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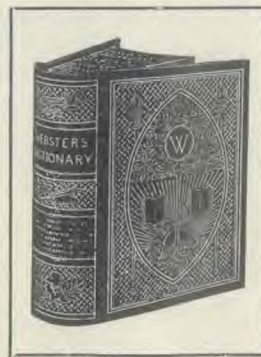
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# GOOD HEALTH

## *A Journal of Hygiene*


VOL. XL

APRIL, 1905

No. 4

### DIETETIC TRAINING

BY J. H. KELLOGG, M. D.

 HERE is a great deal said about the training of the hand, the training of the eye, the training of the brain, but it is not so well recognized that the stomach is just as susceptible of training as any other organ of the body. The stomach is not only susceptible of training, but needs it; it suffers often from lack of training, and not infrequently is habitually trained into very bad habits. For example, a man will eat twice, three times, or four times as much as he can possibly need, with apparent impunity. Men can be trained in overfeeding just as they can be taught to drink whisky and beer. A man may smoke twenty cigars or cigarettes a day. The first cigar he smoked made him deathly sick, but now he smokes twenty cigars a day and declares he feels better for it; that he suffers no inconvenience whatever. His body has been trained to the elimination of the poison. In the same way the stomach may be trained to take care of an enormous excess of food. There are people whose stomachs have become dilated to such an extent that they do not feel comfortable unless they have taken twice as much as they ought to have. I knew such a man some years ago. After eating of a New England boiled dinner all that he possibly could, he straightened up in

his chair and heaved a deep sigh. A gentleman near him asked, "Are you feeling bad?" "Oh, no, not exactly that; but Oh, for capacity!"

There are others who have acquired the habit of eating scantily. The Arab eats but one meal a day. If it is not convenient to eat every day, he eats only every other day. The Tartar travels all day, but eats nothing until night. The North American Indian, when out on a hunt, if he finds nothing, empties his little buckskin pouch of parched corn, and if his stomach is not full, he takes up a notch in his belt. If he gets nothing next day, he takes up another notch in his belt. He goes on three or four days this way if necessary. He does not suffer any serious inconvenience.

Thousands of other people can not go half an hour beyond their meal time without suffering such distress as to get extremely nervous and unable to do business. This is the result of training. A man who trains himself to such excesses in eating that he can consume perhaps five, six, or eight times as much as a man ought to eat in a meal, will surely suffer for it at some time or other. Several years ago I met a doctor who had just before taken part in a beefsteak contest, and he told me he ate nine and one-half pounds of beefsteak at a sitting; but he said his right

shoulder became so stiff before he finished the meal that he could hardly move it, and the next morning he could not move it at all. He knew it would be so, because he had done this before, but he said he liked beefsteak better than ripe peaches. His stomach had been wrongly educated.

Nero educated his stomach to eat food, then to empty it, take food again, then empty it. The old Roman emperors were accustomed to that. When in Rome some years ago I saw among other very interesting things there the ruins of the Emperor's palace. There was the great dining-room where he with his admirers feasted for twenty-four or sometimes thirty-six hours together, and I think on one occasion for three days in succession, reclining upon their couches and eating almost continuously. In one corner there was a door with a sign over it in the ancients' lettering, "Vomitorium." This was a small room to which the guide said the feasters used to go and tickle the throat with a feather to disgorge the stomach and prepare for continued gormandizing.

A few years ago a gentleman visited a sanitarium who, upon examination, was found to have a very much dilated stomach, with very weak walls,— atonic walls — so that it would not contract to empty itself properly. He could digest almost nothing. He had apepsia. His stomach made no hydrochloric acid, no pepsin — was almost as inert as the pocket in his coat. It was simply a pouch. His physician said to him, "You must eat nothing but fluid food," and prescribed for him a simple gluten gruel which would tax the stomach as little as possible, pass through it into the intestines quickly, and be digested there. Two or three days thereafter the matron said to the physician, "Doc-

tor, the girl in charge of the tray department states that Mr. — orders enormous meals, and such astonishing combinations. She said she thought he must be a terribly bad dyspeptic, and you did not know what he was doing, and ought to be informed about it."

"There must be some mistake," said the physician; "that gentleman would not think of eating such combinations as you are talking about, and in such large quantities." "But," she replied, "it is true; I have looked into it myself. He orders everything we have on the bill of fare." Upon his next visit the physician said to the gentleman, "How are you getting along?"

"Very well, Doctor, very well."

"Do you have any trouble with your stomach?"

"Not at all, Doctor, not at all."

"You are following the prescription I gave you, the diet prescription?"

"Oh, yes, Doctor."

Then said the physician, "It must be I have had an incorrect report, because I received an inventory a few moments ago of your tray, and I was really somewhat surprised."

"Oh," he said, "I will have to tell you about that. You see, Doctor, this is the way I do. I send for that tray, and I order everything I think I should like. And I eat everything that comes along except that gluten gruel you tell me to eat; that I put aside, and after I have eaten the other things, then I pass my stomach tube and take it all out again. Then I sit down and eat my gluten gruel. Now," he said, "I do not like that gluten gruel at all, but I do like the other foods, so I eat the things I like, just to have a good time; then I am careful to take it all out again, and it is just the same as if I had not eaten it. Oh, I am getting along very well, Doctor."

That was a curious illustration of what can be done in the way of education and training. That man's stomach was thoroughly subdued. He had trodden it under foot, and put it into such complete subjection that it allowed itself to be used as a garbage box without any resentment at all.

A little boy dining out with his mother saw horseradish for the first time, and begged his mother for some. She put a little on his plate, and he put a teaspoonful in his mouth, but at once he spat it out on the plate. His mother said, "Why, Tommy, how impolite you are." "Please, mama, excuse me, but I would rather wait until that gets cold before I eat any more." That little boy had natural taste; he had not yet educated or trained himself to eat things so irritating. These irritating things we find in foods are Nature's sign boards saying, "This is poison; eat it not." If a boy goes into the woods and finds an Indian turnip and takes a bite of it, and gets his mouth poisoned, we remonstrate with him, inquiring if he does not know that the Indian turnip is poison. Why is it poison? — Because it produces that painful sensation and that swelling. The oil of mustard will do exactly the same thing. And what do we do? — We take things that are wholesome and actually contaminate them with these toxic substances, — substances which the wild animal or the wild Indian would not touch; that a monkey would avoid as he would a serpent. We force those things upon ourselves. No child was ever born with a natural fondness for pepper, mustard, or peppersauce. Children have to be trained to it. Neither does the natural child like the flavor of flesh food. The little one has to be taught to eat meat.

People train themselves to very

curious appetites. In certain parts of Russia the people have accustomed themselves to eating as a delicacy the excrement of certain birds. The birds' nest soup that the Chinaman likes so well is very little better, for the birds' nests are made with the spittle of the birds. They are, however, considered such a delicacy that the nest gatherer runs great risks of life to secure them, and they are sold at enormous prices. Certain specimens of the nests bring almost their weight in gold, they are considered such a delicacy.

Some years ago I met an East Indian, a very intelligent man, studying at Jefferson Medical College, Philadelphia. He was about to return to India as a missionary. In talking with him of the customs of his countrymen, I remarked, "I have read of a substance known as *gnappee*, which I understand is a preparation made from rotten fish. I had wondered whether it were really true that people ever eat such a thing."

"Oh, yes," he said, "it is very common."

"How is it prepared?"

"Well, the fish are caught, and left lying in very shallow water until decomposition is well begun, then they are buried in the ground and allowed to remain for two or three months. They are then taken out, and the scales and bones are removed; the balance is rubbed up with some curry powder, and that is *gnappee*."

"I suppose only the very poor people, who can not afford anything else, eat that."

"No, indeed. I have eaten it myself; it is considered a great delicacy in my country. It is used in Burmah more than it is in India."

I suppose I looked very disgusted, and he probably read the expression in

my face, for he asked, "You think it strange that people eat gnappee?"

"Really, it does seem to me very remarkable that anybody should want to eat rotten fish."

"Now, look here," he said, "you eat rotten milk—you call it cheese, and we eat rotten fish that we call gnappee. What is the difference, I should like to know?" And I had nothing to say.

The normal taste finds delicate flavors in foods that one who is accustomed to peppersauce and such things knows nothing about. It pays to cultivate simplicity and naturalness.

The stomach may be trained to digest meat, milk, or bread; but it is utterly impossible for it to digest all food substances at the same time. This is just as impossible as it is for a man to be working as a blacksmith and training for the army at the same time. If we mix our foods, too many kinds together, we are certainly making trouble. If we mix together meat and bread, the digestive power will be reduced to such a degree that the bread will not be well digested. That is the reason why bread and milk make gas in the stomach,—because the digestive power is reduced in the milk. All breads or cereals digest well together. All fruits and nuts digest well together; but meat is a bad thing in combination with other foods. If one is going to eat meat, he should eat meat. An exclusive diet of meat is far easier of digestion than a mixed diet. That is why multitudes of people who have suffered from indigestion, when put upon an exclusive meat diet, feel better. An exclusive milk diet often agrees with an invalid. Some people put upon an exclusive bread diet would feel better, because the stomach can digest every one of these different articles by itself, but not the combination.

There is another important point in this connection, which has been demonstrated by Mr. Horace Fletcher, who called the attention of scientists to it. Later, Professor Foster, of Cambridge, England, made experiments upon the subject, and recently Professor Chittenden, of Yale, made a similar series of experiments for the purpose of settling this question. What Mr. Fletcher observed was this: Physiologists have said that we need daily three to six ounces of proteids. Proteids are the blood- and muscle-building elements. Mr. Fletcher said, "I have observed that when I chew well, I do not require so much, and that I require but very little, in fact, when I chew well." This thing was tested at Yale. Twenty-one men were detailed by the United States government to put themselves under charge of Professor Chittenden for experimentation. Half a dozen of the best-trained athletes of the college, as also Professors Chittenden and Mendel, joined the experiment corps. The men were not asked to chew extraordinarily much, but they chewed well because their rations were limited, and they understood the food must be well masticated, and the result was that every man improved in health. One man who had been a bad dyspeptic regained his health, and the proteid was brought down to an ounce and a half a day,—one-fourth the amount required by many authorities. The total ration was reduced to one-half the ordinary ration, and in some instances to one-third. These men gained in strength and weight, and the trained athletes found that in some instances they had actually doubled in strength, when they were already in splendid training. The soldiers, who were strong, healthy, vigorous men, also improved in strength.

## A VISIT TO THE ANCIENT CAFE GRECO (ROME)

BY HORACE FLETCHER



IT is a pleasure to return to a favorite pasture or trough after some years of absence and find the grazing and the feeding in no whit less attractive to the taste and not in any way disappointing to a memory-appetite. Neither in these days of expansion have the prices for things changed at *Antico Café Greco*, which is a revived memory that softens one's declining years; for dollars hang higher on the trees in these days of colossal combinations, and fall by natural gravity into the cornucopias of the blooming trusts.

The ancient coffee-house, called the Greco, has been situate in the Via Condotti, just out of the Piazza di Spagna, since 1760, and claims to be the oldest café in Rome. Byron, Gibbon, Mendelssohn, Canova, Gounod, Minardi, Goethe, Thackeray, Thorwaldsen, and a raft of painters, sculptors, poets, musicians, etc., as well as multitudes of other eccentrics, have done honor to themselves and to the place by their patronage, and herein have shown wise discrimination; for the place is worthy from every point of view — economic, decorative, atmospheric, and hygienic. Can more be said? Yes, but it would be superfluous.

Five of us Americans dined at the Greco some time ago at a cost of twelve lire and fifty-five centimes, or about fifty cents American, each, including a generous tip. We were all hale, hearty, and hungry as the traditional wolf, and thirsty, too; yet we failed to squander more than half a dollar each.

But the macaroni and the omelet and the risotto were fine, while the *alices* on which the Colonel made a meal, were dreams of salted succulency. And the

coffee; it was as smooth as oil, and yet it stained the cups an indelible rich dark brown; and it may be said in passing that it dyed the alimentary canal similarly, but, unlike a red and bulbous nose, dark-brown intestines and tanned membranes are not in superficial evidence, and are shown only to operators in post-mortem examinations.

The decorations at the Greco are immensely pleasing and satisfying. They consist of inserted panels of canvas, surrounded by thin carved and dull-gilt frames. They are of various sizes, from about four feet square down to oblongs measuring not more than a foot and a half in length. But they are all masterpieces, painted *con amore*. How I do like to use that last expression, "*con amore*;" it just fits Italy.

Some of the larger panels, in fact a whole room full of them, show the most famous views of Venice and constitute a truly Venetian panorama. In the adjoining room, Rome is similarly reproduced, in terms of paint; and so on with a whole series of specially favored earth-spots.

The ancient artistic costume still persists in many of the patrons of the Greco. The straight-sided, narrow, straight-brimmed, stove-pipe silk hat with ruffled fur hangs on its accustomed peg night after night as it used to do when we were boys and affected the Greco. The man who bought it when it was brand new, fifty-odd years ago, still walks abroad under this ancient tile, and has for many a season past maintained his muscle of arm principally by brushing the refractory silken fur in the way it should go. We saw also the old-fashioned black satin stock, that Thackeray was so fond of wearing and

picturing; but it held up the head of a young Austrian artist with a face like a Greek statue.

We did not see a man, or a woman either, drunk or under the excitement of

alcohol. Gen. Leonard Wood, one of our party a year ago at the Greco, was very keen in observing the sobriety and vitality of the Italian peasantry, and the tireless activity of the soldiers.

### A RECIPE FOR A HAPPY LIVING

THREE ounces are necessary, first of patience,  
Then of repose and peace; of conscience  
A pound entire is needful;  
Of pastimes of all sorts, too,  
Should be gathered as much as the hand can  
hold;  
Of pleasant memory and of hope three good  
drams  
There must be at least. But they should  
moistened be  
With a liquor made from true pleasures which  
rejoice the heart.

Then of love's magic drops a few —  
But use them sparingly, for they may bring a  
flame  
Which naught but tears can drown.  
Grind the whole and mix therewith of merri-  
ment an ounce  
To even. Yet all this may not bring happi-  
ness  
Except in your orisons you lift your voice  
To Him who holds the gift of health.

— *Margaret Navarre.*

### LIFE IN KOREA

BY E. E. ADAMS



THE way in which medicine opened the way for missions in Korea, and Christianity entered "at the point of the lancet," or rather of the surgeon's needle, has become historic. In 1884 Dr. Allen gained admittance to the Hermit Kingdom, an almost unknown land, as medical attendant to the American Legation, his mission being unknown. When he had been there only two months, a riot broke out, and he was aroused at midnight and escorted to the dining-hall of the palace, where he found one of the princes of the queen's family mangled by dozens of sword cuts, and almost bloodless. To stop the bleeding, his wounds had been filled with a Korean preparation resembling melted tar. The use of the surgeon's needle, washings with clean water, and antiseptic dressings, resulted in a recovery that seemed miraculous to the Koreans.

The fame of this success spread, and Dr. Allen was soon besieged by those beyond the reach of Korean skill. The distrust for things foreign was overcome primarily by this agency. For a long time the teaching of Christianity was possible only under cover of medical work.

The need of foreign assistance in things pertaining to the medical art is shown in the following secrets of it as practiced by a native physician, disclosed by him to one of the missionaries: "For convulsions he found that a burning ball of moxa punk, or a red-hot coin placed on the child's head some two inches above the brow, and left till it had burned sizzling into the bone, served as a never-failing remedy. A poultice of cow excrement was good for certain sores. Epidemics he regarded as taxes that were due the great spirits, especially on the part of children, and the more gladly they paid



them, the sooner the spirit would be satisfied.

"In medicine his great success had rested on the classification of diseases under two heads, — desperate cases and general weakness. For the latter he prescribed pills made from tiger bones. He reasoned logically that as the tiger is the strongest animal, and the bone the strongest part of him, conse-

quently such pills must be strengthening in any case. For the former he had a solemn mixture that he spoke of with bated breath. It was made of snakes and toads and centipedes carefully boiled together, and warranted without fail to kill or cure.

"For more specific cases he had a list of medicines that ran thus: Musk sac for melancholy, beef's gall for digestion, bear's gall for the liver, dragon teeth for the heart, caterpillars for bronchitis, maggots for delirium, dried snakes and cicada skins for colic."

One of the difficulties of the physician practicing in Korea is the obliviousness of the natives to the fact that the doctor's directions must be carried out if results are to be what he anticipates. Another trouble attending drug medication, is the natural belief that what does a little good when taken in small doses, will do a great deal if taken in large doses, and hence the universal tendency to consume in one dose what was intended for several.

Until five hundred years ago Buddhism was the state religion of Korea, but under the present dynasty Confucius has ruled the hearts of the people.



A GROUP OF NATIVES

Evidences are not lacking that they enjoyed a higher state of civilization under Buddha than under Confucius; for, says a native, "if Buddhism fails to make a man clean in heart, it at least teaches him to be clean in habits. If it fails to enable a man to love the beauties of virtue, it at least educates him to love the beauties of nature."

But by far the strongest influence in the life of the Korean is the multitude of demons with which he peoples earth, air, sea, and sky. Most of these are hateful and malevolent, and the few good are capricious. Tokens of his desire to appease and propitiate these arbiters of his destiny are everywhere in evidence. Along the wayside may be seen trees fantastically decorated with pieces of cloth, etc., and a heap of stones at the foot. Each passer-by adds a stone to the heap or spits piously toward it in token of reverence. These trees are thought to be the abode of spirits.

Within the house "spirit nests" are provided for the accommodation of the devils concerned in the different departments of the household. The spirit of the ridge pole occupies an important

position, and is thought to keep a measure of health and happiness within the house. However, his efforts are sometimes unsuccessful. At the approach of a contagious disease he flees, and is



A KOREAN HOME

afterward coaxed back with appropriate ceremonies.

The most prevalent scourge, the great enemy of child life in Korea, is smallpox. No mother counts her infants as members of the family until they have been through this ordeal. As soon as the dreaded symptoms appear, a *mutang* (sorceress) is called, and under her directions, reverence is done to the smallpox devil named *Ma-ma*, which is thought to be afflicting the child. The parents address the sick child in terms of the highest respect and bow low before it. A traveler spending the night in a Korean hut, heard moans coming from an inner room. On inquiring the cause, he was informed to his consternation, "His excellency, the spirit of smallpox, is with us." If the sick child survives, a feast is prepared, and with polite wishes for a prosperous journey, *Ma-ma* is bidden farewell.

Like the Japanese, the Koreans are great lovers of nature. They are fond of picnics, especially when the azaleas

and other flowers are in their glory, and live out-of-doors much of the year. Many of them are skilled in archery, and spend much time in its practice. Companies of scholars go together to some picturesque spot and there compose spring poetry in Chinese—the Latin of Korea. Young men and boys dance to the rhythmical clang of a brass gong, a tambourine beaten with a stick, or the shrill tones of a brass clarionet.

That tradition should rule, and any attempt to change the native custom be met with "so it was from the beginning," is not surprising in a land whose cities were laid out before Abraham left Ur of the Chaldees. Respect for their own

antiquity has made them slow to adopt the customs of modern nations, for "age falls not readily in behind the leadership of youth."

Their dress, like all their other customs, has its origin in tradition. The most striking article of Korean attire is the broad-brimmed stove-pipe hat of the men, the main purpose of which seems to be to protect the precious topknot, the badge of manhood. In ancient times, so the story runs, conspiracies were frequent, and to prevent these a decree went forth compelling all men to wear great earthenware hats the size of an umbrella. This prevented more than a very few from coming close enough together to converse, and spies could easily hear their necessarily loud whispering. Gradually the odious law was infringed upon until the present light structure of silk, horsehair, and bamboo was reached.

The garments of both men and women are made of cotton, thickly padded in winter. White is the national

color, for the following reason, if tradition speaks true: On the death of their kings the whole nation is plunged in mourning, white being the mourning color. At one period three kings died within the space of ten years, necessitating a constant change of clothing and outlay of means. The people therefore adopted white as the national color, that they might be in constant readiness for the caprice of their kings.

The custom of wearing white garments in a land where miry clay abounds, provides abundance of work for the women, whose duty it is to keep their men folk in spotless linen. For though uncleanly in other habits, in this the Korean is quite fastidious. There are no tubs, wash-boards, nor soap. The clothes are carried to a well or a brook, and beaten white with flat wooden paddles. As each garment is taken to pieces before being washed, there is plenty of sewing to be done.

The Korean women have hit upon an extraordinary, but very effective method of ironing the clothes. The cloth is slipped over a roller, and beaten into a glossy smoothness and stiffness by one or two women armed with sticks like policemen's clubs. This work is kept up far into the night, the rhythmical "tick-tack" of the ironing sticks being one of the familiar night sounds of Korea.

The women are not allowed on the streets in the day time, but at 9:00 P. M. a bell is rung as a signal for the men to go within doors, that the women may go out. When a Korean woman ventures on the street, the whole of the head and face must be covered, with the exception of one eye.

The Koreans would seem to be in accord with the Hebrew maxim, "He is not a man that hath not a woman," for the bachelors are obliged to wear

their hair in a braid down their backs like the boys. Only on entering the estate of matrimony do they attain to the dignity of the topknot, two or three inches in height and one in diameter, sticking straight up from the crown of the head. The desirability of marriage with them, however, is due to the Confucianism, or ancestor worship, which makes their eternal well-being depend upon the acquisition of a son to sacrifice to their shades after their departure. It is for this reason that child marriage is customary.

The Korean house is usually a simple one-story structure of mud and straw. The rooms are heated in a novel and economical manner by means of flues running beneath the floor, opening at



A KOREAN GENTLEMAN

one end into the fireplace and at the other into the chimney. There is no provision for ventilation. Since the Koreans use neither chairs nor beds, but enjoy the sociability of floor life, the



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A NOVEL METHOD OF IRONING CLOTHES

foreigner is apt to find himself in rather warm quarters. "If," says one, "in a room where the amount of fuel used in heating the stones under you can be regulated, you experience only a genial glow running up and down your spine; but take the case of a Korean inn, where under you rolls the fire used to cook the food of a dozen men, and you feel like a trout in the skillet." Another who slept with several others in such a place, without ventilation, felt the next day as if he had been "exhumed from a burial where all but putrefaction had set in."

Another abomination of the sleeping arrangements in Korea is the universal prevalence of vermin on the floors of the huts. Gruesome tales are told by travelers of nights of slaughter and warfare waged against the different varieties of vermin engaged in their vivisection. At last a genius invented a coat of mail consisting of a sack, with smaller bags for the arms and a drawstring at the top. "Clad in this panoply of war," says one, "you turn on an

American invention that we call a gatling gun, and scatter insect powder over your face, neck, and pillows. This ensures sleep."

The Korean diet closely resembles that of the Japanese, the staple food being rice. With this, fish, bean sauce, sauerkraut, pickled turnips, etc., are used as side dishes. Beef is eaten to some extent, but is out of the reach of the poorer classes. The few sheep the country contains are the property of the royal family, and are used only for sacrifice.

One of the dietetic delicacies of Korea is indicated in the following dialogue, which took place between a native and a foreigner who was much annoyed by the howling conferences of the dogs everywhere in evidence: "For mercy's sake, why don't you kill those dogs?"

"Too early yet; we'll kill them later on."

"But why not kill them now and quiet the town?"

"Why, you know that dogs are not good eating in the spring. We wait till

summer before we kill them. Do you eat them in the spring in your country?"

The coolie classes live almost exclusively on rice, with sauerkraut or pickled turnips for a relish. That they thrive on this diet is proved by the fact that "the strength of the nation has gone into the coolie's shoulders." "With a load such as we often see," says one, "he reminds one of the Titan Atlas lifting the world."

The *Yanghans* are the cultivated class, from which come the scholars, aristocrats, and officials. They are intensely conservative, and have a supreme contempt for labor and the laboring classes.

The wasting away of the Korean nation in idleness, the indifference and apathy of the people, are thought by those who know the country best to be due, not to inherent laziness, but to lack of incentives to industry and ingenuity. These virtues are not with them the road to comfort and honor. The fruits of their labors serve but to enrich greedy officials.

The habitual slowness of the Orient is emphasized in Korea, to the great discomfort of the Westerner, who finds it impossible to coerce the Far East. His attempt to do so has suggested the following lines, which we copy from "Korean Sketches," by J. S. Gale:—

An Occidental newly sent  
And keyed up for the tussle,  
Has come to rouse the Orient,  
And teach it how to hustle.

"This East," he says, "man, woman, child,  
Is chronically lazy;  
"I'll get a move on," and he smiled,  
"Or drive the Orient crazy."

He kicked his cook, and sacked his groom,  
And raised a dire disaster;  
But all in vain his fret and fume  
To move the Orient faster.

The horse he rode was like his boy,  
Whose maxim was, To-morrow;  
His life became, instead of joy,  
Accumulated sorrow.

His nerve gave out, his brain went wild,  
Completely off the level,  
And when he died, the Orient smiled,  
"A crazy foreign devil."

## CURES FOR THE BLUES

BY BENJAMIN KEECH



HERE are very few people who, from one year to another, are entirely free from the blues. This disagreeable affliction comes in many different forms, and often arrives when least expected. The attacks are either mild or serious; and, though we may treat them lightly when we are not enjoying them, they are certainly the cause of much unhappiness when we are in their grip.

There are principally two kinds of the blues. The first is the result of temporary surface aggravations which

really do not amount to much, but which are annoying, nevertheless; and the second comes from prolonged ill health or misfortune.

The person who submits to and entertains these attacks is slowly but surely undermining his health. But it is never too late to mend, and a stitch in time saves several dozen. I do not care how blue you have been or will be, you can cure yourself of this disagreeable affliction.

There are several fine remedies, most of which the writer has tried,

with excellent results. To be sure, it may require several years before a complete cure is effected; but if you begin right, and continue right, relief will surely come. It will depend largely on how long the disease (?) has been standing, and how anxious you are to get rid of it.

We shall first deal with severe cases of the blues, although you who are suffering from mild attacks only should also pay strict attention. In the first place, thoroughly empty your mind of all blue thoughts and fill it with ideas of a more cheerful color. It is your thoughts that are *you*. Thoughts control the mind, and the mind controls the body. How essential, then, that only sweet, pure, uplifting, ennobling ideas should find lodgment in the mind! As you sow, you shall reap. Sow blue, wicked, unclean thoughts, and the body will suffer. Sow beautiful, Christlike ideas, and the body will build itself up, no matter how dilapidated.

Sow a desire to get rid of the blues, and in time you will be free. The first step is to get the mind in proper condition and keep it that way. But there will probably be setbacks. In this event, forgive yourself and begin again. The first effort, though puny, helped you, and all the other efforts, taken together, will effect a cure.

Perhaps your environment is against you—maybe this is the very thing that makes you blue. If so, you can, in time, change your environment by persistently desiring all things that are good. You can not become an optimist in a day, but you can certainly begin to cultivate optimism and cheerfulness at this very moment. When a bad thought enters your mind, dismiss it and replace it with a good one. Then firmly hold to the latter.

One cure for the blues is to quit being selfish. It is true that some of the most unselfish people imaginable are seemingly overtaken by the blues at regular intervals; but this is probably because their good plans are for the moment upset, and not because they are really selfish. At the same time, most of us can lay our blueness to the fact that we can not have our own way. The remedy is to "do something for somebody, quick." When all of your hopes are crushed, and terrible, indigo days follow one another for weeks at a time, just forget that there is such a person as yourself, and "find something good to do" for some one near you. This is a beautiful cure. You can not appreciate its merits until you have tried it. Plenty of work will do the blue individual untold good.

Another leading remedy for people who are either slightly or seriously afflicted, is to take a walk. When everything goes wrong, put on your hat and ramble for a day through fields and woodlands. If you are a true lover of Nature, you can not fail to be benefited by this treatment. Every season of the year is beautiful, and all contain an abundance of health for the person who has sufficient interest in himself to hunt for it. Cures for the blues lie all along the way. You will find them in babbling meadow brooks, in the song of the bobolink, in the heart of a shady woodland, and in the sunsets painted by the angels.

When you are feeling especially mean, get up on a high hill and look around. Perhaps your native village lies below you. It appears rather small, doesn't it, compared with the big, sheltering hills, the drifting masses of clouds, and the great, empty spaces of air? This vastness will perhaps illustrate to you the depth and grandeur

of God's love, and it will fill you with gladness to know that he is watching you and noting your struggle with yourself.

When you are out for a walk, spend considerable time in systematic breathing. Square your shoulders and inhale several hundred long drafts of air, until your chest is fully expanded. This will clean your lungs, improve your heart action, and purify your blood. Consequently, you will have a clearer brain, and your thoughts will not be such blue ones.

A vegetable garden or a flower garden is a good thing to have handy when you are feeling ugly. A hoe and a weeder are sometimes a man's best friends, and an hour or two spent

among the tomatoes and onions will often produce a most cheering effect.

A hobby, such as stamp collecting or "taking pictures," might be indulged in by the person who has moments when he thinks the world is out of joint.

If you live in a city, you can find any number of cures for the blues. In fact, they are quite as plentiful as in the country. For instance, try being good to some one less fortunate than yourself, or lend your aid to some worthy mission. Very frequently an interest in other people's heartaches will cure one's own.

There are so many good cures for the blues that no one need suffer longer.

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### A MERRY HEART

BY FANNIE BOLTON

A MERRY heart doeth good like a medicine,  
 Like a bird singing out in the wide, bright  
 meadow,  
 Like a child in the house of the old and love-  
 less,  
 Like a flower abloom in the place of shadow,  
 Like a ray of light on the walls of a prison.  
 So go, bright heart, full of tears and laughter,  
 The rain may fall like the showers of April,  
 But the sunshine will bring all the flowers out  
 after.

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### EXERCISE AND OCCUPATION FOR THE AGED

BY KATE LINDSAY, M. D.



THE subject of suitable health-  
 ful exercise and occupation  
 for the aged is a very im-  
 portant one, and means  
 much to those of us who are no longer  
 young; in whom the fire of life is grow-  
 ing cold, the heart beats slow, the joints  
 are stiff, and the muscles losing power  
 to act and failing to obey the mental

impulses which seek to compel to the  
 performance of once easily accom-  
 plished tasks.

The question is, What kind of exer-  
 cise, and how much, will keep the fail-  
 ing aged body in good health, avoiding  
 the inactivity which tends to deficient  
 elimination of wastes and to obesity,  
 and the overexertion which wears out

the structures of the body faster than the feeble reparative tissue functions can replace them? This question is very important, indeed.

Many thoughtless children and grandchildren often say, "Now, Grandma," or "Grandpa, you have done your share of work. Just sit still and let us younger ones do our part and care for you." This polite method of telling old men and women who have been active workers all their lives, and perhaps exerted a noble influence in their community, that now nobody needs their work, and no one expects any influence or help or benefit from their efforts to forward the common interests of the home or community, is one of the hardest of life's trials for the aged to bear. To let go one after another of their wonted tasks and feel the gradual lessening of physical and mental activity is surely manifest enough to their own consciousness without being reminded of it continually by others.

To put off this evil day of uselessness and disability as long as possible, every person past threescore years should begin to consider what exercise and other health measures he can take to replace the more strenuous exertion required for the hard work he performed during his prime. Total inactivity will soon stiffen the joints and weaken the muscles. Shortness of breath and palpitation of the heart, with torpid liver and inactivity of the kidneys and skin, mean deficient elimination of waste matter, rheumatism, gout, and degeneration of some important organ, as the heart or the arteries, the liver or kidneys, and overincrease of adipose tissue, and suddenly life is snuffed out like a lighted candle in a broken lantern. The death certificate asserts the cause to be apoplexy, uremia, diabetic coma, etc.

In taking exercise it is necessary first to see to it that each organ does its proper share of work and also gets needed rest. The organs most likely to be overexercised in the aged are the digestive. A dietetic mistake often made by the old is that of failure to diminish the amount of food to correspond with the decreased demand for material to supply tissue waste and working energy; also to avoid overtaxing the now feeble alimentary apparatus. The work required of these important food-preparing organs should be lightened by lessening the quantity and also the variety of food at a meal, using only such foods as can be easily digested. As mastication is liable to be imperfect because of loss of the teeth, all bread, grains, and other starchy foods should be dextrinized by heat. Then they may be softened in milk, cream, malted nut gruel, or fruit juices, and thus lessen the danger of carbohydrate stomach fermentation for want of proper mastication.

As lessened heart action means slower blood current and increased tendency to blood stagnation and lessened tissue oxygenation with decreased action of the respiratory organs, — regular, moderated daily breathing exercises should be taken by the aged to increase the intake of air into the lung cells and proper exchange of gas between the blood and the air. Fifteen or twenty minutes two or three times daily spent in deep breathing before an open window or in the open air, or brisk short walks, moderate dumb-bell and other arm and chest gymnastics, are excellent exercise measures to increase the respiratory action of the breathing apparatus.

To prevent joint and muscular stiffness, rub the body thoroughly night and morning, and take a cool water or



air bath in the morning, and a tepid or warm bath in the evening. This will increase the rapidity of blood circulation, improve tissue-cell nutrition, and aid the absorbents to eliminate the wastes from the lymph spaces, thus keeping the tissues well nourished and clean. Then there is the exercise found in various light out-of-door recreations and work; as, moderate bicycle or horseback riding, mountain climbing, the care of a small garden, orchard, or poultry yard; or some easy outside work, as light woodsawing, digging in the earth for tree planting, hoeing, weeding, driving a fruit, hay, or vegetable wagon from the field to the barn or town in harvest seasons. Then, outdoor social gatherings should not be neglected by the old: a picnic party to some quiet lake shore or river bank; a pleasant trip on the water or by rail; and, when the old person's home is near a stream or lake, light rowing on the water.

While thus taking care to exercise the body properly, normal sleep should not be neglected. The aged should take a daily midday nap besides eight hours' sleep daily.

Combined with proper exercise and recreation to keep the body healthy, should go healthy feeling and thinking. Healthy mental activity means that still a true, high, and noble ideal shall inspire faith, hope, and courage for the future, and lead to a lively interest in the living present, and trust that God will wisely rule in all the events of the future. Why should the old be expected to dwell gloomily among the tombs of the dead past and mourn over the deficiencies and failures of bygone years? or discount all the good of the present because it is not a complete reflection of the days when they were young? It is always helpful to recall

all that is good, beautiful, and true in life, either past or present. But as the present is the living reality, the now what we have to deal with, and what is capable of being helped or hindered more or less by the way we relate ourselves to it, the important matter of life for both old and young is to adjust themselves aright to it, and by reading and by association with others keep in touch with our fellow-men, interested in their work, hopes, and aspirations.

Experience should help those who have seen many days of sunshine and shade, who have had humanity's share of failure and success, joy and sorrow, to aid those just beginning life by pointing out to them their danger of shipwreck, and why; to tell the discouraged and unsuccessful the needlessness of despair, and the folly of being beaten in the battle of life so long as the struggle is for the success of the right. Nothing makes the heart beat stronger, the blood flow faster, and every bodily function act more vigorously than to think courage and talk it to others. The more helpful, courageous people in the world, the better a world it will be. And however feeble physically the aged may be, so long as they maintain cheerfulness, hope, and courage, and talk and otherwise impart the same to even one other soul, they are taking helpful exercise themselves, and may be cheered by the assurance that their life is not in vain.

Who can tell what will be the result of planting one good seed in the human heart? All the seedless oranges now in the market are the offspring of two small slips saved from destruction, a little more than a quarter of a century ago, by the efforts of a woman. So, when a live inspiration for good is implanted in a human heart, who knows to what vast proportions it will grow,

or who will be better for its influence?

As long as the aged feel and hope and act for right, life is worth living, and dead inaction and premature decay

will be prevented, and life prolonged.

"The hoary head is a crown of glory, if it be found in the way of righteousness." Prov. 16:31.

### NATURE'S LESSON

Is there a cloud in the azure sky  
That forgets the mission it hath on high?

Not one.

Is there a star in the curtain of night  
That forgets to shine with a radiance bright?

Not one.

Is there a bud in field or bower  
That forgets to blossom into a flower?

Not one.

The clouds, the stars, and flowers bright  
In a beautiful language speak forth God's  
might:

While we, frail creatures of the dust,

Forget, alas, to be even just.

We stand empty-handed while all around

There are lives to brighten, now sorrow  
bound.

There are deeds which our hands should  
gladly do

That would cheer some heart its journey  
through.

A kind word here, a good deed there,  
Would scatter sweet blessings everywhere.

— Anna T. Hackman, in *Philadelphia Bulletin*.

### A POPULAR DELUSION

BY MARY WOOD-ALLEN, M. D.



NE needs but to glance over the pages of our various periodicals, from the most expensive magazine down to the most insignificant newspaper, to be aware that a widespread "popular delusion" exists in this country. It might be called the "drug delusion."

As we look over the advertising pages of these various periodicals and read the glowing testimonies to the merits of the various remedies advertised, we might readily believe that, if one-half of the virtues ascribed to patent medicines by their venders really existed, there would be no need for any one to be ill. But disease evidently "grows by what it feeds on," and its principal dietary seems to be drugs. Not only is there apparently no lessening of disease, but, on the other hand, there seems to be a constant discovery of new diseases.

Each month new medicines are put

upon the market, their remedial virtues heralded abroad through the newspapers, and a great army of those who have not been cured of their ailments by the medicines which they have already tried, hasten to possess themselves externally and internally of the new remedy.

I believe it was Lincoln who said that you may fool a part of the American people a part of the time, but you can not fool the whole American people all of the time. This statement seems to find its exception in patent medicines; for the gullibility of the great mass of American people in regard to drugs as a panacea is so general as to warrant the name of being universal. Indeed, it has become entrenched in the law, and the individual who would like to die a natural death, if die he must, is not legally permitted to do so. If he does, it must be in violation of the law. Even the national government has put a re-

straining hand upon those who are endeavoring to cultivate in the general mind the idea of health as a universal possession, because they do not accompany this suggestion with a package or a bottle of a drug remedy.

Sir Walter Scott was once taken suddenly ill when traveling in the Highlands. A physician was called. When he entered the sick room, Sir Walter discovered that the doctor had once been a servant of his own. He knew him to be a man without education, and in great surprise he asked:—

“Sandy, are you a doctor? What do you know about treating diseases?”

“Weel,” said the old ex-servant, but now physician, “I do varra weel; I just gie ’em calomy or laudamy and they a’ recover, and ye cudna dae better than that yoursel’.”

In his universal prescription of calomel and laudanum the old man had solved the two secrets of drug medication. The first is to relieve the system by increased elimination; the second, to deaden the sense of pain; and it is quite probable that the great majority of patent medicines are put up in accordance with these two ideas. Analysis of their contents indicates that their compounders have made no discoveries which are unknown to the regular practicing physician, but they have, by their excessive laudation of their own compounds, predisposed the public mind to expect great results from their use. They have used some remedy which in its action corresponds with calomel, and something else corresponding to laudanum, which is tincture of opium.

Not long ago, noticing quite frequently in the papers an advertisement addressed to “those who dread motherhood,” and desiring to know the method of procedure of the man advertising a

remedy to insure maternity without suffering, I answered the advertisement. In return I received a small package of herbs in which could be discerned senna leaves, bits of rhubarb, licorice root, slippery elm bark, and various other ingredients. Directions for making these herbs into a decoction accompanied the package, and at the bottom of these directions, tacked on as if it were an unimportant thing, was the key to the whole matter. In this postscript was given the suggestion to add to the mixture gin, rum, or even alcohol, and as additional counsel it was intimated that the use of the medicine should not be limited to a few weeks, but should extend over months, in order that the full beneficial result might be secured.

Unsuspecting and uninformed women reading these directions would in all probability not grasp the full import of this postscript. The package of herbs was only important so far as it assisted the sender of it to share in the profits of the liquor dealer. And that is true to a large extent of the majority of patent medicines so widely advertised.

It is well known that the liquor business is one of the most remunerative. Many people there are who will not take alcohol in the form of an alcoholic beverage, but without any compunction will take it regularly if combined with drugs and sold as a medicine. Taking the prescribed remedy and finding it followed by a sense of comfort and a lessening of pain, and later discovering that if its use is omitted, their unpleasant symptoms return, they fall into the error of supposing the remedy to be beneficial, and the manufacturer reaps the reward of this faith in the fact that the medicine has created a desire for stimulation, and, at the same time, has induced in the patient a faith in that special form

of the administration of alcohol which passes by the name of his special remedy.

The report of the State Board of Health of the Commonwealth of Massachusetts—document No. 34—proves the justification of this statement. The Board of Health has made an analysis of tonics, bitters, and various proprietary remedies and has published a list of them, showing that they contain, by volume, alcohol varying in amount from six to forty-seven per cent. Some of these medicines, advertised as "purely vegetable" and recommended for inebriates, contain over forty-one per cent of alcohol; or as "entirely vegetable and free from alcoholic stimulants" when they contain twenty per cent of alcohol. A list of these remedies with their percentage of alcohol can be found in the *Woman's Journal* (Boston, Mass.) of January 23, 1904.

The doses indicated by the labels upon these preparations vary from a "teaspoonful to a wineglassful," taken from one to four times a day, and "to be increased as needed." These are startling facts, and one of the most serious features of the whole business is that periodicals which pose as teachers of morality and temperance admit to their columns without hesitancy the advertisements of patent medicines, never making inquiry as to their ingredients. Papers which would refuse the advertisement of a brewery or distillery because it openly proclaims its purpose to be the selling of alcoholic beverages and is, therefore, a recognized evil that can be shunned, will, at the same time, admit advertisements of alcoholic preparations, masked under the name of "medicine," and especially dangerous because their evil character is not known.

It is well known that the advertisers of objectionable things are those who pay the most for the privilege of advertising, and the periodical that takes a stand for righteousness in regard to the advertisements which it accepts, will meet with pecuniary losses. I have seen it stated that one well-known periodical loses at least \$100,000 a year by refusing advertisements of liquors. When we pick up a religious periodical and see its advertising pages filled with depressing records of diseases and the advocacy of proprietary medicines as remedies, we might feel like asking how large an income they receive for these advertisements of alcohol.

Aside from the question of the injurious ingredients in these remedies, there is in them a potent suggestion of evil. Many well-meaning parents shrink with a prudish (one might almost say prurient) timidity from giving to their children physiological instruction concerning the functions of their own bodies; but feel no shudder when they see in the hands of these same children the daily newspaper with its magnified pictures of men or women who have been willing to advertise, even to the minutest detail, their most personal sufferings, or to record openly the ruin which their vices have left upon them.

Far better would it be for the coming generation if all periodicals became teachers of health through obedience to natural law, than purveyors of the causes of disease. There can be suggestions embodied in advertisements of remedies, the use of which tends to increase the popular drug delusion or, even worse, to create an appetite for some form of a narcotic, such as opium, cocaine, the bromides, and in this list we may, with scientific accuracy, include alcohol.

# THE COCOANUT AND ITS USE AS A FOOD 187

BY A. CURROW



ALTHOUGH most of the isles of the Pacific abound with cocoanut trees, the natives use but little of the nuts for food. This is due to the growth of the copra industry, and to certain restrictions placed upon the native population in order to secure taxes for the government under whose rule they serve. Formerly the native was sole possessor of the cocoanut, and enjoyed himself to the fullest extent in the use of the nut, while green, as a beverage, and also as a delicious food. For some months each year he is debarred from using what is truly his own, under heavy

penalty. Until the full amount of copra is secured from each district and delivered to the official collectors, he is under restriction. Undoubtedly, the loss of such a valuable food to such an extent must have its effect upon the health of the natives. It is surely a good and sufficient reason for the physical degeneration and increased mortality everywhere present among the island races to-day.

Probably there is no tree known which has so many good uses as the cocoanut palm. The trunk is used as a bridge over creeks and streams; also in the construction of houses. The palms make



Here is shown the native ceremony of presenting tapa-cloth, mats, and whales' tusks. The two heaps in the foreground are yams, to be used in the attendant feast.

excellent roofing; and plaited baskets for carrying food are made therefrom. Fruits and vegetables are exposed for sale in them, ready for the purchaser to carry away.

In the green stage the nut provides a cool, effervescing drink in purest form. Some nuts contain more than a quart of fluid—sufficient for a day. The flesh at this stage is a most palatable food, being slightly sweet, and nutty, as tender as could be desired, suitable for a little child. It supplies the nitrogenous element in purest and most digestible form, in appearance like the white of an egg parboiled. It contains also a sufficient supply of fats and mineral salts. Children delight in it; adults relish it with considerable gusto.

In the matured state it is little used as an article of food, being rather coarse for digestion. Natives eat it at times, together with a softer food, by way of a flavor. The water within the nut is discarded, having lost its effervescence and sweetness. The principal food use is for making milk, which the natives term *lōlō*. When the breadfruit is matured, a peculiar form of pudding is made from it. This is cut into slices, and the *lolo*, sweetened with the juice of the sugar-cane, is used as its sauce. It is surprising to note the rapidity and relish with which the pudding disappears, no attempt whatever being made at mastication. It is a mere swallowing process. In earlier days it served as a matter of contest among chiefs, the quantity used being much greater, the fastest eater winning the admiration of the onlookers. But what must have been the physical reward!

When the flesh has become hard, the nut is called the *niu mandu*, or "dry cocoanut." It is from this that copra is made. The nuts are broken open into halves, then hung up on lines or spread

out on the ground to be dried in the sun, the heat of which, while setting free the oil, also hardens and dries the flesh. During the process more or less decomposition occurs, leaving a rank, oily odor, very unpleasant. Much of it breeds into live corruption. When sufficiently cured, it is bagged for export. Shiploads are sent to Europe yearly, where a high price is obtained, ranging from sixty dollars to ninety dollars per ton. There cocoanut oil is prepared from it, and lately an article known as "cocoanut butter," made from the copra, is obtaining favor in the markets as superior to oleomargarins and other substitutes for dairy butter. What the refining process is, is a matter of doubt, but how it can be made palatable and wholesome after the putrid condition that occurs while being *cured*, is a marvel and a mystery; for "who can bring a clean thing out of an unclean?"

For the benefit of those who desire a more natural and wholesome use of this excellent article, we give a few simple processes used successfully in the tropics for years for making milk, cream, and butter as perfectly wholesome substitutes for the animal products,—preferable, also, in quality and cost:—

*Process for Making Milk.*—Select good nuts—those which have plenty of water inside. Scrape off all loose fiber, and have the shell smooth and free from particles. Crack the nut in two, around, as neatly and evenly as possible. Pour the water into a bowl and use for diluting milk or adding to a soup or other dish. If no nut grater as used in the tropics is at hand, the common hand grater can be used successfully, but the flesh must be taken out of the shell in order to grate it. The illustration shows the grater used here. It consists merely of a stout



piece of iron one and a half to two inches wide, one-eighth of an inch thick, slightly turned up at one end, rounded off and filed into fine teeth with upward groove. The other end is screwed down to a narrow-headed stool. This is a most durable grater.

Grate out finely all the flesh, avoiding the hard skin inside. The finer the grating, the easier the next process of wringing, and the richer the milk.

*Wringing.*—Have hot water ready, and add one pint for each nut grated; mix together well and allow to stand until cool. Make ready beforehand one or more cloths, ten to twelve inches square, cut from good, firm material, as a sugar bag; prepare a wide bowl or dish, into which spread open the cloth. Put into it some of the gratings, take up the ends, and wring gently, then vigorously, until nothing more can be squeezed out. The last wringings contain the milk elements, being rich in proteids. The milk is now ready for the table, needing

neither straining nor sterilizing. A little salt added gives a better flavor for use with vegetables or grains. Milk thus made can be used for baking breads or biscuits, for either boiled or baked puddings, and is far superior to cow's milk as stock for vegetable soups. In tropical climates it keeps a whole day without scalding, only a little salt being added.

*For Cream.*—For a good cream suitable for fruit dishes or any other way in which ordinary cream is used, the process is the same, the quantity of water being one cupful to each coconut. Let stand in a cool place, and skim off the cream when risen.

*For Butter.*—The process is the same, the quantity of water being limited to one cupful for three coconuts, the wringing being done more thoroughly. Pour the milk into a flat enamel dish, place on stove and heat, not too rapidly, to simmering. In a few minutes the albumen will coagulate. When it has all

thickened, remove the dish and let cool rapidly. It will then set into the consistency of a jelly and is ready for use. No oil is separated if the milk is heated quickly and not allowed to simmer too long. With or without salt added, it is very palatable, and is an excellent, pure substitute for dairy butter. With salt added, it will keep for three days in a warm climate, and longer in a cold. If kept on ice it could probably be kept for five days. One can partake of it freely on bread, with vegetables or fruit, without fear of taxing the liver or in any way deterring digestion. Children take to it readily. To some the taste is a little rich at first; but after a few trials a liking is acquired for it. A few drops of lemon juice mingled with it impart quite a new flavor, much relished by some.

The value of butter thus prepared is that it contains fat in a perfectly emulsified state and ready for digestion, which is not the case with dairy butter. The latter, when used with hot foods, melts and saturates the particles, so preventing the gastric juice from penetrating and dissolving the albumen present.

For three years the writer has used it freely, and has proved its superiority, having no desire for any other butter, and feeling much better with it than without. In every case where it has been recommended to friends, and used by them, stomach irritation was soon allayed, and all tendency to constipation readily overcome.

A still better substitute for dairy butter can be made from the cocoanut, the process being exactly the same. Cold is used to make the cream rise; which is skimmed, churned, washed,

salted, and made up in pats, and keeps well for a much longer period. The process is not so easy and practicable as the one just described, which can be completed in forty minutes.

Many desirous of obtaining a healthful substitute for dairy butter, have been wrongly instructed in regard to making cocoanut butter. On a recent visit to New Zealand the writer discovered that some friends had been eating cocoanut fat, which, if melted and refined, would make pure cocoanut oil. One good lady had persisted in using the so-called butter until severe biliousness resulted. When a sample of the recipe given above was tried, these friends were highly pleased, and decided in its favor at once. We take this opportunity of recommending to the readers of GOOD HEALTH the use of cocoanut butter as a pure, palatable, and wholesome substitute for the animal product so much adulterated and often the medium of disease infection.

*The Residue.*—The cocoanut gratings left need not be thrown away as useless. Save some, and the rest give to the fowls. Fowls relish nut foods, improve in flesh, and lay more eggs, of a better quality, when fed thereon.

A rich brown gravy can be made from the gratings by adding thereto a little water. Let boil, strain off the liquid, thicken with brown flour, and salt to taste. This adds a pleasant nutty taste and rich flavor to the gravy.

Keep the shells for ironing day, and use for fuel, and the irons will give little cause for distress. The shells may be made into little pots for hanging ferns, suspended by thin wire passed into holes bored through the shell, and fastened above.

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To me let living faith be given  
That works on earth and soars to heaven.  
—Culver.



## SOME CAUSES OF BAD BREATH

BY B. R. PARRISH, D. D. S.



N offensive breath is a functional disorder, liable to occur at all periods of life, and more often in men than in women. Owing to the morbid conditions which may exist, the breath is an important and prominent symptom of many disorders. It is a constant source of misery to all, who, by force of circumstances, are compelled to associate with the unfortunate one. In many instances it is the means of destroying the communion of friends and the pleasures of social life, and those who are thus affected are seldom aware of the existing conditions. With the best intentions in the world, we rarely whisper a word of their disorder or suggest a source of relief. This false kindness is quite universal. It has been left to the physician and the dentist to inform the patient when an opportunity presents itself.

The causes of foul breath are many, but in each case the cause should be removed if possible, and this will afford the only permanent relief. It is the custom of many afflicted in this way to use various kinds of deodorants or breath perfumes, some of which are so strong as to be detrimental to the teeth and mucous membrane.

One common reason for foul breath is uncleanness of the mouth. The teeth, being smaller at the neck than at the crown, allow an accumulation of tartar, particles of food, etc., which is an excellent medium for bacteria. There are four distinct classes of deposits which accumulate upon the teeth: (1) mucoid, due to the abnormal condition of the breath; (2) salivary calculus, the result of improper mastication; (3) green stain, found especially on

the teeth of children, and which arises from an acid condition existing in the mouth; (4) serum calculus, which is generally found upon the inner surfaces of the teeth.

The dentist seldom comes in contact with all four classes of deposits upon the teeth of any one patient, but the most common kinds are the second and the third. Often a person does most of his mastication on one side of the mouth, perhaps because he may have a tooth which is very sensitive upon the opposite side. This not only encourages accumulations of various kinds to become attached to the teeth, but, owing to the non-use of the teeth upon that side, the jaws, both upper and lower, are materially affected, and the teeth are more easily attacked by the agents of destruction.

Teeth decay, likewise, from uncleanness. Small particles of food accumulate in the cavities between the teeth, and soon decompose. This material which has become attached so firmly to the surfaces of the teeth, breaks down the enamel, and then more rapidly destroys the dentine or softer portion of the tooth structure. In connection with this deposit, a minute vegetable parasite is developed in the mouth, called the *Septothric Bucollis*, and when examined under the microscope, it has the appearance of a granular mass, covered with filaments.

Tartar, which may be recognized by its hardness and yellow-gray color, consists of phosphate of lime, mucus, salivary matter, and a peculiar animal substance, the density and compactness of this matter being due to the phosphate of lime. The use of acids for a length of time, either in the form of

medicines or unripe fruit, is another agent producing decay. During the process of mastication many particles of food become lodged between the gums and the teeth. The heat and moisture of the mouth excite and encourage decomposition in the mass. As might naturally be expected from the putrefactive change, the breath becomes impregnated with foulness, and it is almost impossible to remain in close proximity to the patient. The odor is worse than most of the varieties, but is the most easily and effectively removed when the right mode of treatment is followed. If the deposits which collect upon the teeth are allowed to remain, the breath not only gets more foul, but the gums around the teeth are pressed out of place and engorged with bad blood. They bleed at the slightest provocation, and instead of getting better, grow gradually worse, until diseases of the contiguous parts break down the sockets of the teeth and allow them to become loose and eventually drop out. Those who are compelled to wear artificial crowns and bridge-work should also take special pains to

keep the teeth and mouth scrupulously clean if they would avoid an offensive breath.

By careful instrumentation the dentist can remedy this bad condition which so often exists. In some cases it is necessary to use quite vigorous methods in order to accomplish this purpose, but when the teeth have been cleaned and the surfaces polished, it is not a difficult task to keep them so with a brush, which should be used thoroughly after each meal.

There are various preparations on the market, most of which are good, and with a brush aid greatly in preserving a hygienic condition. It is well after each meal to pick the teeth with a polished toothpick, which will not let small slivers penetrate the gums, or to use a silk floss, which may be forced between the teeth. It is advisable to leave it with the family dentist which kind of brush and preparation are best adapted to each particular case. By keeping the teeth free from accumulations and rid of decay, the breath will not be offensive from any of the above-mentioned causes.

#### A Boy's Composition on "Breathing."

"Breath is made of air. We breathe with our lungs, our lights, our livers, and our skin if it's not all stopped up with powder. If it wasn't for our breath we would die when we slept.

"Our breath keeps the life a-going through the nose when we are asleep. Our noses was made for breath and our mouths for food and to talk with.

"Women that stop in a room all day should not breathe. They should wait till they go out of doors.

"People in a room make bad, foul, unholy some air. They make carboni-

cide. Carbonicide is poisoner than a mad dog. A heap of soldiers was in a black hole in India and a Carbonicide got into the hole and killed nearly every one before morning.

"Girls and women kills the breath with corsets that squeeze the diagram. Girls can't holler or run like boys because their diagrams is squeezed too much. If I was a girl I'd wish I was a boy, so I could run and holler and breathe lots of air and have bright eyes and rosy cheeks, a big appetite, and a good diagram.

"Give me air or give me death!"

## OLD AGE IS CURABLE

BY D. H. KRESS, M. D.



PROF. OLIE METCHNIKOFF says: "There is undoubtedly a great resemblance between old age and a diseased state of the body. I believe, therefore, that it will be possible in the future to prolong life beyond the limits which it reaches in the present day. Man attained a much greater age in Biblical times than he does now, and the efforts of science should be directed to bringing about a similar state of things nowadays. The discovery of a cure for the disease we have just been mentioning will be a great step in that direction; and the suppression of alcoholism, which is accountable for twenty-five per cent of cases of arteriosclerosis, will still further increase the chances of the people living to a 'good old age.' But much more than this can be done. *The human system is poisoned in other ways, and in no way so frequently as by the innumerable microbes which swarm in the large intestine. This organ is not only useless in man's present state, but positively harmful.*"

There can be no doubt that the absorption of poisons formed in the colon has much to do with arteriosclerosis, or hardening of the arteries, which is a symptom of decay and old age. Bouchard, the famous French scientist and doctor, has clearly shown that most diseases are the result of self-poisoning, having their origin in the alimentary canal, and that some of the poisons formed are extremely deadly, in many cases having caused almost instant death.

Several years ago one of America's most eminent authorities on physiological chemistry made the statement before a class of students that the

stomach was a *useless* organ, and could easily be dispensed with, and in many instances with real benefit, since it was responsible for so many diseases. Other medical authorities have pronounced the appendix a superfluous and dangerous organ, and in harmony with this belief they have in recent years taken apparent delight in its removal whenever opportunity afforded, thinking that by so doing they were bestowing a great blessing upon mankind. Now Prof. Olie Metchnikoff, recognizing that life is shortened by the deadly poisons which are formed in the colon by the action of an innumerable host of germs, says: "This organ is not only useless in man's present state, but positively harmful," and predicts that in the distant future, it, like the appendix, may be successfully removed and with advantage to the individual.

These assertions remind us of the little farmer boy, who, having intently watched his father amputate the tails of little lambs, remarked: "Papa, God don't know how to make lambs, does he?" In fact, Professor Metchnikoff says: "Man is very, very far from being perfectly constructed."

We believe God knew how to make man, and, further, that he made man upright and perfect, with no useless organ. In fact, after man was formed, the Creator pronounced him "very good." But "man has sought out many inventions." The difficulty we find ourselves in lies not in man's construction, but in man's inventions; it exists in forcing these organs to do what they were never intended to do, in crowding upon them foods or substances that should never find a place in them.

The stomach, when in a normal condition, is not only a digestive organ, but a perfect disinfecting chamber, capable of destroying the most deadly germs. Foods are retained there a sufficient length of time to undergo thorough disinfection. In health, the stomach protects the body from germs of disease. By constant abuse, this organ wears out, the glands fail to secrete the normal amount of acid, and then it loses its power to disinfect. The moisture and warmth of the stomach favor the development and growth of microbes. The alimentary tract, as a result, becomes the hold of every foul germ, and poisons of a most deadly nature are formed, which harden the arteries, bringing on premature old age, and shorten life. Especially is this the case when foods are eaten which readily undergo decay, such as cheese, veal, oysters, fish, and other flesh foods. The same poisons which are formed in these substances when they decay outside the body, are formed in the stomach and colon when the stomach has lost its power to disinfect, or to prevent decay.

There exist animals that are provided with short and smooth alimentary canals, the colon either being smooth or entirely absent, so that the flesh they eat can be rapidly moved along and expelled. But even then, the odor of the expelled residue of these flesh-eating creatures is always extremely offensive when compared with that of herb-eating animals, showing that in spite of this short canal, putrefaction occurs, and a certain amount of poison must be absorbed. No doubt it is for this reason that flesh-eating animals have a strong odor and do not live so long as do herb-eating animals. Cats and dogs when fed largely upon flesh are more apt to disease than when fed

on grains, etc. The sick dog is usually fed upon hard biscuit to afford him an opportunity to get well. Dog trainers, hunters, and owners of valuable dogs, as a rule, find it wise to withhold meat from their dogs, recognizing that even *they* do best on well-baked cereal foods.

Man, however, has a long, succulated alimentary canal and a capacious colon. Not being smooth, it is not nearly so well adapted for the handling of flesh foods or substances which readily decay. Food is, therefore, retained a much longer time. The necessary prolonged retention of such foods in the colon favors putrefaction and the formation of the deadly poisons which are mostly absorbed from the colon. These poisons create many diseases, and, according to Professor Metchnikoff, they shorten life. Certainly, "man is very far from being perfectly constructed" to handle such foods; in fact, he is not constructed at all to subsist on these foods. It may be truthfully said, therefore, that in "man's present state (living as he does) these organs are not only useless, but positively harmful," and the removal of the stomach or colon or shortening of the alimentary canal, bringing it nearer to that of some of the lower creatures, might afford partial relief at least to those who *persist* in using these foods.

But by far the better way would be to fall in with the divine plan and eat the food originally given to man,—the fruits, nuts, grains, and legumes. Who could be a better authority as to the food best adapted for man's physical, mental, and moral well-being than the One who made him and constructed his digestive organs. After man was formed, the Creator placed him in a garden—a fruit orchard. Foreseeing the danger of his eating unsuitable foods and the results that would follow,

He said: "Of every tree . . . thou mayest freely eat," and "Behold, I have given unto you every herb bearing seed, . . . and every tree, in the which is the fruit of a tree yielding seed; to you it shall be for meat." This is the meat given to man. This is the meat that has in a special manner been created to be received with thanksgiving by them that believe and know the truth.

No amputation or removal of stomach or colon will be found necessary by those who subsist upon these foods. Even the appendix may remain, for appendicitis is recognized by leading authorities to-day to be confined almost exclusively to meat eaters.

The departure from the original plan of living is responsible for the existing degeneracy and premature decay.

AN INTREPID BATHER



T

HE Japanese officer must have his hot bath in the evening, all else fading into insignificance beside this important operation. The illustration shows the officer taking a bath in the earthenware jar which is found in all Manchurian homes. As a preliminary procedure to this hot bath, the officer washes with soap in the small bowl

(on the stump of the tree) and rinses off with cold water before entering the jar, as the latter must serve for several more persons.

If the remarkable success of the Japs in the present conflict tells anything, it certainly is indisputable evidence to the value of their strict adherence to hygienic modes of living even in the midst of shot and shell.

## AN APRIL MENU

BY MRS. D. A. FITCH

Barley Soup	
Noodles with Cranberries	Jambalaya
Stuffed Potatoes	Creamed Turnip
<i>Lanseé Brod</i>	Ribbon Sandwiches
Squash Custard	Meltose Cream Pie
Fresh or Stewed Fruit	No-Coffee

### Recipes

*Barley Soup.*— Soak a cup of pearly barley over night, and cook in plenty of water until well done, but not mushy. At proper periods add to it a portion each of minced onion, sliced cabbage and okra, diced carrots and turnip, salt, and enough tomatoes to give an appetizing flavor and color. A little seasoning may be required.

*Noodles with Cranberries.*— Beat well one egg, or more according to the need, incorporating with each a tablespoonful of cold water and a pinch of salt. Knead in flour sufficient to make a stiff dough. Roll as thin as thin pasteboard. Let it dry on one side and then on the other, frequently turning it, but do not let it become dry enough to crack when rolled. Roll it very compactly; with a very sharp knife cut thin slices from the end until all is used. Let these dry thoroughly (they may be prepared several days before needed), and cook in boiling salted water about twenty minutes. Drain in a colander, and give a dash of cold water to prevent pastiness. Reheat, and serve with strained cranberry sauce as a dressing. Any other fruit may be used. Any of the various forms of macaroni may be substituted for the noodles.

*Jambalaya.*— In the usual manner cook red beans or any other legume, being sure to have a good amount of liquid. Half an hour before done, salt sufficiently, add half as much rice as there was of the dry beans, and a de-

sirable portion of diced protose or nuttolene. When done it should be about the consistency of baked beans.

*Stuffed Potatoes.*— Bake smooth potatoes until just done. Cut in halves lengthwise, remove the insides, being careful not to tear the skins. Mash, season, and return to the shells. Have ready some slightly salted, stiffly beaten egg white to cover the top of each piece. Place on a tin in the oven to brown and warm.

*Creamed Turnip.*— Dice turnips and boil until tender, having salted them a while before draining. Somewhat more than cover them with rich milk. When boiling hot, pour in slowly some braided flour, gently shaking the kettle to insure the even thickening of the dressing. Cook a few minutes and serve.

*Lanseé Brod.*— Beat one egg into one cup of milk. Add salt and a spoonful of sugar. Dip into it slices of stale bread and brown them nicely on a well-oiled pancake griddle. Serve while hot.

*Ribbon Sandwiches.*— Spread several slices of bread with butter and some dark-colored filling. Pile on top of one another and gently press together. With a very sharp knife cut rather thin slices from top to bottom. There will be a striped appearance and a decided palatability.

*Squash Custard.*— Prepare squash the same as for pies. Bake in a shallow pudding dish without crust and serve cold.

*Meltose Cream Pie.*— On a larger

saucer spread a thin layer of granose flakes, over which put thinly sliced bananas or any fruit desired. Let the next layer be of malted nuts and threads of meltose. Repeat the whole once

more, adding a top layer of flakes. Over the whole put the stiffly beaten white of one egg with which has been incorporated a teaspoonful of meltose.

## A NORMAL CHILD



ACCORDING to Dr. Holmes, "every sick man is a rascal," and though it may not be true that every rascal is a sick man, it is certain that, in the words of a noted physician, "much that is called total depravity, is in reality total indigestion." The disposition depends largely upon the diet.

This is especially true of children. Their fretfulness and irritability may almost invariably be traced to disorders due to improper feeding. The normal condition of every child, as of every other young animal, is one of happiness and content.

Of the child shown in our picture, her mother says that "she is perfectly



GLADYS LILLIAN LINDSAY

healthy, a bright, beautiful child, and loved by every one." Up to the age of six months, however, her condition was very different, owing to the fact that no

food tried would agree with her. About that time the life of her dyspeptic father was saved by his learning at the Middletown branch of the Battle Creek Sanitarium of the Sanitarium health foods. Since these suited his own feeble digestion so perfectly, he decided to try them for the child. She has since lived principally upon malted nuts, with the result that at eighteen months she is, as shown

in the picture herewith reproduced, a beautiful specimen of normal childhood.

EVEN God can not take your weaknesses away, as a mother picks thistle points from her child's fingers. But he can help you to overcome them, rise above them, vanquish them. You need a good, open, square fight with yourself if you gain the victory over temptations. Never sit down and whine because God does not send an

angel to pull obstacles out of your path. Better pray for strength. Sharpen your axe, and cut a path to higher living.—*Sel.*

"THE thing that goes the farthest  
Toward making life worth while,  
That costs the least and does the most,  
Is just the pleasant smile."

## THE RENEWAL OF YOUTH



**T**HAT men die prematurely, not only by violence, disease, and accident, but even of old age, is coming to be generally recognized. Comparative physiologists, reasoning by analogy, are agreed in fixing the minimum normal length of human life at one hundred years at least, some even placing it at one hundred and twenty.

It is a vital question for each one of us, how far we can ourselves determine the length and healthfulness of our own lives. Most men die of a slow suicide, "digging their graves with their teeth," as one philosopher has observed. "If I were to assign any one thing as specially conducive to long life," says another, "from a study of the habits of centenarians, it would be semistarvation." Does not the fact that most men would consider themselves half starved on the diet found to be most conducive to long life, prove that the majority habitually eat twice as much as they require? We imagine ourselves starved before we are really hungry.

Sidney Smith humorously stated that, according to his own computation, he ate and drank, between his seventh and his seventieth year, forty-four wagon-loads more than was good for him. What becomes of this enormous surplus? Think of the vast amount of life power wasted in the effort to rid the body of the encumbrance! And this effort can be but partially successful.

The work of the eliminative organs is to expel the waste resulting from normal metabolism—the various changes connected with nutrition and waste. When their work is increased and even doubled by having to dispose of an amount of nutritive material not

required in the bodily economy, they become worn out, and lose the ability to do even their normal work perfectly. Consequently, clogging of the organism takes place, nutritive processes are slowed, and all the physical energies are weakened. The disabilities of old age are largely due to the presence of foreign matter in the tissues.

The human body is a marvel of what has been called "intelligent automatism." It distributes supplies where they are needed, makes its own repairs, gets rid of its own waste, regulates its own temperature, and, under normal conditions, maintains a perfect equilibrium. It is constantly renewing itself by degrees, and casting off the old slough, so that there is a complete renovation of the entire body periodically.

The softer tissues change most rapidly. The composition of the blood is altering constantly. We get a new skin every month, new finger nails every four or five months, new toe nails once a year. Even the solid particles that compose the bones are continually being replaced by new ones. The enamel of the teeth is the only part of the body that is not completely changed in the course of a few years. This is provided for in another way. The milk teeth of infancy are replaced by the permanent teeth, which apparently should remain with us until the time for the third set. Numerous cases are on record of centenarians being blessed, after passing the century mark, with a whole or partial set of new teeth, which might be regarded as an intimation that man is intended for a much longer life than most of us anticipate or realize.

All work, physical or mental, even the vital processes themselves, results



in the destruction of tissue. The intake of new material is for the purpose of repairing this, and should be exactly suited in both quality and quantity to the work to be done. A well-trained, or rather an unperverted appetite will indicate just what and how much is needed. When the diet is so intelligently regulated, perfect equilibrium is maintained, and perfect health is the happy result.

"Many a man," writes Sir Henry Thompson, "might indeed safely pursue a sedentary career, taking only a small amount of exercise, and yet maintain an excellent standard of health, if only he were careful that the 'intake' in the form of diet corresponded with the expenditure which his occupations, mental and physical, demand."

The healthy man is physically an entirely new man every few years. The old man has been cast off, and the corpse has mingled with the soil and

air as completely as if it had been buried. One can not grow old so long as this complete renewal of the body is maintained. But when waste and dead matter is not cast off, when the corpse is partially retained, so that the body becomes to a certain extent its own sepulcher, the tissues are poisoned thereby, and the changes incident to old age naturally result.

While this period of decay comes, under present conditions, in due course to all forms of animal life, it is greatly hastened or retarded according as the life is ill or well regulated, especially in the matter of diet. Moderation in diet, a proper dietetic regimen, has more to do with prolonging human life than any other one thing. Indeed, all other physical blessings seem to hang upon this. It not only prolongs life, but, by ensuring perfect digestion, gives capacity for the enjoyment of it, causing all minor annoyances to vanish.

E. E. A.

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### Wholesale Adulteration of Food and Drink.

A temperance wave has struck that portion of New York where numbers of people not long ago were poisoned by wood alcohol, and its effects are being felt more or less all over the country. The investigations which resulted from these deaths led to the statement by Dr. Wiley that fully eighty-five per cent of all whisky sold in this country is a cheap imitation. The ingredients used in concocting these spurious drinks are even more injurious than "pure whisky."

On the other side of the water an English Royal Commission not long ago discovered that the widespread peripheral neuritis in the north of England was due to arsenical contamination

of the acids used in the manufacture of beer. One curious phase of the wood alcohol poisoning is a sudden absolute and incurable blindness of one or both eyes. New York, Philadelphia, and Chicago physicians have observed an alarming increase in the number of cases of paralysis of the optic nerve, and this is believed to be traceable to the use of wood alcohol in beverages. The consumer of intoxicating liquors is not the only one in danger from this source, according to the following statements, which appeared in a recent issue of the *Journal of the American Medical Association*:—

"To a large extent 'Columbian spirits' and other 'deodorized' forms of this deadly poison, wood alcohol, are being substituted for the innocu-

ous or less injurious grain alcohol in all sorts of liquids which, legitimately or otherwise, are used by human beings. These include the medicines we use, the perfumes we smell, the condiments, sauces, and flavors we employ in cooking, as well as the common intoxicating beverages. Surely it is high time that the medical profession should voice an emphatic protest against this wholesale poisonous adulteration of food and drink — an adulteration so far confined, by the way, to the American continent — and consider whether the sale of this 'deodorized' palatable and attractive poison should not be altogether prohibited."

There can certainly be but one opinion regarding the propriety of such a recommendation.

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#### Life-Saving in an Army.

Japan is willing to use up the lives of tens of thousands of her soldiers on the field of battle. She is not willing to waste a single soldier's life by disease if she can possibly help it.

Those two principles put together make an almost ideal policy for warfare, if wars must be fought. Nevertheless, there are many great nations, proud of themselves, that have no practical conception of the importance of life-saving along with life-using in their armies. It is to Japan's credit that she sees clearly and aims high in this regard.

The Japanese standards are, however, but a matter of momentary interest compared with the Japanese ability to achieve the end in view. This latter is a modern miracle. The reports from the chief surgeon of General Oku's army tell a most wonderful story.

In seven months of campaigning, from May 6 to December 1, just forty

men in his army of probably more than 100,000 men died of disease. Nor was this record due to lack of sickness. The cases of disease treated, all told, numbered 24,642. Of these 18,578 recovered while on duty or in the field hospitals, 5,609 were sent to Japan for treatment, and, except for the forty dead, the remainder were undergoing treatment with the army at the date of the report. Typhoid attacked only 193 soldiers, dysentery only 342, but beriberi afflicted 5,070.

The figures for typhoid and dysentery are most significant. Clearly, Japan has mastered those dreaded diseases against which our Western armies are seemingly powerless. No remembrance of our war with Spain is more vivid than the frequent hospital boats and trains full of typhoid convalescents.

In our little war with 275,000 men under arms, but not more than a tenth of them in active service, the death roll from disease was 4,965. Allowing for relative size of armies, but not for difference of service, at least 4,850 of those lives would have been saved if we had attained to General Oku's standard.

Our army surgeons may now go hat in hand to and pick up crumbs of wisdom at the Japanese doorsteps.

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#### What the "Grip" Is.

Asked what made him look so ill, an Irishman replied, "Faith, I had the grip last winter." To draw him out, the questioner asked, "What is the grip, Patrick?"

"The grip!" he says. "Don't you know what the grip is? It's a disease that makes you sick six months after you get well." — *Ladies' Home Journal*.

# Chautauqua School of Health

## A DAY'S WORK

BY J. H. KELLOGG, M. D.

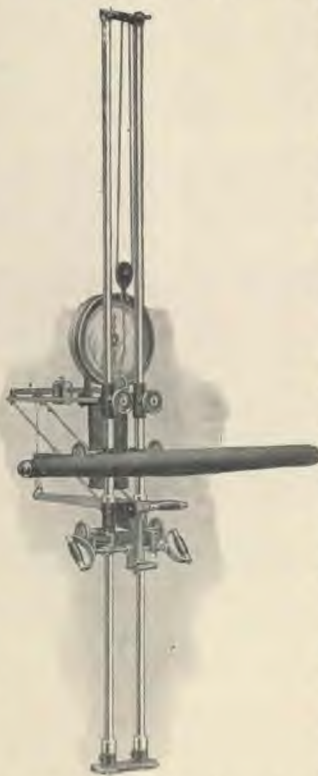
THE amount of work which can be performed by the whole body is much greater than one would naturally suppose. The human body is, in fact, one of the most perfect working machines in existence. It makes more economical use of the food taken into it as fuel than does the most improved form of locomotive. The body is able to utilize one-fourth of its food-fuel in energy, three-fourths going to the production of heat; whereas, the most economical steam engine ever constructed can utilize only about one-sixth of the energy of the fuel, five-sixths being wasted as heat.

The total strength of all the muscles in the body of a very strong man, as shown by the dynamometer, an instrument by which muscle strength is tested, is about ten thousand pounds. The strength of the average healthy man is about two-thirds as much or, we may say, six thousand pounds. Of course no person can lift a weight of ten thousand pounds. The figures given repre-

sent the sum of all the lifts, pushes, and pulls which the various groups of muscles of the body can execute. The anatomist knows each of the five hundred pairs of voluntary muscles by name. This great number of muscles is divided into about thirty groups, but for our purpose we may simplify still more, and divide the muscles of the body into five groups,—those of the legs, arms, trunk, chest, and back.

It is interesting to note something of the relative strength of these several regions of the body. The strength of the legs is almost exactly one-half that of the entire body, and twice that of the arms; so the strength of the arms is about one-fourth that of the whole body. The combined strength of the trunk and the chest equals that of the arms. The strength of the average woman is about one-half that of the average man.

Let us suppose the amount of work which a person is capable of doing in a day is equal to the lifting of 1,800,000 pounds one foot high. This is the



THE UNIVERSAL DYNAMOMETER

amount stated by eminent authorities to be the average day's work of which the body is capable. Let us determine how far a person would have to walk in order to perform this work in lifting his body along a horizontal surface. Supposing the weight of the person to be one hundred and eighty pounds, dividing 1,800,000 pounds by one hundred and eighty, we learn that it would be necessary to lift his own body ten thousand feet in order to do the required amount of work. If the work done in walking twenty feet is equivalent to lifting the body one foot, the distance to be traveled to do the required amount of work will be obtained by multiplying ten thousand by twenty, which equals two hundred thousand feet. Dividing this by 5,280, the number of feet in a mile, we have thirty-eight miles as the distance to be traveled. If the journey involved the ascent of a mountain five thousand feet in height, the required distance would be only one-half as great, or nineteen miles. By similar calculations it is easy to determine the amount of work done in traveling either on a level or in climbing hills or mountains, provided the distance traveled and the altitude ascended are accurately determined. The amount of work done may be increased, of course, by carrying a burden of any sort. If, for example, a man weighing one hundred and eighty pounds should carry in addition to his own weight a burden weighing ninety pounds, the distance traveled would be proportionately less (1,800,000 divided by 270 equals 6,666).

It is thus apparent that a very fat person will accomplish a larger amount of work in traveling a given distance than a person of less weight.

The body is always at work. The heart and lungs do work amounting to much more than one hundred foot tons during twenty-four hours. The simple acts of sitting or standing require expenditure of energy. Rapid walking may more than double the energy expended in a given time, and in running, the amount of work accomplished may be several times as much as that performed in walking at the rate of three miles an hour.

Ordinary slow walking involves very little muscular exertion for a person in ordinary health. When the rate of walking is increased to five or six miles per hour, the amount of muscular work involved is considerable. Walking at the rate of three miles an hour is equivalent to lifting the body perpendicularly through one-twentieth of the distance walked.

In going up-stairs one is obliged to lift the body through the distance from the lower floor to the floor above. Suppose the distance to be ten feet, and one's weight to be one hundred and seventy pounds. Going from the lower story to the upper would involve an amount of work equivalent to lifting a little more than one ton a foot high. To do a day's work, that is, to lift one hundred and fifty tons, the person would have to ascend the stairs about one hundred and fifty times, taking no account of the small amount of work involved in descending the stairs.

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" THE heart that's truly blest  
Is never all its own ;  
No ray of glory lights the breast  
That lives for self alone."

# DANGERS TO THE MAN WHO WORKS AT THE BENCH

BY J. F. MORSE, M. D.

OCCUPATIONS may be classed as dangerous to health when the workman is compelled to labor under any condition which does not allow of maintaining the vigor of the body unimpaired. The first consideration is the air for breathing. In many factories the air is impure from overcrowding, frequently of too high temperature, and saturated with moisture. Probably the worst conditions are found in the so-called sweat shops, but the unfavorable conditions existing in these hotbeds of disease are only slightly modified in the average tailoring and dress-making rooms.

Other classes of laborers to which overheating of the workroom is a matter for especial consideration include engineers, stokers, cooks, bakers, miners, weavers, sugar refiners, foundry workers, and those employed in all kinds of mills for the working of ores. Sudden changes of temperature and long-continued overheating, with severe muscular exercise, make the workman especially liable to catarrhal and rheumatic affections, also to kidney diseases.

Occupations in which irritating gases and fumes are present as the result of the manufacturing processes, are objectionable to the degree in which the substances are poisonous to the system. Deserving of special mention are alkali works, factories in which the fumes of wood alcohol constantly saturate the air. Dust is dangerous when it comes from poisonous chemicals, as arsenic

and lead. Arsenic is present in the grinding of green pigments—particularly those formed by combinations of arsenic and copper, which are used in the manufacture of wall papers and many other decorations, and also in the



FIG. 1

making of artificial flowers. The latter occupation is especially dangerous, as the green pigment is dusted on from a box held in the hand, and the air thus becomes laden with the poisonous dust.

Lead poisoning may occur in the treatment of all lead ores, glazing of paper, enameling, type-founding and typesetting, glass and file cutting, the cutting and polishing of gems, dyeing,

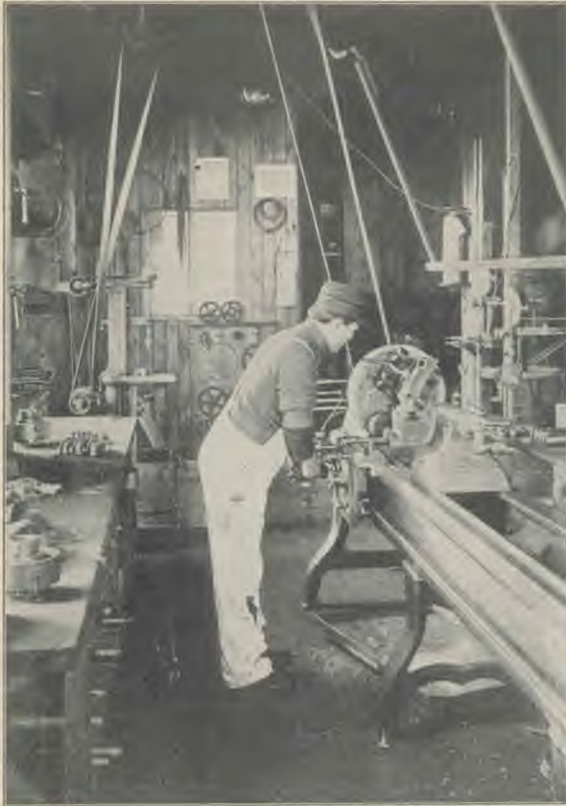


FIG. 2

painting, plumbing, and many other occupations. In the factories of England in one year there were 1,278 cases of lead poisoning, most of which were reported from the china and earthenware trades. Poisoning by lead seems to come from two sources,—the dust in the air, and from carelessness in putting the fingers when soiled with the lead to the lips or mouth. In Paris alone thirty thousand working people are exposed to lead poisoning.

Cotton and linen factory workers are exposed to dust which is very irritating, and are thus especially liable to tubercular infections. In the linen factories of Belfast, employing some thirty thousand people, five-sixths of them women, the deaths from pulmonary tuberculosis and other diseases

of the respiratory tract outnumber deaths from all other causes, two to one. In tables given by Hirt, comparison is made of workers in trades subject to mineral, metallic, vegetable, animal, and mixed dust with those of non-dusty trades, with regard to three classes of diseases,—pneumonia, pulmonary tuberculosis, and digestive disorders. For each one hundred workmen the cases of pneumonia vary from six to seventeen; pulmonary tuberculosis, thirteen to twenty-eight; digestive disorders, fifteen to twenty for the dusty trades. For the non-dusty trades, pneumonia four and one-half; pulmonary tuberculosis, eleven; digestive disorders, sixteen. This shows at a glance the actual dangers of dust in the causation of disease.

A list of occupations involving constrained or cramped positions would include almost all known trades. Of the various deformities caused, those of the chest are most important. Combined with the impure air which is almost always present with the conditions causing such a deformity, it is not surprising that tuberculosis is the most frequent disease. Overexercise of certain parts of the body causes a class of diseases, perhaps best illustrated by the paralysis of telegraph operators, the cramps of writers, pianists, and violin players, and engravers. Many occupations may be classed as sedentary in which deformities caused by abnormal positions are frequent. Deformities of the chest are especially common among those who work at desks, typewriters, and low benches. The very low vitality of the tissues

caused by lack of sufficient activity is explanation enough for the poor nutrition and general weakness usually found.

To get the picture vividly before our minds, let us imagine that some one has gone through the principal factories of our fair land and placed upon the arm of every fourth worker, man or woman, a piece of crape; then as we watch them file from the side doorway at the end of their day of toil, attempt to count the number, which would be one-fourth of the multitude, remembering that they are marked for death by the unfavorable conditions of their occupation. Let this list include, also, the stenographers and other desk workers in every business house throughout the land, and we have some idea of the relation of the occupations to disease.

Much might be done to correct these existing evils. The first appeal should be to the employer to realize his responsibility for the lives of his workers, that he may furnish sweet, pure, life-giving air for breathing. This also necessitates the proper removal of the impure air. Many devices have been arranged to provide for the safety of the fingers and hands of those working with dangerous machinery. Some factories have installed dust hoods which by strong suction remove practically all of the dust made by the machines. A few factories have proper ventilation, but the number is pitifully small.

Education of the working class to habitual cleanliness when about their work would save many lives. While preparing this article, the proprietor of large pottery works told the writer that he had never seen a case of lead poison-



FIG. 3



FIG. 4

ing; that the dipping room where lead is used in his factory is as exquisitely clean as a parlor. Pure air, cleanliness, and simple living would solve the problem of health.

Another remedy which is practically under the control of the workman himself is the attitude maintained by the body. Our first picture shows a mechanic at his lathe in the position which he usually occupies. The second shows the correct standing position. The third and fourth illustrate the incorrect and correct positions somewhat more strikingly, as they show the exact position of the bones of the body in each case. In the incorrect position notice how distinctly narrowed and cramped the chest is, as well as how compressed the abdominal organs are, both of which are entirely relieved by taking the correct position. Figures 5 and 6 show the incorrect and the correct position when writing at a desk.

Do not think that because you are not among the class of people indicated by the heading of this article you have nothing to do. The responsibility for your own health and possibly the health of other people rests upon your shoulders. If each would do what is within his power to correct the existing evils, much might be accomplished. Are you doing your share? It means a little personal work. There is no royal road to health. Adopt a simple, nutritious dietary, spending sufficient time at meals to chew the food until it is a liquid and disappears from the mouth without swallowing. Get all the outdoor air and exercise possible. Breathe deep; sit, stand, and walk erect.



FIG. 5



FIG. 6

Sleep eight hours soundly. Use every muscle in your body at least a little every day. Do these things, and

even though your work may be at a bench, disease will have no hold upon you.

### THE STANDING SPONGE BATH

THE sponge bath may be administered in a more vigorous manner to a person who is able to stand erect. If the patient is not much accustomed to cold water, and does not react very readily, he should stand in a hot foot-bath at a temperature of  $104^{\circ}$  to  $110^{\circ}$ . This will excite the circulation so that reaction will be assured. The patient should be covered with a large sheet or a blanket to retain the heat of the foot bath until he becomes warm. In the meantime a pailful of water at  $60^{\circ}$  or  $70^{\circ}$  is made ready, with two large bath sponges. The pailful of cold water, with the sponges immersed, is placed just in front of the patient. The pa-

tient bends forward over the pail while his head, scalp, face, and neck are drenched with cold water by the aid of either a saturated sponge or a towel. The attendant takes his position close to the patient, facing his right side. Bending forward, he seizes the two sponges, lifts them out of the pail, and presses them firmly together, lifting as much water as they will carry without dripping. The sponges are then applied, one to the chest, the other to the back, and then up and down the whole front and back of the trunk. After the back and front have been thoroughly rubbed, the patient turns his back to the attendant, and clasps his



hands over his head, while the attendant vigorously rubs the sides of the chest and the under side of the arms. The arms are then dropped, and the sponges are applied to the arms. Dropping the sponges in the pail, the attendant now vigorously rubs the trunk, chest, and arms with the hands, rubbing rapidly, making firm pressure. The rubbing should be continued until the surface begins to redden. The sponges are then applied to the legs, first the right and then the left, one hand rubbing the front of the leg while the other rubs the back. The patient then turns himself so that the outer and inner surfaces of the legs may be rubbed in a similar way. Dropping the sponges, the attendant now rubs the legs vigorously with the hands, and finishes by dipping his hands in cold water and again thoroughly rubbing the chest, back, and arms, and percussing the back and chest.

The time occupied in sponging each half of the body should be five to twenty seconds. The duration may be increased as the patient's ability to react increases. The whole treatment should be finished within one to two minutes.

If the patient is thin in flesh and has little power to react, and especially if the patient fears the contact with the cold water, the sponges should be squeezed quite dry. The vigor of the application may be increased to any desired extent by lifting the

sponges from the cold] water without squeezing, and prolonging or repeating the application; that is, after the patient has been once sponged and rubbed, the sponging may be renewed, to be again followed by rubbing, thus repeating the applications as many times as may be desirable.

A still more vigorous method is to have the patient stand in a large tub containing two or three inches of cold water ( $70^{\circ}$  to  $60^{\circ}$ ). With two sponges which are redipped in the water of the tub every four or five seconds, the attendant very rapidly passes over the body, making long sweeps the whole length of the trunk, and now and then from the head to the feet. After sponging for fifteen seconds, the patient is rubbed for the same length of time, the whole surface being gone over rapidly; then the sponging is renewed. The effect is increased by pouring into the tub a pailful of water five or ten degrees lower than that first employed ( $60^{\circ}$  to  $50^{\circ}$ ).

As soon as the bath is completed, the patient steps out upon a dry mat, a bath sheet is thrown about him, and he is vigorously rubbed, special attention being given to the arms, legs, and back, the patient himself rubbing the front of the body. As soon as the patient is dry, he should dress, and take some form of exercise for twenty to thirty minutes or until reaction is complete.



STANDING SPONGE BATH

J. H. K.

# CHAUTAUQUA SCHOOL OF HEALTH SEARCH QUESTIONS

## A DAY'S WORK

1. Tell about the economical use by the body of the food taken into it as fuel.
2. What is the dynamometer ?
3. What is the total strength of all the muscles of the body of a very strong man ?
4. Of the average healthy man ?
5. What is the relative strength of the muscles of the legs, arms, trunk, and chest ?
6. How much work do the heart and lungs do in twenty-four hours ?
7. Walking at the rate of three miles an hour is equivalent to what ?

## DANGERS TO THE MAN WHO WORKS AT THE BENCH

1. What classes of laborers are especially subjected to overheating and to abrupt changes of temperature ?
2. What occupations involve other dangerous conditions ?
3. From what causes may lead poisoning occur ?
4. What disease is particularly noticeable among workers in cotton and linen factories ?
5. What is the cause of the poor nutrition generally found in those whose occupation is sedentary ?
6. What corrective measures would tend to ameliorate the existing conditions in most shops and factories ?
7. What can each individual do to put himself above the disease level ?

## THE STANDING SPONGE BATH

1. How may a sponge bath be more vigorously administered ?
2. What additional measure is sometimes necessary ?
3. Explain the method of giving a standing sponge bath.
4. What should be its duration ?
5. What precaution should be taken if the patient is thin, and if he fears the cold water ?
6. What is a still more vigorous method of giving the sponge bath ?
7. What should always follow a bath of this kind ?

# Health Chats with Little Folks

## HOW TO SIT



HOW many things that are in common use to-day, and that we think we could not get along without, were unknown to our great-grandmothers. Gas, electric light, sewing machines, railway steam engines, etc., had not been heard of one hundred years ago. Yet they lived just as happily as we, and did not dream how many things they had to do without. In one hundred years from now, the people would wonder how *we* lived, without the many new things that by that time would have been discovered or invented.

Yet the simple, natural life of the first men, who knew nothing of the many inventions that men have sought out, was just as happy as, if not happier than that of those who live among the luxuries of the present day.

One of the inventions of men for their comfort and convenience is *chairs*. The custom of sitting as we do upon raised seats is not a natural one. The people that we call "savage," a word that really means people that live in the woods, know noth-

ing of chairs. They sit upon the ground, usually in the squatting position shown in our pictures. When they are weary and need rest, they lie full length upon the ground.



TURK



HINDU



KOREAN

Have you seen a tailor at work with his legs crossed in front of him? This is the Turkish way of sitting. Even when a Turk is sitting upon a raised seat he draws up his legs under him as if he were sitting upon the ground.

Japanese, Hindus, and other Eastern races all sit in the same manner upon the ground.

The first kind of raised seat that was invented was the stool. But people found that when sitting with the body raised from the ground, they needed a resting place for the back. So a back was put to the stool, and it became a chair. The man who loved his ease invented arm rests for the chair, which make the arm-or elbow-chair.

The savage and Eastern races who sit or lie upon the ground are usually well formed. But among civilized people who use chairs, one often sees stooping shoulders and flat chests.



INCORRECT POSITION

Look at the picture of the child reading, and you will see one of the chief reasons for this. Have you not often seen a boy or a girl sitting huddled up in this shape? If one spends much time in this bad position, the body grows into this form. The back curves outward, and the head pokes forward, making one look foolish and awkward.

When the shoulders are brought forward in this way, they press upon the chest and flatten it, and one can not take full, deep breaths and get plenty of fresh air and keep his blood pure. The stomach and liver are crowded down, and can not do their work properly. A person who lets himself grow into this shape can not be healthy and strong.

This picture shows the right position, with the chest for-



CORRECT POSITION

ward, the shoulders back, and the chin in. One should be very careful to keep this position when sitting.

In the ordinary straight-backed chair it is not easy to sit upright for long at a time, because there is no support provided for the lower part of the back. A special chair has been invented that just fits the curve of the back, and rests every part of it, when one sits in the right position. This is called the "Sanitas chair," but if it is not convenient for you to use this particular chair you can make a very good substitute for yourself by putting a pad or cushion at the lower part of the back of the chair, to fit into the curve of your own back.



INCORRECT POSITION

E. E. A.

A STORY is told of a benevolent mill-owner in Preston, who fitted up baths in his mills, and required every person employed by him, to bathe regularly. Most of the men submitted, but not without grumbling. One of them, regarding the conduct of the employer as tyrannical, sought an interview with him, when the following conversation took place:—

"Oh, Mr. —, I've called about this washing."

"Well, what of that, John? I'm furnishing you with the means of being

cleanly, and improving your health.

"Yes, I know," replied the workman; "but are we to wash ourselves?"

"Certainly, you are; it is for your own good, and I must insist on it. It is very important that people should cultivate habits of cleanliness; so all that work here must wash themselves."

"What — all over?"

"Yes."

"What! feet an' all?"

"Nay, I'll not; neither my father nor my grandfather ever washed their feet; and I'll not. I'll leave first."

FOUR things a man must learn to do  
If he would make his record true:  
To think without confusion clearly;  
To love his fellow-men sincerely;  
To act from honest motives purely;  
To trust in God and heaven securely.

—Henry van Dyke.

## .. *By the Editor* ..

### THE NATURAL WAY IN DIET

WE have apparently wandered further away from nature in diet than in any other particular. In the first chapter of Genesis we have a picture of man in his pristine innocence. The Bible teaches, as did the mythology of the Greeks and Romans, that there was a time when man in his innocence lived a simple life out of doors, among the trees, plants, and fruits. The diet given to him by God was the fruit of the trees and the seeds of the plants, while the herb of the field was to be the food of the lower animals. Man's bill of fare was fruits, nuts, and seeds. In the beginning he was given no instruction nor permission by his Creator to eat flesh.

It would seem that flesh eating was in the first place the result of necessity. The man who first tasted flesh must have become desperate as the result of starvation, and resorted to it to preserve his life; for there is nothing in the taste of flesh that one naturally likes. Children have to be trained to eat meat, just as one has to be trained to drink beer or to smoke.

Pythagoras, the great philosopher of the ancient Greeks, advocated a return to the natural diet of man — the diet of fruits, grains, and nuts. He preached very strongly against the eating of flesh food, and had a colony of vegetarians at Crotona, where hundreds of his disciples lived with him on the simple dietary furnished by the earth. Ovid describes his views: —

“If men with fleshy morsels must be fed,  
And chaw with bloody teeth the breathing bread,

What else is this but to devour our guests,  
And barb'rously renew Cyclopean feasts?”

Many people do eat their beefsteak as if it were bread. They do not stop to think that the slaughtered animal was not a thing, but a breathing, sentient, intelligent being. To slaughter such a creature, to knock him insensible, tear off his skin, remove his entrails, and set what remains upon the table and eat it, — is really a heinous thing when we stop to think about it. Pythagoras is represented by Ovid as saying, —

“Not so the Golden Age, who fed on fruit,  
Nor durst with bloody meals their mouths pollute.

Then birds in airy space might safely move,  
And timorous hares on heaths securely rove,

Nor needed fish the guileful hooks to fear,  
For all was peaceful, and that peace sincere.

Whoever was the wretch (and cursed be he)  
That envied first our food's simplicity,  
The essay of bloody feasts on brutes began,  
And after forged the sword to murder man —

Had he the sharpened steel alone employed  
On beasts of prey that other beasts destroyed,

Or man invaded with their fangs and paws,  
This had been justified by nature's laws  
And self-defense. But who did feasts begin  
Of flesh, he stretched necessity to sin.  
To kill man-killers, man has lawful power,  
But not the extended license to devour.

\* \* \*

“Take not away the life you can not give,  
For all things have an equal right to live.”

Though this comes from a heathen philosopher, there is conscience, and

sense, and reason, and ethics in it. To kill and eat an animal as a necessity to preserve life is justifiable. But when nature has provided us with such an abundance of good things to eat, to slaughter an animal simply to gratify perverted appetite, is another thing. It unquestionably leads to war. It was but a step from "the essay of bloody feasts on brutes" to the forging of "the sword to murder man."

Butchers become so hardened by their occupation that the shedding of blood is to them a small matter. In the Chicago riots a few years ago, the awful atrocities were committed by the butchers. Those who have been into the great abattoirs and seen the slaughter of the animals will never forget the sights; for instance, a man clad with a loin-cloth, standing ankle-deep in gore, and covered with blood from head to foot, sticking a large knife into the throats of pigs swung up before him, and the blood pouring out. The influence of this business on the characters of men is recognized in the exclusion of butchers from the jury when a man is on trial for his life, because they have not a proper sense of the value of life.

Our unnatural bill of fare has brought upon us severe penalties. A host of maladies grow out of our diet. Every man who eats largely of meat is of necessity shortening his life, because he is adding to the waste matters of his own body those of another body. It is the wastes of our bodies that kill us, as Professor Metchnikoff, of Paris, has recently

shown most conclusively. The accumulation of waste matters in time produces degeneration of the arteries, resulting in old age, since a man's age depends, not on years, but on the condition of his arteries. When the effete matters of another animal are added to those of a man's own body, the period must early come when these poisons will be so accumulated that they will lead to some grave disease which will shorten life, as apoplexy, aneurism, or angina pectoris.

More than this. When a man eats an animal, he takes in with it the disease; the animal had at the time of its death. If the animal had trichinæ, he swallows the trichinæ and they make the man their habitat. One trichina may produce a thousand, and so the whole body is quickly filled. Ham sandwiches lose something of their charm when we consider that in at least one case out of ten you are likely to be swallowing trichinæ; for ten per cent of all hogs are affected. In foreign countries animals are carefully inspected, but in this country we have no protection against diseased animals, except in some of the larger cities.

Another parasite that infests animals is the tapeworm. Beef and pork are the only foods from which one can possibly get tapeworm.

The simple life, in which we eat natural foods, will protect us entirely from all these dangers. No tapeworm nor trichinæ are to be found in bread, or nuts, or pears, or cherries, or plums, or peaches. None of these natural foods are subject to any deadly disease.

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## THE BEST FOODS FOR GROWING CHILDREN

CHILDREN from five to twelve years of age can take any food that is wholesome for persons of any age; for at the age of five years the child is fully developed as far as nutrition is concerned. It can then digest any food that can be digested by adults.

It is necessary that special precautions

should be taken not to deprive the child of anything that it really needs. The child of five requires half as much food as the adult; the child of twelve, about two-thirds or three-quarters as much as an adult requires. A child needs much more food in proportion to its size and weight and years than an adult, for the

reason that material must be furnished for the growth as well as for daily use. This must be taken into account.

The growing child especially needs those elements that are found in whole-grain preparations. A child fed on soft bread and butter and sweet dishes, or on potatoes, with very little nitrogenous elements, is starved. Such foods do not furnish sufficient bone- and muscle-making material. Any food lacking in blood-making material is also lacking in salts; and foods lacking in salts are likely to be lacking in proteid also.

Whole-grain preparations are of great service, but we can get the same elements elsewhere. You will not find finer specimens of well-developed human beings than are to be found in Ireland, especially in the northern part. The Irish giant, the largest man recorded in modern times, whose skeleton is in the museum of the Royal College of Physicians and Surgeons in London, was over eight feet tall. This man was raised on potatoes and buttermilk, the common diet of the Irish peasantry. The potatoes furnish the starch

and carbohydrates; the buttermilk furnishes the proteid—the blood-making material—and the necessary amount of fat, making a complete dietary.

Nuts and fruits constitute a perfect dietary. You can raise a young monkey from youth to old age on nuts and fruits; and nuts and fruits are just as good for a boy as they are for a monkey. There is nothing better than nuts for boys. How far they will travel to find a nut tree, and what laborious efforts they will make to get a few nuts. The child has a natural appetite for nuts, and one can live well on nuts and fruits. These foods contain everything that is required, in the right proportions.

The most important thing is that the child shall eat the food properly. He should be taught to masticate every portion so thoroughly that it will be liquid before it leaves the mouth. The child's appetite will then call for the proper amount of food. Not only so, but it will call for just the right kinds of food.

Sweets are good for children, but they should be sweet fruits, not candies.

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## THE CLOSED DOOR

THE business of the liver is to manufacture antidotes for poisons. It is a rendering establishment to which the dead fragments—the little corpses that accumulate in the body—are carried to be destroyed. In every city the various dead animals are gathered up by a scavenger and taken to the rendering establishment, where they are converted into all manner of useful things. The liver is to the body a sort of rendering establishment which disposes of the dead corpuscles. All the corpuscles of the body die every six weeks. Every second of our lives something like 18,000,000 of these red cells have to be disposed of, and the liver does part of the work of grinding them up and working them over into something useful. The red corpuscles have potash in them, which is used for

making bile. The bile is a kind of lye for making soap in the small intestine. This soap, like all good home-made soaps, is disinfectant; it is a splendid antiseptic and germicide. It destroys the germs in the alimentary canal, helps in the digestion and absorption of food, is useful as a laxative, and in a variety of ways. The coloring matter is carefully saved out of these red cells, and sent back into the body to be used for dyeing the hair, tinting the skin, and painting the dark chambers of the eye where the photographing is done.

If the liver does not do this work as efficiently as it ought, these little corpses accumulate in the body. In other words, the body becomes a sepulcher, and we carry about with us dead things that should have been discharged from the

body through the bowels, the kidneys, the skin, and the lungs, and should have returned to dust again.

The liver is a closed door which keeps poisons out of the rest of the body. The kidneys, skin, and lungs are open doors to let the poisons escape from the body; the liver is a closed door to keep poisons from getting into the body. It is wonderfully interesting to see how the liver is placed in the circulation of the blood for the purpose of accomplishing this.

The blood that comes down from the heart to the stomach, spleen, pancreas, and intestines is gathered up by itself and carried into one large vein called the portal vein, which conveys it to the liver, where it is purified and sent into the large vein that conveys the blood back to the heart in a pure state again. All the food taken into the stomach is filtered by the liver before it is absorbed. That is why one can, with apparent impunity, take such things as tea and coffee, whisky, beer, tobacco, etc.; all these impurities are passed through the liver before they get into the general circulation. If they should go straight to the brain, the drinker would fall dead shortly after taking his glass of whisky.

When the liver is plump and healthy, full of glycogen made from the food, it has a wonderful faculty of destroying poisons; but a starved liver can not do this. That is why a glass of whisky taken before breakfast does a man twice as much harm as if taken after breakfast. A dose of medicine taken on an empty stomach is much more powerful in its effects than a similar dose taken when the stomach is full, for the reason that a full stomach furnishes the liver with material which it makes use of to fight poisons.

Suppose a man takes into his stomach quantities of whisky, rancid fats in the shape of cheese, decomposing milk, dead fish, beefsteak with *haut-gout*, game, and fancy poultry not cooked until in an advanced state of putrefaction. When peo-

ple eat things of that sort, the liver is supplied with more poisons than it can possibly deal with, and they pass by into the veins.

The normal liver is a closed door, but when there comes such a flood upon it, it can not keep its door shut; it is forced open a little way and lets the poisons through into the blood. Then the blood is not purified; the impurities go through and the body becomes filled with them. The brain becomes confused, dull, stupid, and the man feels bilious. The poisons get into the muscles, and he feels weary and worn out; they get into the nerves, and he has sciatica or lumbago; the nerve centers get irritable and inefficient and there is nervous exhaustion and perhaps melancholia.

A man in this state is intoxicated by the poisons generated in his own body, by the putrefactive processes taking place in his stomach, colon, and intestines. His body becomes saturated with these putrescent corpses, and has an offensive odor about it. A corpse is simply decomposing flesh, and when a man's body is full of that sort of thing he is really a sepulcher. This is the condition of the body when a man has been filling himself with unwholesome things. For instance, thousands of people are now living almost entirely on meat. The reason they do so is because it is easy to get; it is the principal thing found at the hotel or boarding-house. It is also easy to eat, can be swallowed without much mastication, and will digest quickly in the stomach. One does not have a sour stomach, eructations, or gulping after eating meat. Starch will ferment in two or three hours, but meat requires a longer time to get to that stage, and it produces ptomaines instead of acids. These alkaline ptomaines make no discomfort or trouble in the stomach; but after they are taken into the blood, the liver and the kidneys have to wrestle with them, and soon the body becomes saturated with them.



## ... Question Box ...

**10,177. Asthma.**—J. G. W., California: "I am twenty-nine years old, and have always been subject to attacks of asthma, with sometimes a lapse of two or three months. Change of climate, diet, fasting, etc., do not seem to lessen the attacks. Please advise."

*Ans.*—This case requires general constitutional treatment as well as dieting and change of climate. We would advise you to visit a sanitarium conducted on the Battle Creek Sanitarium plan. We have in California a number of such institutions. We can recommend especially the St. Helena Sanitarium, Sanitarium, Cal.; the Glendale Sanitarium, near Los Angeles; the Paradise Valley Sanitarium, near National City; and the Garden City Sanitarium, San José, Cal.

**10,178. Cold Hand.**—W. R., Ohio: "The third finger of my left hand, when slightly cold or in contact with a cold substance, becomes white and numb and remains so for a long time. Please give the cause and cure."

*Ans.*—You are suffering from a nervous affection which may become serious, the symptoms giving ground for strong suspicion of the approach of Raynaud's disease, or what is known as "dead finger." The case should receive attention immediately. It is especially important that your whole general vital resistance be built up. Uric acid should be eliminated. Discard meat. Chew food very thoroughly. Avoid excess of proteids. Live outdoors as much as possible. Take warm baths frequently. Bathe the hands in alternate hot and cold water. Visit a sanitarium for a thorough course of health training.

**10,179. Kerosene — Lemon Juice — Creeping Paralysis.**—Z. V. F.: "1. Is kerosene good for the hair and scalp? 2. Is lemon juice injurious when used to cleanse the teeth? 3. What is the cause of and cure for dizziness and blindness when rising from a stooping position? 4. Is there any cure for creeping paralysis?"

*Ans.*—1. Kerosene will destroy parasites in the skin, hair, and scalp, and is on this account sometimes beneficial.

2. No.

3. Sudden contraction of the blood vessels of the brain.

4. The disease can be arrested, but seldom cured.

**10,180. Enemata.**—A. W. McF., Idaho: "1. Are enemata to be recommended above the use of physic? 2. Are enemata injurious after the prolonged use of artificial means? 3. How may the natural movement of the bowels be restored? 4. Have you a book on constipation? 5. What is the price? 6. How much water should the average person drink during the day?"

*Ans.*—1. Yes.

2. No, if the temperature of the water is 80° or less. Warm water is relaxing and harmful.

3. By lowering the temperature of the water and gradually diminishing the quantity.

4. "Home Hand-Book of Domestic Hygiene and Rational Medicine."

5. Address the Modern Medicine Publishing Company, Battle Creek, Mich., for prices of the different styles.

6. Two or three pints, unless fruit is used freely.

**10,181. Fasting — Lithemia.**—G. I., Utah: "I have had rheumatism and gout for twelve years. Much use of the ankles or toe joints or fingers and wrists is painful. General health is otherwise good. 1. Do you advise fasting for thirty or forty days? 2. Do you advise regular exercise of the affected parts?"

*Ans.*—1. No.

2. Yes.

**10,182. To Reduce Flesh.**—A subscriber asks for an exercise to reduce flesh on neck and hips.

*Ans.*—A general reduction of weight by abstemious diet and walking eight or nine miles a day will doubtless be effective.

Special exercises alone will not accomplish much. Massage of the neck and hips may be employed in addition to walking exercises, and some advantage may be gained from such exercises as bending the thigh, bending the neck forward and backward, twisting it to one side and the other, making resistance with the neck muscles, holding the neck muscles rigid so as to increase the work considerably. These movements ought to be executed several hundred times a day to accomplish much effect. Fomentations followed by cold rubbing and massage of the fleshy parts may be applied three or four times daily with advantage.

**10,183. Nervousness.**—A subscriber in Newfoundland asks: "1. What are the symptoms of nervousness? 2. Does food affect the nerves? 3. What food is best to strengthen the nerves? 4. What kinds are injurious?"

*Ans.*—1. Nervousness is in itself a symptom of fidgets; that is, inability to sit still. Twitching of the muscles, confusion of thought, irritability, inability to concentrate the mind, and a great variety of other symptoms are included under the general head of nervousness.

2. Certainly.

3. Foods that are most readily digested.

4. Meats of all kinds are highly injurious, and any excess of proteids is objectionable. Not more than an ounce and a quarter of proteids should be eaten daily. Food should be thoroughly chewed, and should be taken in moderate quantity. The total amount of food should be limited to the actual requirements of the body. By thorough chewing, food may be reduced to half or two-thirds the amount habitually eaten by the majority of people.

**10,184. Intestinal Catarrh.**—F. E. G., Michigan, asks: "1. What diet is best for gastric and intestinal catarrh? 2. There is lack of desire for movement of bowels. What do you advise for relief in this case? 3. My diet is strictly fruits, grains, nuts, and potatoes. The feces are quite soft, and greenish in color. What special foods would you recommend?"

*Ans.*—1. Send to the Modern Medicine Publishing Company for a copy of the last edition of Mrs. Kellogg's cook-book, entitled "Science in the Kitchen." This furnishes recipes for dishes which, if taken in moderation, may be safely used by almost any one suffering

from gastric or intestinal catarrh. If there is much irritation, the taking of food in too large quantities must be avoided. Fats in particular must be taken in moderate quantity. All meats must be avoided, also every coarse vegetable. Everything must be thoroughly chewed, and should be reduced to a liquid state before it is swallowed; and all coarse, woody matter, like the hulls of peas and beans and seeds of fruits of all kinds, must be carefully avoided.

2. The free use of fruit; and the use of the cool or cold enema, from one to three pints daily. The temperature of the enema may be 75° to 80° at first, and may be gradually lowered to 50° or 60°.

3. Pan-Peptogen, malt honey, fig bromose, and similar preparations are especially excellent for you.

**10,185. Pregnancy.**—C. G. B., Minnesota: "1. What is the best general diet during pregnancy? 2. What exercises are most beneficial? 3. Is sewing on the machine in any way harmful? 4. Recommend suitable literature."

*Ans.*—1. The Battle Creek Sanitarium menu. Careful observations which have been made on the subject have shown that no advantage whatever is gained by any system of starvation or confining the mother to special articles of food. Nature is so insistent on the proper development of the child that if a special dietary is followed, calculated to starve the child so as to make it small and prevent hardening of the bones, the child does not suffer, but rather the mother.

2. Walking, and general household exercises.

3. No, not unless continued for long periods and until fatigue or exhaustion are experienced.

4. "The Ladies' Guide," published by the Modern Medicine Publishing Company.

**10,186. Ensign Remedies.**—M. R., Ohio: "1. What is the standing of the men who manufacture the Ensign Remedies? 2. Is there any danger in taking these remedies? 3. Do they give better results than drugs?"

*Ans.*—We know nothing about these parties or their remedies; but in general we feel it perfectly safe to say that all patent medicines and nostrums are utterly unreliable and inefficient as a means of cure.

**10,187. Numbness of Thumb and Finger — Itching of Ears.**—Mrs. P. G., Ohio: "1. What causes numbness of thumb and fingers, beginning with a smarting and burning? This trouble is of eight months' standing. Please advise. 2. What is the cause of and cure for intense itching in the ears?"

*Ans.*—1. There are several causes. You may be suffering from neuritis. You should submit your case to a competent physician for thorough examination.

2. The trouble may be eczema, or it may be disease of the middle ear. You should consult a specialist and have a careful examination of the ears.

**10,188. Fat — Food Combinations.**—W. P. P., Wyoming: "1. What is the difference between grease obtained from frying cream down to grease and butter fried to grease, or any other free fat? 2. Are potatoes and cream or milk a good or even fair combination? 3. What do you advise with potatoes if milk, cream, fruit, or canned fruit do not agree?"

*Ans.*—1. None at all.

2. Better than milk alone for people with the average slow digestion.

3. A poached egg, or such food as protose or Sanitas meat, makes a proper combination with potato, and will be found especially advantageous in cases in which the articles mentioned do not agree.

**10,189. Sciatica.**—H., Massachusetts: "1. Is there such a thing as neuritis of the sciatic nerve? Suggest treatment for one so afflicted. 2. Is this a disturbance of nutrition? 3. Can it be permanently cured. 4. A woman of thirty-one has for ten years suffered from acidity of the stomach, so much so as to be reduced almost to the verge of starvation. What is the cause and cure?"

*Ans.*—1. Yes. Fomentations or radiant heat should be applied over the affected part twice a day. This should be followed by a heating compress covered with mackintosh applied to the whole limb. The patient should rest in bed until the difficulty has disappeared.

2. Yes.

3. Yes.

4. The patient is suffering from hyperchlorhydria. The cause may be in the blood, or it may be some reflex disturbance. The patient should put herself under the care of a thoroughly competent physician. As you are in Massachusetts, we would recommend that you visit the New England Sanitarium at Melrose, for a thorough investigation of your case and such treatment as you may require.

**10,190. Horsford's Acid Phosphate.**—M. J. S., Colorado: "1. Is this preparation harmful? 2. What is its composition? 3. Is it assimilated by the system?"

*Ans.*—1. It is not food.

2. Its most important constituent is phosphorus.

3. Probably not.

**10,191. Constipation.**—J. F. S., Ohio: "A baby of twenty-two months has for about six months been troubled with constipation. Eats plenty of fruit, perspires very easily. Please outline diet."

*Ans.*—We recommend for the child fruit juices, malt honey, Pan-Peptogen, Sanitarium infant food, baked potatoes carefully prepared, granose flakes, hard-boiled yolks of eggs.

**10,192. Uric Acid.**—C. S., California: "1. Outline diet for a woman of forty-four with too much acid in blood with consequent bladder trouble."

*Ans.*—Discard meats of all kinds, also tea and coffee. Drink water freely, at least three or four pints daily; make a free use of fruits, particularly sub-acid and sweet fruits. Take very little proteids, that is, albuminous foods. Eat sparingly. Spend the greater part of the time in the open air. The case should be submitted to a competent physician for a thorough examination.

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**NOTICE** our advertisement of New Books and special prices if ordered with one year's subscription to GOOD HEALTH. We can now supply you with "Studies in Character Building," price, \$1.25 postpaid; or "Healthful Cookery" (revised to date), price, postpaid, paper, 25 cents; board, 50 cents; cloth, 75 cents.

**GOOD HEALTH PUB. CO., Battle Creek, Mich.**

## LITERARY NOTES

THE most valuable record of Indian life in the United States that has ever been made is a great collection of photographs by E. S. Curtis, an artist-photographer of Seattle, who has spent many years in making pictures of the primitive types of the fast-vanishing tribes. A selection from these wonderful pictures appears in the March **Scribner's** with an article by George Bird Grinnell, the editor of *Forest and Stream*, who is an adopted Indian chief. He says that these pictures are the best that have ever been made, for fidelity to nature combined with artistic feeling.

The March issue of **Success** contains, among other interesting matters, the second instalment of Mr. Cleveland Moffett's "The Shameful Misuse of Wealth." This time Mr. Moffett deals with "The Real Race Suicide." He emphasizes his subject with a number of important facts which bear out the value of his series. Mr. Moffett presents one of the most important problems of our great cities: the condition of very poor mothers who are unable to employ doctors, and are left to the care of unprincipled practitioners. He shows that thousands of babies die annually from lack of care, and in contrast to this condition he brings out many extravagances of the rich, stating that a small percentage of the squandered money could very well be employed for the betterment of the conditions of the poor. Many of the extravagances that Mr. Moffett brings out are really startling.

"The girls in Switzerland, for instance, are taught not only to read and write and spell, but to cook, to wash, to sew," says Robert Webster Jones, in the March **Housekeeper**. "In addition to being trained for the duties of home-making and housekeeping, each girl is taught some useful trade. Many of the pupils are daughters of rich parents, and there is little likelihood of their ever having to earn their own living, but the paternal government takes the view that every member of society should possess the ability to be self-supporting, even though the necessity to exercise that ability should never arise. No expense has been spared in equipping the schools of Switzerland for the teaching of domestic science.

"The boys, too, have not been neglected in the Swiss system of education."

From cover to cover the March **McClure's** teems with interest. In the discussion of vital topics, in action, in humor, and in verse it runs the gamut of human experience. It is a number with never a dull page, and crowded, too, with sound, solid matter.

In the March **Arena** there are several notable papers which persons desiring to keep in touch with world questions of the day should read.

In the March **Woman's Home Companion** appears the first of Mr. Dodge's series of articles on "The Truth about Food Adulteration." It has been prepared under the direct supervision of Dr. W. D. Bigelow, chief of the Division of Foods of the United States Bureau of Chemistry. It will create a sensation.

The articles in **The Pilgrim** for March touch the high standard long since set by this admirable magazine.

In its departments *The Pilgrim* for March is most complete. Every member of every family will find something of interest in the magazine, which is indeed what it set out to be—"a magazine for all of every family."

We have had the World's Fair at Chicago; Atlanta was the scene of the famous Cotton States Exposition, Buffalo had the Pan-American, St. Louis its surpassing exposition, and Portland is next on the list, but in 1907 a celebration will occur which for historic interest will, perhaps, excel all of these, for the ceremonies will commemorate the tercentennial of the settlement of Jamestown by Capt. John Smith and his little band of adventurers. It was in 1609 that Henry Hudson discovered Manhattan Island, at the mouth of the river which bears his name, but two years before this Smith, had planted corn on the banks of the James River and, with his men, was erecting the stockade which was to defend the future city.—From "The Nation's Birthplace, by Day Allen Willey, in **Four-Track News for March**.

PUBLISHERS' DEPARTMENT

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J. H. KELLOGG, M. D., EDITOR

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BATTLE CREEK. . . . . MICHIGAN

THE following is a hint of the splendid stories and most interesting articles contained in the March **American Boy** :—

The list of stories contains: "Under the Mikado," by Kirk Munroe (Chapters 8, 9, and 10); "The Champion Corn Plover," by Mott R. Sawyers, the story of a persevering farm boy; the continuation of "My Four Years at West Point" and the opening chapters of an English school story entitled "A French Frog and an American Eagle," which

the boys will hail with delight. Among the larger articles in the paper are "Just between Ourselves," by the Editor, who treats of "Going to Church;" "Schoolboys Then and Now;" "The Boy Who Is 'Going To';" "The Iroquois Indians," telling of their courage as pilots and voyageurs; "Making Men Safe," telling of the career of Supt. George W. Beach, who during thirty-two years never had a serious accident on his railroad; "The Boys' Garden," a finely illustrated article by Hugo Erichsen; No. 5 of "Among the Birds;" "Rex, Police Dog," telling how a policeman's dog of intelligence aided his master in his duties; "Owls as Pets." Short biographical sketches, with pictures, of Sir Alfred Harmsworth, the great English newspaper publisher; William Barclay Parsons, the man who built the New York subway, and Oscar II, King of Norway and Sweden; "How to Make and Throw a Lasso," besides other articles of interest too numerous to enumerate here. In addition there are all the departments which interest and inform the readers: "Boys as Money-makers," "Amateur Journalism,"

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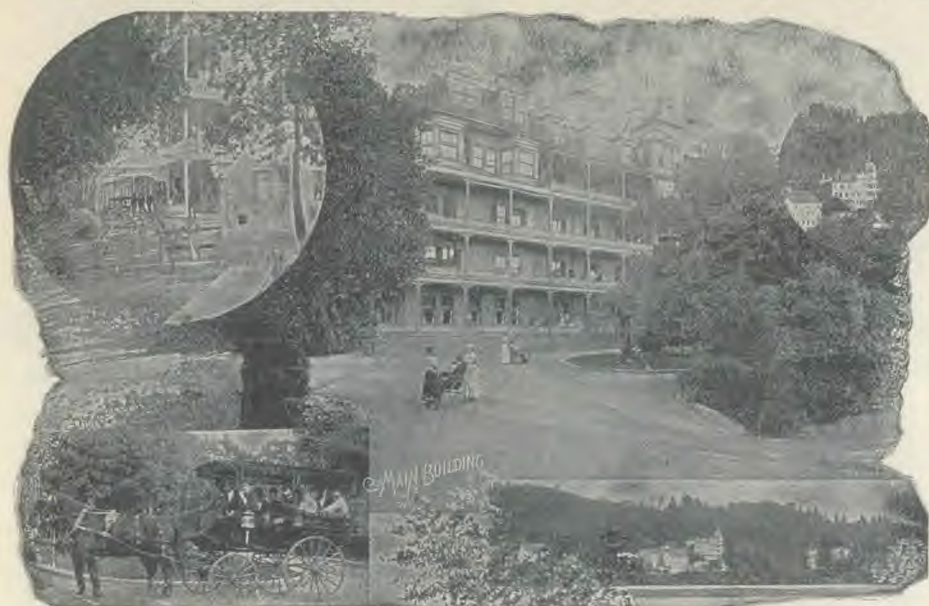
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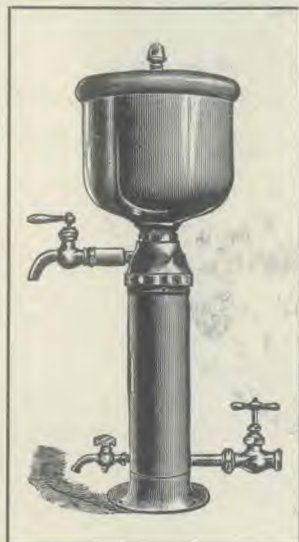
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