

The Diet Question Number

VOL. XXXIX.

Edited by J. H. KELLOGG, M. D.

NO. 9

GOOD HEALTH



September, 1904.

The New Dietetics.
Health Work in India — *Ill.*
Modern Faith in the Mysterious.
Cuba as a Health Resort — *Ill.*
Good Samaritans.
"Shoddy" Diet.
How the Professional Woman
May Secure Exercise — *Ill.*
The Intestinal Disorders of In-
fancy.
Shall We Eat Raw Food?
Heliotherapy — *Illustrated.*
Stimulants.
How Much Shall We Eat?
CHAUTAUQUA SCHOOL OF
HEALTH: The Shower Bath
(*Illustrated*); Refreshing
Drinks and Delicacies for the
Sick; How to Arrange a Bill
of Fare; Typhoid Fever.
Hundred Year Club.
Editorial.

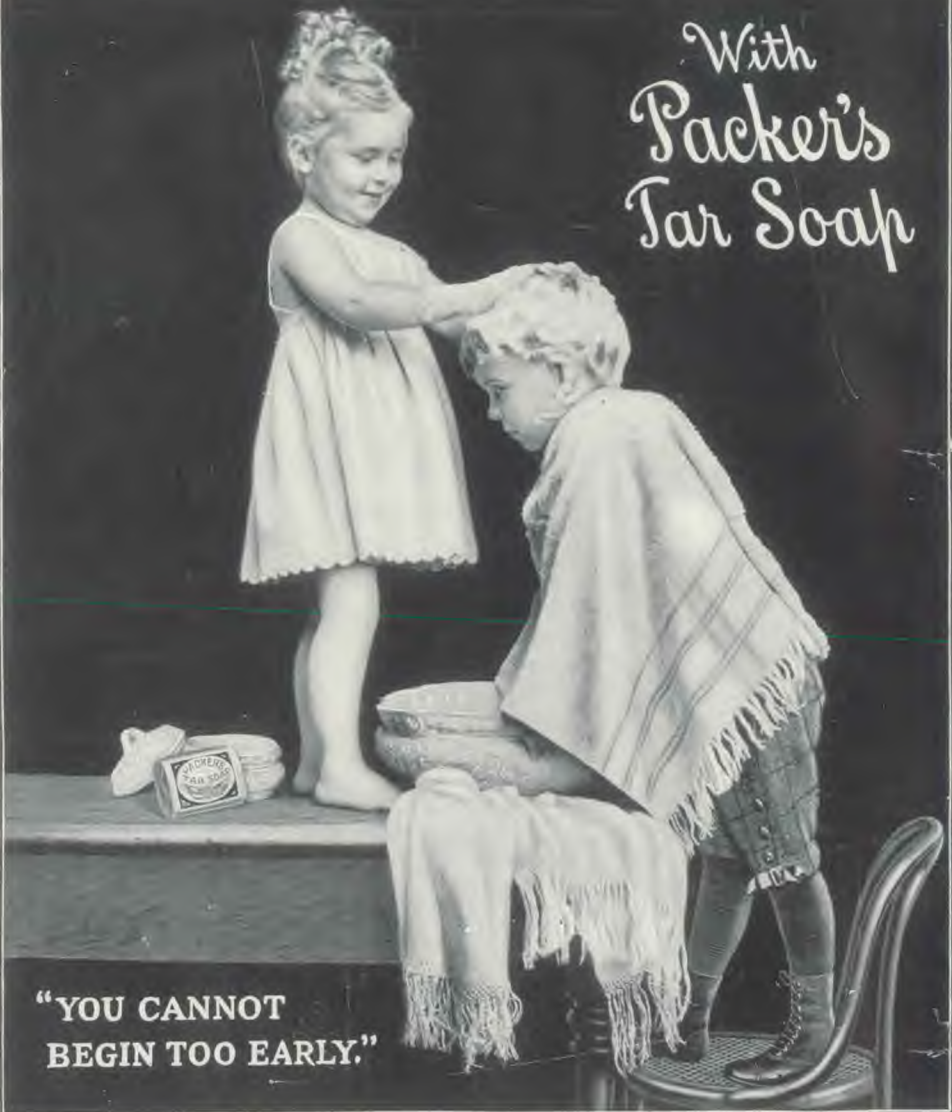
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PUBLISHED MONTHLY

Entered at the Post Office in Battle Creek, Mich., as Second-class Matter.

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Is the oldest health journal in the world. It is owned and published by a philanthropic association organized for the purpose of promoting hygienic reform in general and especially dietetic reform. There is no private interest, and the journal is not the organ of any institution or association other than its own.

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THE patrons of the Battle Creek Sanitarium have arranged for a Battle Creek Sanitarium Day at the World's Fair. The World's Fair management have granted the use of their most beautiful Congress Hall for the purpose.

The date selected is Thursday, September 29. The whole day will be devoted to a discussion of the principles, purposes, and methods of the Battle Creek Sanitarium System, and the various cognate enterprises connected with it. Representatives of the Battle Creek Sanitarium and the various allied institutions, including the leading physicians who represent the system in various parts of the world, will be present and will take an active part in the proceedings, together with many distinguished persons who have enjoyed the benefits of this system at the Battle Creek Sanitarium and various other allied institutions in the United States and foreign countries.

The day's proceedings will close with a hygienic banquet, to which all who attend the Congress will be welcome. After the banquet there will be held a reunion of Battle Creek Sanitarium patrons, physicians, and nurses. No pains will be spared to make the occasion interesting, profitable, and entertaining. Each one who attends the Congress will be presented with an elegant souvenir of the occasion. Do not forget the date, Thursday, September 29.

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"When earth repays with golden sheaves
The labor of the plough,

And ripening fruits and forest leaves
All brighten on the bough;

"What pensive beauty autumn shows,"

GOOD HEALTH

A Journal of Hygiene

VOL. XXXIX

SEPTEMBER, 1904

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THE NEW DIETETICS

BY J. H. KELLOGG, M. D.

PAWLOW, the eminent Russian physiologist who has charge of the great government experimental laboratory in St. Petersburg, has come forward with the publication of some remarkable experiments in which he has been engaged for five years; which, put alongside of facts previously recognized and observed, enable us to outline scientific dietetics and to lay down fundamental principles that are so clear and simple that they can be easily understood.

In the first place, Pawlow commenced operations upon dogs. He partitioned off from the dog's stomach a small stomach or pouch one-tenth the size of the larger one, and connected with the skin by a glass tube, so that he was enabled to see what was going on inside the stomach. When anything was taken into the dog's stomach, what happened there took place also in the small portion, although no food was allowed to pass into it. The gastric juice was produced in a pure state, so that he was able to study it and to find out what effects were produced by different substances introduced into the stomach.

Pawlow found that when he introduced meat into the stomach, a very acid gastric juice was formed. When bread was given, the gastric juice was only slightly acid, but it had remarkable digestive power. When he gave milk,

a very weak and slightly acid gastric juice was formed. The germs in meat make it necessary that the gastric juice should be very acid in order to disinfect the meat and prevent it from decaying in the stomach. It was found that when food was held in the mouth, gastric juice was poured into the stomach, and the juice formed was exactly adapted to the digestion of that particular food.

Pawlow also discovered some interesting facts about the saliva. He made a hole in a dog's throat, so that anything swallowed came out through this hole instead of passing into the stomach. When he gave the dog pebbles, very little saliva was made. When the pebbles were ground up into sand, the dog made a great quantity of saliva. When Pawlow had his dog well trained, he found that if he stood at some distance from the dog and threw the pebbles to him, he would catch them, entering into the experiment heartily because he knew he was going to be well fed afterward. When he made a motion as if to throw the pebble to the dog, but did not throw it, the dog produced just a little saliva, which would trickle out of the hole in his throat. When he showed the dog some sand and made as if to throw it at him, his mouth poured out quantities of saliva, although there was not a grain of sand in it. These experiments

show the influence of the mind upon the digestive organs.

Pawlow made the remarkable discovery that there are certain substances in the food that call forth the digestive juices. These substances have the effect, while the food is still in the mouth, of causing the stomach to pour forth what Pawlow calls "appetite juice." If a person is hungry and chews his food, digestive juice will be formed in the stomach before the food gets there. If a person is not hungry, and so does not relish his food, he will have no appetite juice to welcome the food in the stomach and begin the digestive process. So it is a matter of great importance that one should have an appetite and that food should be relished.

Pawlow says, "Hunger means juice." An all-gone feeling in the stomach may be due to the presence of gastric juice which is attacking the stomach because there is nothing there to digest. This was proved by an interesting experiment. He had one particular dog which had always been fed by a certain man. When feeding time came, the man who was accustomed to feed the dog, came into the room, and three or four minutes after, the gastric juice began to trickle out of the little pouch, showing that the dog was all ready for a meal. The influence of the sight of the food upon the psychic nerves was sufficient to cause the stomach to pour out gastric juice, and to get ready for the meal the dog thought was coming.

Pawlow found that after the man had been through the room a few times without paying any attention to the dog, this experiment did not work. If the man showed the meat to the dog, the gastric juice began to flow at once; but after he had disappointed him a few times, this also had no effect. He then found it necessary to take the

meat and cut it into small pieces, laying it piece by piece upon a plate, just as when the dog was regularly fed. When he did this, the gastric juice would flow, even before the dog had smelled the food.

These experiments are of marvelous interest, because they show us the importance of the method of taking our food,—the preparation of the food, and the manner of eating it. We see the significance of ornamenting the table with flowers, and having the food tastefully served, making it agreeable to the senses of sight and smell, as well as the sense of taste.

Pawlow found that besides these flavors there are certain important substances that are recognized by the nerves of the stomach and that cause it to pour out what he calls "chemical juice," a process which begins from fifteen to forty-five minutes after food has been eaten. This chemical juice is the result of the stimulation of food upon the gastric nerves. If the gastric nerves were paralyzed or atrophied, there would be no stimulation, and consequently no juice. If a person had no appetite, this would be an indication that the glands, for some reason or other, were not prepared to make gastric juice. Pawlow noted that if a small amount of food were put into the stomach, it would begin to excite the nerves of the stomach, which would react upon the brain, influencing it in such a way that an appetite would be produced. The digestive juice produced in this way he called "igniting juice." Or, if a little gastric juice were taken into the stomach, the presence of this would cause the stomach to call for more food, so that the gastric juice would be brought out in abundance.

Most people have had such an experi-

ence as this: You sit down to the table with no appetite, thinking you do not care to eat at all. But after taking a mouthful of food, you are surprised to find an appetite beginning to grow, and the longer you eat, the more appetite you get. Eating seems to create an appetite. Pawlow explains that this is due to the stimulating effect of food upon the stomach nerves. The substances in the food which give rise to this stimulation of the nerves are called

peptogens, an important food element.

From these observations we learn that when a person has slow digestion he ought to take foods that contain peptogens in abundance, and well-flavored, appetizing food. The food should also be thoroughly chewed; for the juice made in the stomach while the food is in the mouth is the best kind of gastric juice,—the most powerful and active, the best in quantity and quality.

LIFE

If life were only what a man
Thinks daily of,—his little care,
His petty ill, his trivial plan;
His sordid scheme to hoard and spare;
His meager ministry, his all—
Unequal strength to breast the stream;

His large regret—repentance small;
His poor, unrealized dream,—
They're scarcely worth a passing nod:
Meet it should end where it began.
But 'tis not so. Life is what God
Is daily thinking of for man.

—*Julia Lippman*.

HEALTH WORK IN INDIA

IN spite of the wide-spread notion that the people of India live very simple and healthful lives, the frequent epidemics of plague and cholera that sweep them away by thousands show that there is much to be desired from the standpoint of hygiene and sanitary science.

Although lentils and rice form the basis of nearly every meal, yet the Hindus are not, strictly speaking, vegetarians. Most of them eat fish and all manner of creeping things that live in the water. They also eat the flesh of the goats sacrificed to their idols. With the lentils, rice, and vegetables that form their staple articles of diet, they use large quantities of *ghi* (clarified butter).

That which renders the whole diet of the Hindu worse than anything we are accustomed to in the European or

American, is the large amount of peppers and spices of all kinds used in cooking. Red peppers, or chillies, are eaten cooked and uncooked, and every dish is flavored with the famous Indian curry. This is a powder made of pepper, salt, turmeric, ginger, tamarinds, onions, cocoanut juice, garlic, saffron, etc., mixed according to the taste of the individual, and added to the fish, flesh, fowl, or vegetable.

Sweets, in the form of doughy cakes fried in oil, most indigestible compounds of grease and sugar, are eaten to excess.

All, old and young, chew the betel nut, and a leaf called *pahn*, together with a little lime. They claim that it is for the digestion, but in reality it is a narcotic.

The character of the Hindu diet is doubtless responsible for the dyspeptic



BATTLE CREEK SANITARIUM HEALTH FOOD FACTORY IN CALCUTTA

disorders to which so many of the natives are subject. Enlargement of the liver and spleen is a very common condition. Colds and pneumonia are by no means infrequent.

Health work was started in Calcutta six years ago. Two sets of treatment-rooms are now in operation here, under the supervision of physicians educated in Battle Creek Sanitarium methods. Their equipment consists of electric and electric-light baths, Russian bath, sprays, massage and manual Swedish rooms. "All the Hindustani are masseurs, as well as sort of surgeons," says a physician practicing there, "and they will give a man a thorough massage on the street for four cents, or come to the house and give the treatment for six cents." But the white people do not employ these native masseurs.

A number of Battle Creek nurses are

stationed in different parts of India, and their work has been much appreciated by the English official residents. There is now a nurses' training-school for natives at the headquarters in Calcutta, and efforts are being made to instruct the people in hygiene, healthful cookery, etc.

The native Hindu, as well as the American, has the medicine habit. He does not wait until he is sick, but takes medicine as a preventive. Patients bring their bottles, expecting a supply of medicine. Unless they are well dosed they think nothing is being done for them, and will go elsewhere and get medicine. But confidence gradually increases as the effects of the rational remedies used become apparent.

One of the difficulties of the foreign nurse in India is the fact that a high

caste Hindu will die rather than receive food from a Christian or anyone but a member of his own caste. But Christian love can break down even these race and caste prejudices, and those who at first refuse will often afterward accept without hesitation.

It is very difficult to get food pre-

pared by the natives in a hygienic way. This fact has made the health foods shipped from Battle Creek peculiarly acceptable. A factory has recently been established in India for the manufacture of these foods, which will greatly facilitate the work of the physicians and nurses.

E. E. A.

MODERN FAITH IN THE MYSTERIOUS

BY DAVID PAULSON, M. D.

It is apparently being demonstrated that an era of great intellectuality is as favorable to the development of superstition as were the times that we are pleased to call the Dark Ages. We read of the medical superstitions of those days with mingled pity and disgust, while we are likely to forget that the patent medicine vender, the nostrum fakir, the healer by occult means, is to-day reaping a bountiful harvest by preying upon those possessed of similar superstitions.

Dr. Osborne, professor of materia medica at Yale University, has been making a careful study of this subject, and reported the results of his investigations at the recent meeting of the American Medical Association at Atlantic City. "Recent investigation in Berlin shows that sixty per cent of the quacks who are doing good business were ordinary day-laborers before they became so-called benefactors of mankind; eighty-five per cent had been servant-girls, and thirty per cent of the total number of quacks had criminal records."

Dr. Osborne calls attention to a man who claimed, through the daily press, that he had wonderful powers of curing. He was arrested for fraudulent use of the mails, and during the time that he was in detention, 32,600 letters were

seized, most of them containing money. He also states that a magnetic healer who proposed to heal by absent treatment, was, in a short time, taking in twenty-five hundred dollars a day. Another magnetic healing concern that claims to cure by absent treatment, or influence, has developed such a business that it keeps eighty typewriters busy.

Dr. Jacobi, the eminent New York physician, is authority for the statement that American people are spending two hundred million dollars a year for patent medicines, nostrums, and quack remedies. The real potency of most of them consists in the amount of cheap whisky, morphin, and cocain in their composition.

The *Journal of the American Medical Association*, in a recent editorial, calls attention to the alarming increase of sudden deaths from heart disease. During the year 1902, there were 5,461 such cases in New York City. The Board of Health in that city has investigated the composition of the headache powders so freely sold at almost every drug-store, and found that nearly all of them contain acetanilid, which is well known to be distinctly a heart depressant. Professor Jacobi also insists that "it is an actual tissue poison, to be used only with great care."

Reliable information in regard to how to develop physical health and strength in the only way in which it is really obtainable; that is, by a wholesome dietary, properly graduated exercise, pure air, suitable hot and cold bathing, and a correct regimen otherwise, can now be readily obtained by anyone; yet thousands of people scorn the right way, and superstitiously seek to secure health by patronizing quackery. The newspapers are filled with disgusting advertisements which would never appear if they did not pay.

Beautiful scenery all over America and Europe is disfigured with hideous sign-boards flaunting advertisements of various remedies purporting to do the impossible. They would not be there were it not for a large class of people in this enlightened age who are so thoroughly wedded to superstition that they have more faith in all this spectacular display of the mysterious than they have in the power of the plain, common-sense principles underlying physiologic methods of caring for themselves.

CUBA AS A HEALTH RESORT*

BY REV. WALTER A. EVANS

II

POPE'S saying, that "the greatest study of mankind, is man," finds illustration certainly in Cuba. Cuban peculiarities are something *peculiar*, especially to one from the temperate zone. They are partly a matter of climate, no doubt, but more the result of mingling of races and centuries of struggle against the poverty of tyranny under Spain. The better class of Cubans who have been schooled and have traveled are far more affable, polite, and accommodating to a stranger than people of any community are here. If they are a shrewd hand at a bargain,—barter their recognized mode of trading—it is because they have never known any other way of doing business; and as for shrewd and high-handed sculduggery in "business," they are mere children compared to the swindling Americanos who are in Cuba *only* to swindle, many of them a disgrace to their own country and a curse to *Cuba Libre!* Cuban children are an endless amusement as well as a real joy to the stranger who loves

children. They are of all colors, from Negro to Caucasian, frequently, in a large family, children of the same parents showing both hues, and several shades between. But especially in the better class of families they are delightful company, polite and obliging, though as quick to resent a slight as to appreciate an attention.

Words fail in trying to picture these people in their strange customs. But here are a few attempts at picturing what can only be appreciated by being ^{of} seen. Morning, 6:30: Here come caravans of horses and mules from far into the country to market produce. All is carried in pack saddles slung over the beast and made of palm leaves to hold three or four bushels on each side. One is laden with milk in cans and bottles, peddled from door to door by the boy astride, at five cents per *bottle*,—the Cuban standard of measure is a *bottle*—nearly a quart. One has bananas and oranges on one side, and a pig with his head and squeal sticking out on the other. There's one with bags of char-

* Copyright, 1904, by Rev. Walter A. Evans.

coal,—the fuel of Cuba—and there's another with bunches of grass tied up and piled up on a rack over the horse and on both sides until scarcely more than head and tail are visible! Here comes a water seller with a little cart full of five-gallon ex-kerosene cans, now full of water, drawn by a team of goats. Then again a team of four yoke of oxen, hitched by the horns, as in Abraham's day, to a massive two-wheeled cart made

tools. Chicken peddlers with *gallina gorda* (fat hens) tied by the legs, hung over the peddler's shoulders and carried miles to market, then cried from house to house with heads hanging down till sold—the same sometimes also with pigs. Street processions at night of a religious character, with hundreds of children having burning candles in their hands and carrying images of Jesus and Mary. John the Baptist and Jesus



CUBAN ARCHITECTURE—COLLONADE STYLE

wood like iron, with wheels eight feet high, and piled with giant logs of mahogany and cedar that weigh tons. How they are loaded onto the two-wheeled cart without machinery is a mystery. And so it is in endless variety.

Children of the poorer classes go nude till four or five years of age. There, now, on the doorstep of brick are a number of little fellows playing marbles with sea beans, or sitting astride a log, sweetly unconscious that they are just as Adam was before aprons were invented! Yonder are carpenters doing excellent work with clumsy, hand-made

amusing the crowds on the *plaza* (park) before a cathedral at night by shooting firecrackers and rockets at each other. Goat carts, their drivers having for sale at night abominable ice-cream, and others with all manner of sweet things, of which Cubans are very fond, besides pork sausage of an especially choice brand, made very rich with garlic, costing seventy Spanish cents per pound! Here are groups of men in groceries drinking rum (there are no saloons in Cuba) and wine, mixed with water; all jolly, but none of them tipsy. The writer saw but five drunken Cubans in

all his travels of five months, and four of *them* were celebrating an election of their party,—a justifiable excuse, as they thought!

But in all this change in Cuban life there is no such thing as hurry. The



MILKMAN

old Anglo-Saxon adage, "Never put off till to-morrow what you can do to-day," is exactly reversed in this land of sunshine—an excellent place for slowing up from "the strenuous life." It takes a week or two to rent a house or to buy a horse. A Cuban simply *won't* hurry or *be* hurried. He will take his *time*, to talk, to roll his cigarette, to *think* about it over his cup of *café negro* (black coffee, which, with the everlasting black and raw tobacco, is a great injury to Cubans, men especially, and probably accounts for the fact that the men who begin using it before clothes, are usually two sizes smaller than the women), to take a daily *siesta*, and he will have no care for the morrow. The tropic sun has something to do with this quality of the Cuban character; it makes an Americano lazy in time. The bountiful provision of nature for sustaining man without labor also has something to do with it, as well as the unworrying Negro blood which flows in the veins of most Cubans. Thousands in every Cuban city, not the

rich, either, seem never to do anything at all (and how they live is a mystery); while a Cuban woman above the lowest grade, dressed gaudily, her face covered with white powder, however dark *she* is, never thinks of stooping so low as to sweep a room or cook a meal. They take time to enjoy life! Who says they are wholly at fault? Here one learns how superfluous are many of our whimsical "necessities," and learns what a tyrant Mrs. Grundy is. He drifts awhile on the sluggish stream of this somnolent *ennui*, and is let down from the high-strungness of this accursed American hustle!

4. *Change of diet also contributes to the helpfulness of a winter in Cuba.*—Here one, like a jaded horse, can go out to grass! One is likely to get weaned, at least in part, from meat eating here; for he can *get* no good meat (it is eaten the same day it is dressed), and a humane man can hardly eat meat as he thinks how the poor animals are *tortured* before they are killed. A man will, for example, bring pigs to market twenty miles, their legs tied together and slung over the back of a jogging mule. Horrid! One turns to fresh vegetables and fruits with eggs and *pan*,—Cuban bread, which is made without yeast or baking-powder, thoroughly kneaded till it is *done* (a hard crust outside), and which is simply delicious when fresh. These substantial afford an excellent basis for the following menu: Oranges, half a cent each! Pineapples, such as you never saw here, appetizing and *peptonizing*, at five cents each. The cheapness adds to their flavor! Bananas of many flavors and varieties, two kinds especially like the ambrosia which the Greek gods fed upon; *viz.*, *mansanas* and *datils*, scarcely ever seen elsewhere. Plantains, a large species of banana, four-

teen inches long and nine inches around, which are sliced and fried in butter. The writer bought a string of fine *mansanas*, with one hundred and five delicious bananas on it, for thirteen and one-half cents Americano! It is cheaper to eat there than to starve! And the food value of one acre of bananas, according to Humboldt and other eminent authors, is one hundred and sixty-six times as great as one acre of wheat. Here, also, are nisperos, chimetos, mameas, — like jelly inside, sweet and nourishing — and limes, — all picked in winter or early spring. And melons! The writer has seen muskmelons, in late winter in Havana, as big as the prize pumpkin at an Illinois county-fair, of delicious flavor. Besides, there is a variety that grows on trees. Some American gardeners near Havana market watermelons in New York in February that bring a dollar and a half each, and weigh thirty to forty pounds apiece. Besides, here are also beans of many and strange varieties, some of them when cooked almost as large as plums, and, somehow, better than any bean ever eaten elsewhere. Yams, the tropic potato, which grow to weigh ten to twelve pounds, and though of a slightly different flavor, are better than our finest potato. Fresh sweet potatoes, too, all winter. Cocoanuts, green and ripe, chayotees, Spanish tomatoes, and Bermuda onions just out of the ground, do not exhaust the list of dainties for tickling the palate of the vegetarian epicure, while they help to make him *robusto*. Among such a variety one can simply eat, drink, and be merry for a while, and return home the better for it.

5. Study of new species of plants, flowers, and animals also adds healthful entertainment to the winter tourist in

Cuba.— Here the hibiscus flower, which is rarely seen in a greenhouse or private conservatory at home, with a crimson flower two inches across, grows wild, blossoming all the year with flowers as large as a bowl. Here, too, all those plants which by much trouble and expense are cultivated in conservatories and palm gardens for their beauty, but which, out of their natural environment, never come to their normal growth, are seen in their full splendor in *patios* and even in field and forest. The banyan tree, which shoots out branches that take root and become trees themselves, and which in turn shoot out branches, till one tree sometimes covers half an acre of ground; rubber trees; trees of all the citrus fruits, beautiful in foliage, deliciously



TREE MELONS

fragrant in bloom; mango trees, *massive*, symmetrical, dark green foliage every day in the year, and during several months of the year covered with what is probably the most delicious fruit in all nature. The writer has seen

probably five hundred bushels of mangoes hanging on one tree. If they all ripened at once, they would destroy their parent tree. For beauty in foliage and blossom, nothing can exceed the



SABINAL BAY, COLUMBIA, CUBA: SEAT OF AN AMERICAN COLONY

tree known as the royal *poinciana* when in blossom in April. Graceful in form, leaf like the sensitive plant which we sometimes see here, and covered with magnificent spikes of lovely crimson flowers in every part, it seems as if Nature were trying to see what she could do to charm the eyes of him who loves the beautiful in tree-life.

Curiously, there is no venomous serpent in Cuba, nor are there any ferocious beasts. Animal life is on a small scale, the same animal there, as, for instance, the deer, averaging several sizes smaller than the same genus in the

United States. There are birds of beautiful plumage, doves of delicate colors and shading, ducks of every color of the spectrum in their plumage, parrots so pretty that you can forgive their endless chatter. If singing birds are fewer in number there, the general average is fully kept up by the wonderful music of the *sinsonte* — the tropic mocking-bird. The first time the writer heard one, he stood riveted to the spot and wondered what it could be. He bordered on rudeness to get into the big house where it was, and stood entranced for half an hour and listened to that wonderful songster with beak open, throat distended, pour-

ing forth every note of all bird creation, and more, too; for to give a full variety he whistled the air of "Hiawatha" and several other popular pieces of music.

But we must stop somewhere and leave the rest for some of our readers to find out for themselves when they go to Cuba. If any jaded Americano, suffice it to say, wishes to have a profitable winter where he can live for half what he can in the frozen North, rest tired nature, or get rid of some troublesome complaint as above mentioned, he will probably find what he is looking for in *Cuba Libre*.

SOMETIME, somewhere, perhaps we'll know
 The meaning of the things we suffer here —
 The discipline of life, which stings and
 smarts;
 The throes, the soul-pangs and the heart-
 throbs,
 The spirit's anguish, and the stifled groans,
 Which rend our souls asunder and destroy
 Life's sweetness and make sad and drear
 The days which might be full of sunshine and
 of joy.

Sometime, somewhere, mayhap we'll know.
 —K.

GOOD SAMARITANS

BY HORACE FLETCHER

IT has always been recognized that nursing of the sick is the best part of doctoring, but it is only of late years that it has been made a profession, with a long course of study and practice required of the certificated professional.

My duties called me to be in attendance at one of the great hospitals of London for a month. So perfect are the arrangements, and so beneficial the services of these institutions for the purposes of study, that the duty was a great pleasure.

What most attracted my interest was the corps of trained nurses. There are from two hundred to three hundred in the St. Guy's Hospital corps. Each hospital has a distinctive uniform, and you can distinguish the nurses from any of the great hospitals wherever you see them; and you see them everywhere now. In the provincial towns and all over the continent of Europe where English and Americans travel, the uniformed nurse is to be met.

One of the peculiarities of the nurse's occupation seems to be that it attracts mostly very pretty women; that is, women of intelligence and character, which are the true requisites of beauty.

The Princess Alexandra of Denmark took a course in trained nursing before she became the Princess of Wales. She is now Queen of England and Empress of India, but all the better queen and empress for having been a trained nurse. In her case she was following the good German custom of learning scientifically some branch of the profession of wife. No self-respecting German woman shirks the task of taking a course in cooking or some other branch of household service; and the present Queen of England added to the

usual wifely studies the special accomplishment of scientific nursing of the sick.

One of the most charming hostesses of London, as well as one of the most beautiful, is the wife of a very busy physician, Dr. Harry Huxley, son of the great scientist. She was a daughter of a famous Yorkshire family of large means; yet she came to London and went through the paces of the nursing school and what are technically called the "intern" experiences in one of the hospitals, and continued faithfully up to the point of graduation. She then devoted herself to gratuitous practice among the poor of London, and had become so much interested in the Good Samaritan work that social pleasures failed to lure her back to her position in society. She is now the mistress of a perfect home, where husband and wife are in full sympathy in the work as well as in the recreations of life.

A grateful patient of Guy's Hospital, one by the name of Raphael, of the same race that gave us the Good Samaritan of Bible fame, left twenty thousand pounds (\$100,000) for a nurses' home at this hospital. His heirs have added to that sum, as was needed for special features of comfort, until it stands as a model for such institutions. It is built to accommodate over two hundred residents, and has a wing devoted to a huge swimming bath, in connection with other kinds of baths, for the sole use of the nurses. But they, being Good Samaritans, give up the swimming-pool to the young men students, and to the male resident-physicians of the hospital, on alternate days of the week, so that its usefulness is extended as widely as possible.

The nurses are not all from the wealthy classes in training for efficient wifehood; most of them, as must needs be in a country where the women outnumber the men, are girls who have chosen this in preference to some other remunerative occupation.

If appearances are not deceitful, these good little Samaritans are very happy. One of them remarked: "It must be dreadful not to have something to do, and no set time to do it in. I never should enjoy my hours and days *off* if I didn't have hours and days *on* duty. Besides that, we cultivate chumships among us that are the sweetest things possible to imagine. It's just like being a boy and being in college. The principal charm is feeling that you are useful; and then we have some lovely patients whom it is a pleasure to be nice to, and the training itself is good

discipline and a liberal education."

Apropos of the above: I visited the great Battle Creek Sanitarium in company with the dean of American physiologists and member of the Executive Council of the International Congress of Physiologists, Prof. H. P. Bowditch, of Harvard Medical School, and heard his comment on the corps of nurses as well as the other features of unique excellence in the Battle Creek institution. The average number of patients to a single attendant in the great hospitals of the world is eight. At Battle Creek there are two attendants to every three patients. At a meeting of eminent men in Boston, Wm. Ernest Van Someren, of Venice, Italy, a Guy's Hospital graduate, said: "The entire equipment at Battle Creek is the finest in the world;" and my own observation bears out this estimate.

"SHODDY" DIET

BY MRS. D. A. FITCH

SHODDY is manufactured by passing old woolen articles through powerful machinery, so that the fibers are torn apart, giving what is known as "rag wool," with which is mixed a certain per cent of new wool,—sometimes more, and sometimes less,—and it is then made into cloth, cheap according to the amount of "rag wool" used. It is not likely to be branded as "shoddy," but is palmed off as genuine cloth. Its presence in wearing garments is detected by rolls of short wool between the cloth and the lining.

A teacher of food principles likens a flesh diet to "shoddy," and it seems very pertinent to do so. The cow has used good food of which to make her tissues, and, having served its purpose,

it is now old, having been worn out in building her body, and well answers to the "rag wool" of shoddy. Her flesh is put through the powerful digestive machinery, and has added to it a per cent of new material, such as grains, fruits, and vegetables, when, to all appearances, there is built up a fair kind of body; but it is found that it will not stand the test of wear; for, like the rolls of short wool between the cloth and the lining, so the degenerated material of the flesh-eater's body is found lodged in all the folds and interstices of his system, just waiting the introduction of some disease germ to set up its work of disturbance.

Shoddy may answer as a present substitute for cloth made of pure new wool, but is found lacking in the wear-

ing properties of the latter. So flesh gives a stimulating nourishment which at best is only second-hand — a “rag wool,” if you please, and very inferior to that fresh from Nature’s own larder.

HOW THE PROFESSIONAL WOMAN MAY SECURE EXERCISE

DID you ever stop to think how much we all are creatures of habit? The things we must do every day to care for ourselves properly are largely automatic. We are content, many times, to spend much time and thought on our toilet, that we may appear to the best advantage among our friends. Again, the more rapidly we can hurry through and get off to work, the more successful we consider our morning’s effort. Often we waste more time and knowledge trying to make things easy for ourselves than it would require to go straight at the question in hand and have it done.

As professional women, we are expected to keep more or less in touch with the world. The world to us, however, may mean the routine of professional duties and perhaps a favorite magazine or paper. It is wonderful how broad and full our life may grow to be if daily brought in touch with lives that we are capable of helping, perhaps in a material way, our material recompense being the extreme satisfaction and buoyancy which comes from knowing we are of real service in the world.

The subject of this paper is a vital one. The writer has spent fifteen



1



2

DIPPING EXERCISES FOR INCREASING CHEST EXPANSION AND DEVELOPING THE SMALL MUSCLES OF THE BACK (SEE FIGS. 1, 2, 3, AND 4)

years in the study and practice of what is usually recognized as physical culture. After the most careful and conscientious study and pursuit of the recognized authorities on these subjects, she is convinced that the best exercise is that which comes from useful labor,



Quietly consider the various ways in which you can bring useful physical labor into your daily program.

In the morning we must go through more or less movements while arranging our toilet. All that is necessary to prepare for the day's best mental effort is to give the physical a thorough overhauling in the morning. The cold, morning sponge bath, followed by vigorous friction with an ordinary, long Turkish towel, will bring into play every muscle in the body, give the skin a healthy glow, send the blood tingling to every tissue, and make the brain think twice as fast without the ordinary fatigue.

After the cold bath, two minutes of exercise which brings into play the strong trunk muscles, as in trunk bending sidewise and forward, stir from their hiding-places in the liver tissues the tiny carriers of oxygen and life to the tissue. Followed by a glass or two of cold water, which, by the way, is as agreeable to the lining of the stomach

as the application of water to the face, and you are ready to complete your toilet with chest erect, head up, chin in, weight forward, elastic step, and bright countenance. A cheery "good morning" with a nod of the head to the first person you meet as you start down to the office is just as good an exercise as if you spent fifteen minutes before the glass practicing the latest grace which you may have heard about as being "Delsarte." This is Delsarte.

The hours in the office are quickly over. Perhaps a few outside calls must be made; then home to your favorite book, with leisure for supper and perhaps a social evening with friends. This is all exercise, because exercise means change. It is eternal monotony that wears out nerve force and energy.

On the way home you remember that it is the night for the gymnasium class at the Y. W. C. A. Now if there is not a Y. W. C. A. in your town, there ought to be, and you would better begin one. You need the joyous happi-



ness that comes from mingling with a bevy of girls properly dressed for the standing high kick, long jump, chin-ning, perhaps a bit of club swinging or dumb-bell exercise. The merry laughter that follows each unpremeditated mistake and the happy yell that closes

the evening's work bring into play muscles that you would have forgotten since childhood had you not been compelled to study them during your professional preparation.

One night in the week gone. You walk home feeling rested from your day's application, gladly looking forward to the hot bath, with a series of exercises which bring your feet higher than your head, and add to the exhilaration the time at the gymnasium brought. Before your open window you breathe deeply and noisily in through the nostrils, mouth closed; then as deeply and noisily exhale through the nose. After half a dozen such breaths, you are sleepy enough and tumble into bed—glad to be alive, glad to get a chance to sleep, happy in the usefulness the Lord has opened before you.

The next morning at the breakfast table your kind landlady tells you of a peculiar case of need in a distant part of the town. Here is another chance for exercise. All through your office hours your mind is happy and active, planning how you can manage this little expedition, and the gray cells of your brain get a raking up they have not had for some time, and you feel young again as you anticipate the ministry you may bring to one of His needy ones.

After the hours that sometimes seem so long, with basket in hand, you start off with elastic step, in spite of the rain, or snow, or wind, or heat, breathing, unconsciously, very deeply, because of the joyous satisfaction in your own heart. The case of need was not over-drawn. It takes all of an hour to soothe the helpless one, arrange the house so that it is more inviting and comfortable, and pat the children's neglected cheeks. The food you have

brought the little ones devour to supply their physical needs no less greedily than you take in their thankful appreciation.

Another walk home, no thought of tire, chest expanded at least an inch more than when you went down, and a quiet resolution to make part of your weekly program some errand of Christian helpfulness, which the Lord is only too willing to present to your attention.

The days are unusually inviting, and some of the savage (?) instincts impel you to plan a day in the woods. It may be the Sabbath which must be chosen for this. Why not? The Lord created the beauties of nature for our rest and enjoyment. Will you not, for a time, leave the place that man has built, and come forth to view and enjoy God's handiwork. Fill the lunch box, choose a friend who needs the rest or change or exercise, and early in the morning make your way to the woods. The intoxication of the fresh air sur-



5
EXERCISE FOR FRONT MUSCLES AND DEVELOPING
"NATURE'S CORSET"

passes that of any beverage or perfume the epicurean can name. The complete change is an *exercise*; it is a rest, and you go back to your week's duties in the office, holier, happier, nobler, and more true.

Then comes the long walk "just for fun." It is all right to do things for fun when it works no ill to another, and we can bring more than mere pleasure in a walk in the fresh air. Emerson's definition of a friend is one with whom you can walk for hours, perfectly happy and content, yet not speak a word. Just *live* in the glad outdoors—His gymnasium.

The little details of exercise which you manage early in the morning and immediately on retiring are part of your very being. You miss the cold dip, the trunk exercise, the chest lifting, and at night the heel and leg raising, as much as you miss your breakfast,—in fact, if you had the chance occasionally, you would prefer to omit your breakfast than to be deprived of the exhilarating tonic that cold water, inside and out, brings.

There is no monotony in this system of physical training. There is nothing but a glad joyousness which brings to you the glow that right doing alone can furnish. It is just as essential to your happiness to give the physical its share of attention as to be truthful or faithful. You are embued with the thought that the body is His temple, and all that you can

do to keep it clean physically, pure physically, alive physically, must meet his approval and your own best development.

Health Briefs.—If you have trouble in going to sleep, throw your window wide open, inhale and exhale deeply six times. Jump lightly until you are tired, then jump into bed, and sleep will come.

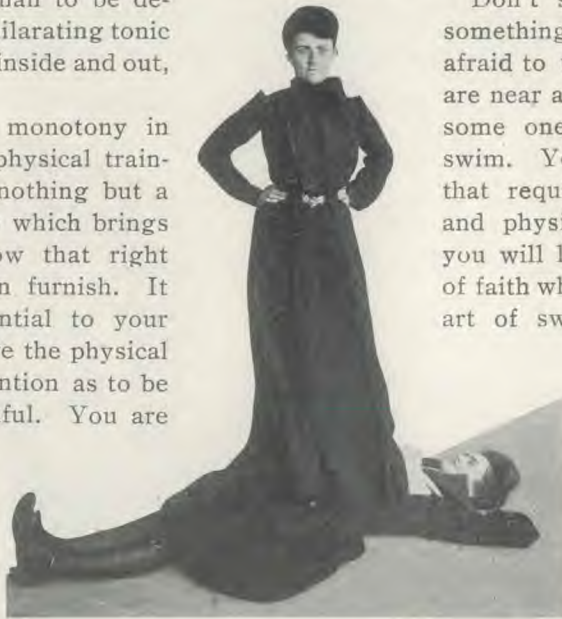
Maintain correct carriage in every movement, at least every time you think about it, until the habit is formed. It will form.

After your morning drink, rub and knead the bowels deeply, always from right to left. This aids peristalsis wonderfully.

At night, when tired, apply hot and cold to the face and eyes. "Stand on your head" by running the feet up the wall. Spend five minutes breathing out and in before your window, your prayers, and a night whose sleep "knits up the raveled sleeve of care."

Don't stop. Keep doing something, and don't be afraid to try things. If you are near a body of water, get some one to teach you to swim. You do other things that require moral courage and physical strength, and you will learn more lessons of faith while conquering the art of swimming than you can dream about in a year under the average Sabbath sermons.

Keep on trying. Try, try. I. O.



THE INTESTINAL DISORDERS OF INFANCY

BY KATE LINDSAY, M. D.

THE most frequent intestinal disorder of infancy is what is commonly called "simple diarrhea." It often follows an attack of stomach indigestion, and is due to the same causes; as, food in too large quantity and of bad quality, irregular feeding, and giving infants solid food or food used by adults. When the child is breast-fed, this malady may be brought on by shock, overheating, anger, fear, or any intense passion or emotion in the mother, as well as by overeating, overwork, or a sedentary life.

Any acute or chronic disorder which changes the character of the mother's milk may produce this disease. In bottle-fed babies, unclean, improperly-modified milk, condensed milk, dirty nipples and bottles, and many brands of infant foods will cause it.

The disease is more prevalent in hot weather because of the debilitating effects of the heat upon the little patients and the fact that food and water infection is increased. Diarrhea is a frequent disorder of first dentition, and is a disease which should never be neglected. An attack often follows a sudden change from cold to hot weather, or the reverse. The symptoms are frequently watery stools containing undigested food, mucus, and in severe cases, blood. Sometimes there is fever (100° — 101°) and colic. If the disease is not checked, but continues for several days, it may become chronic, when the discharges are foul-smelling, clay-colored or green, and the child wastes rapidly in flesh. Since the disorder is due to intestinal infection from spoiled food in the alimentary canal, the treatment should be to remove the cause by stopping all food and cleansing the alimentary canal. This

implies a fast of twelve to twenty-four hours and a mild laxative, as a dose of castor-oil (one-half to four teaspoonfuls, according to the age of the child); a stomach lavage, and copious flushing of the bowels with clean sterile water. In the case of a small infant, employ half or a whole pint of water at 108° , followed by half as much cool or tepid water, by enema, every four hours. The child should be kept in bed, and fomentations should be applied to the abdomen every three hours, with tepid compresses between. After the fast, in the case of bottle-fed babies, milk should be withheld from the food, and gruels made of dextrinized meals should be given; also white of egg or barley water for a few days. When the return to milk is made, the food should be modified so as to reduce the solids, and then gradually increase them again.

All through the disorder the baby should have plenty of cool sterile water. This should be given in the nursing bottle every hour.

If the baby is breast-fed, it may be permitted to take one-fourth the usual amount of breast milk, and the mother must be careful to avoid all habits which would tend to cause a defective supply of the natural food.

Diarrhea in an infant should never be neglected. It may be the onset of some serious bowel infection, as cholera infantum, or may terminate in chronic catarrh of the bowels and cause the death of the patient, or may handicap him for life with impaired digestion.

Cholera infantum is an acute catarrhal disorder of the lining membrane of the stomach and intestines. The chief cause is milk infection. Its victims are principally bottle-fed infants, espe-

cially in cities, and where the milk is of poor quality, or when the little ones are fed on condensed milk or infant foods. Sometimes a breast-fed infant, when the mother's milk is defective, or the mother is uncleanly in her habits, may be infected with the germs of this disorder. Or the child may infect itself from soiled fingers or a foul rubber ring or dumb-nipple. Unclean surroundings often cause the disease. It is rare that the well-nursed breast-fed infant of a clean, healthy mother has this disorder. The disease is almost entirely confined to the hot season of the year, and is usually fatal if the mistake is made of feeding the child milk during the attack or too soon after, as milk infection takes place from the germs in the stomach, and the patient suffers a relapse.

The symptoms of cholera infantum are constant vomiting and purging; at first watery discharges mixed with mucus and food from the stomach and bowels, and lastly rice-water-like matter passes almost constantly. The patient looks pinched and blue; finally spasms occur, then collapse and death.

All food should be discontinued at once. At first when the patient has a chill, give a warm bath. Give hot enemas of boiled sterile water, four or five times a day. Wash out the stomach, and give plenty of sterile water, either hot or cold, in all stages. In the fever stage which follows the chill, use plenty of ice-pills, but be certain that the ice is germ free. Small amounts of sterile ice can be made in a clean ice-cream freezer by using ordinary ice and salt to freeze the sterile water. Much depends upon keeping water in the alimentary canal to meet the demand of the body for fluids which are flowing away through the mucous membranes of the bowels. When the fever is high, make use of cool sponging, and cool

enemas, given often, two or three ounces at a time, and retained if possible. When there are symptoms of collapse, as indicated by cold, clammy, blue-looking skin and quick, feeble pulse and respirations, a hot bath should be given, together with hot enemas, and friction to the surface.

Do not attempt to give food until water can be retained for several hours. Then do not make the mistake of giving milk. Barley water or strained gluten gruel and white of egg mixed with water may be given, two or three teaspoonfuls once in two hours. Gradually increase the amount should it be retained. Then give malted or peptonized gruels and peptonized foods, as malted nuts and some form of infant food which does not contain milk, for it is several days, often weeks, after an attack before the child can take milk without suffering a relapse. Milk being the only food that will properly nourish an infant, it is important to get the patient's stomach and bowels freed from the germs, so that it will retain this food. After several days of improvement, a little modified peptonized milk may be tried mixed with the gruel, and if there is no disturbance of digestion, the amount may be gradually increased.

A chronic or subacute form of milk poisoning, known by the terms "summer diarrhea," "summer complaint," etc., is very common in the summer months among bottle-fed infants. The symptoms are not so intense as those of the acute form. The disease usually begins with a mild diarrhea, gradually increasing in severity; often there is vomiting, especially after taking food; the child wastes in flesh; there are green, foul-smelling discharges from the bowels; temperature, 101° - 103° . The first step to be taken in such cases

is to cease all milk feeding, using the white of egg and barley water, peptonized gruels, malted nuts and gruels. Often some mild strained fruit juice, as blackberry or raspberry juice, will agree well with the child, especially if over six months old. A stomach wash and a soap enema will often relieve the symptoms and free the bowels of much noxious material. Enemas of tepid water (temperature, 85°) after each movement of the bowels, and fomentations to the bowels, with cool compresses between, are advantageous. Allow the compress to get warm before changing. Often a change from the city to the country is the only means that will save the life of the infant.

Dysentery, or catarrh of the lower part of the large intestines, is due to the same causes: In infants, bad milk and other spoiled food; in older children, unripe fruit, spoiled foods, overeating, bad water, bad air, and overcrowding. The symptoms are diarrhea, —frequent stools, passed with much straining, and containing mucus and blood—fever, and wasting of flesh.

The patient should fast from twelve to thirty-six hours, the length of time depending upon the age of the infant. Give an enema and mild cathartic to free the bowels of morbid matter. Foment the bowels; after every movement of the bowels give a warm enema, followed by a starch enema. If the infant is bottle-fed, the food should be lessened in quantity and carefully sterilized and modified. Often only white-of-egg water and barley water should be used for the first day or two. If the infant is breast-fed, lessen the amount of food one-half or more. Keep the patient quiet.

In all cases of infantile bowel and stomach disorders in summer, and at all other seasons, the child should be

given aseptic food. If nursed by the mother, this means cleanliness of the person and surroundings of both mother and infant; if bottle-fed, then carefully modified, clean, sterile milk, fed regularly and in proper amount, good air and water. Avoid overcrowding. Do not change the food or wean, if the infant is doing well, during the hot months or when teething. Keep the baby as cool as possible and free from all irritation of insect bites. See that it gets sufficient sleep; that it drinks plenty of pure water; that it is properly clothed, and not exposed to extremes of temperature.

In hot weather never neglect a diarrhea. Do not be deceived by the common notion that looseness of the bowels is due to teething. It means toxins in the bowels and may be the beginning of cholera infantum or some other serious bowel disorder. Put the patient to bed and lessen or withhold food; give a hot enema and if necessary add soap to the water; apply fomentations to the bowels, followed by cool compresses, changing every half hour, or when warm. If the symptoms do not abate, call a physician at once. Hundreds of infants die, especially in city tenements, whose lives might be saved were these simple hygienic instructions heeded; and by these same measures the children who survive may be saved much suffering and crippling of health in after years.

Of chief importance in a great number of cases is to discard cow's milk. Cream, sterilized by boiling, and diluted with twice its measure of water, is better than ordinary milk; but in many cases malted nuts or malted nuts with thin barley gruel is better than milk in any form. Some infants can take cream with malted nuts who do not tolerate milk alone.

SHALL WE EAT RAW FOOD?

THIS question may be answered both affirmatively and negatively, and both answers may be equally correct. Primitive man doubtless took his food raw. His food consisted at first of fruits, nuts, and soft, unripened grains. Cuvier and other comparative anatomists pointed out this fact many years ago. In the absence of their normal food, tribes of ancient men, reduced to starvation, saved their lives by slaying certain classes of animals and eating their raw flesh. Raw fruits, raw nuts, and raw flesh are all easily digestible in the human stomach.

Migrating to various parts of the earth, members of the human family have found themselves at different times and in sundry places compelled to subsist in whole or in part upon other substances not in their natural state digestible in the human stomach. To this class belong all such foods as roots, leaves, stems, and other articles which are commonly sold in the market as vegetables. These substances, while not available in their natural state, have been, to use the words of Ovid, "tamed by fire," and thus rendered both eatable and digestible through the softening of the hard, woody structures with which they abound, and the hydration or dextrinization of the starch which constitutes the principal nutritive element found in this class of foods.

Man can live easily upon a raw food diet provided he will take those foods which are natural to him, as fruits and nuts. A dietary of fruits and nuts is not only capable of maintaining the body in perfect health, but is often found highly beneficial as a means of overcoming a variety of disease-conditions. Meat may also be eaten raw, and is much more digestible in this

form than when cooked, though to most people too repulsive to be tolerated. Meat is an unnatural food. It can not be considered any more natural for a man to eat a cow, a hen, a monkey, or a horse than to eat a wild man or an enemy, for example. In other words, the common practice of flesh eating is no more natural than is cannibalism, though, of course, it is, to most people at least, far less repulsive. A Hindu once said, "I can understand how a man can become so angry that he will be willing to eat his enemy, but I can not conceive how a person could ever be willing to eat the flesh of a cow or a sheep."

Potatoes, cabbage, parsnips, asparagus, and other vegetables when taken raw are not prepared for the action of digestive fluids in the stomach. Raw starch is not acted upon by the saliva in the stomach, though it may be digested by the pancreatic juice after the food passes out of the stomach. The raw food fad which has been started in New York City by certain parties who are perhaps more or less commercially inclined, will have a short life. Horses, cows, and most other lower animals have digestive organs adapted to the transformation of these coarse, uncooked foodstuffs, but the human digestive apparatus requires different material. The effect of cooking upon potatoes and other vegetables is to produce changes similar to those which are produced in green fruit by the action of the sun. Starch is transformed into dextrin and sugar, and other changes are effected by means of which well-cooked vegetables become nearly as easily digestible as the normal fruit and nut diet.

The raw diet is all right, but it in-

volves the selection of foods which have been predigested in the sun, and thus prepared for the action of those digestive fluids which come in contact with the food in the stomach; namely, the saliva and the gastric juice; but for a person to undertake to subsist upon raw crushed wheat, raw potatoes, or other raw foods of similar character, is to ignore the first principles of rational dietetics, and to impose upon the digestive organs a task to which they are wholly

unadapted. Raw vegetables are the proper food for herbivorous animals, but human beings, as well as the chimpanzee and other frugivorous animals, together with the dog and nearly all other carnivorous animals, are unable to subsist upon a diet of raw vegetables. The teaching of certain faddists upon this subject is wholly without scientific foundation. Whether man may subsist upon a raw diet or not, depends upon what he eats.

J. H. K.

HELIO THERAPY *

THE treatment known as heliotherapy, or "sun-cure," is becoming more and more popular in Europe as well as in this country. This treatment has had magical results in various diseases, such as tuberculosis, anemia, cancer, and skin diseases. Sunshine is the great enemy of all kinds of disease germs, and will invariably destroy all such as are exposed to its direct influence.

To facilitate the taking of the sun-cure, revolving houses, which can be turned so as to face the sun at all hours of the day, have been invented. In some of the British sanatoria for the open-air treatment of consumption, the shelters which protect the patients from drafts are so arranged that those occupying them can enjoy perpetual sunshine without changing their positions.

A well-known Parisian physician, Dr. Pellegrin, has adopted this method of curing his consumptive patients, whom he sends to live in a house facing all day long toward the sun. The

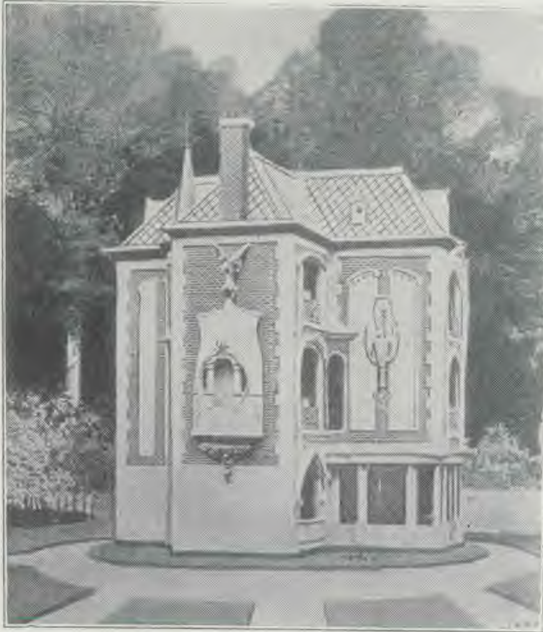
house is situated on a hill, with the sea to the south, and to the north, whence there is no sun, but only cold winds, a thick plantation of trees.

"The house is square in shape, and the weight is carefully distributed. It is built upon a steel turntable, which can be revolved by a slight effort. The house is built of stone, brick, and iron, because it was desired to make it as



THE HOUSE FACING THE EAST AT SUNRISE

* Cuts used by permission of the Ford Publishing Company.



THE HOUSE FACING THE WEST AT SUNSET

strong and as free from drafts as possible, although it would have been much simpler to have made it of wood. The house is carefully balanced on this turntable, which revolves by means of ball-bearing wheels on a circular rail. There is an upright rod running through the

center of the foundation beneath, with a cross-bar forming two handles like the bars of a capstan. By means of this arrangement, two men can turn the table and the house at the same time. There are holes in the platform of the turntable for the passage of water and sewer pipes, electric wires, etc."

At sunrise this hygienic house faces the east, and it is turned hour by hour upon its axis until sunset, when it faces the west. There are no windows at the back, and sides of the house. Those in the front are all set back, so as to enable patients to sit out in the sun and air without fear of drafts.

Considering the immense advantages to be gained from such a house, the cost of its construction is small; the mechanical foundations add only ten per cent to the cost of a house of similar size and construction built upon a cellar, while making it much drier and more healthful.

STIMULANTS

BY D. H. KRESS, M. D.

THE use of stimulants is becoming more and more common. Some feel unable to begin their day's work without a stimulant of some kind. They wake in the morning without sufficient strength or ambition to get out of bed, and they feel the need of something to whip them up. They start out to work, but about ten or eleven o'clock a faint or exhausted feeling comes over them, and they imagine they need something to stimulate them. Some go to the nearest drug-store and procure a so-called "pick-me-up," while others re-

sort to a bar and indulge in a drink of spirits. There is another class who depend upon the pipe; still another who would not do any of these wicked things, who go to the teapot. But all of these are slaves to a stimulant.

During the sleeping hours we store up energy to be used in carrying forward muscular, glandular, and mental activity during the day. When in health we start on the duties of the day with the brain and nerve cells stored full of energy, but toward evening we begin to feel a little weary, providing we do

with our might what our hands or minds find to do; this is physiological fatigue. Nature says all muscular and brain effort should cease; man needs rest and sleep; he needs to store up more energy.

Nature tries to reserve a certain amount of energy to carry forward the vital functions of the internal organs during sleeping hours; for the heart must be kept pumping, the lungs inhaling, and the liver and other organs eliminating the wastes formed during the day.

Many, however, get to the point where nature calls for rest long before night. This is because they have a depleted capital to start with, and long before that time are living upon the reserve. When they have that exhausted, tired feeling, instead of doing the wise and sensible thing, getting a rest, they take a so-called stimulant. This is supposed to impart energy and strength, but it is a deception. When a person takes a stimulant, he robs the digestive organs and the heart of that which nature tries to reserve for them. In a little while, if this course is pursued, the person becomes a chronic dyspeptic and finally a total wreck. Stimulants are not nutrients. They do not add, but

subtract energy. If this is continued, finally the action of the heart, the vital pump, is interfered with and arrested.

Hundreds of people resort to stimulants, imagining that they impart strength. What would you think of a man who starts in business and invests a certain sum of money and remains in business for five years, and during that time lives upon the original capital that he invested, yet flattering himself that he is doing well? The time must come when his bankers will inform him that he is on the verge of bankruptcy.

This illustrates the case of a man who starts life with an excellent heredity, good mental and physical powers, and who, by the use of stimulants, keeps up. He lives upon and is exhausting the principal, and surely comes to the point of physical bankruptcy. He says, "Nothing hurts me." His flushed face is to him an evidence of health. Nature finally protests in unmistakable language, and notifies him of his true state.

Much of our ill health and chronic invalidism may be traced to the use of these narcotic stimulants. The substances that we rely upon so much are deceivers, which whip up, but never build up.

HOW MUCH SHALL WE EAT?

IF we all ate natural food, and ate it in the proper way, we might eat as much as we wanted to, for the palate would then be a perfectly safe guide. An appetite trained to appreciate natural foods is itself a perfect guide. Dr. Van Someren, in a paper read recently before the British Medical Association, called attention to the important function of the palate. He stated that if a person masticates his food thoroughly,

the palate will indicate when he has had enough by declining to let any more food pass.

There is a sort of pylorus (gatekeeper) at the back of the mouth whose business it is to keep food in the mouth until it is reduced to a liquid. The sensitive nerves of taste will then recognize just the nature of the food and what its province is—whether it will make blood or fat, or re-enforce the muscles.

There is wonderful wisdom located in the palate when it is given a fair chance; but when we blister it with mustard, pepper, pepper-sauce, ginger, and other hot, spicy things, the nerves are so paralyzed that they lose the power to discriminate the delicate flavors and properties of the food elements — albumin, starch, fat, etc.

If we take only natural food and chew every morsel until it is liquid, the palate will recognize when we have enough of albumin or proteid, starch, fat, or acid, and will call for just what we need. If we need fat, the palate will call for butter or nuts or something else that contains a large proportion of fat. If proteids are necessary, the palate will call for beans, lentils, gluten, nuts, or something else which experience has told us contains a considerable amount of albumin, the blood-making element. If we need starch to re-enforce the muscular energy, the palate will indicate that by a craving for bread or some other farinaceous food, such as corn flakes, granose flakes, malted nuts, containing carbohydrates. When one whose palate has been trained by the proper mastication of food has a strong craving for a particular food element, it should be taken.

Instinct does not pertain alone to the lower animals. Human beings have instincts to instruct them with reference to diet and everything else it is necessary for them to know. There are sensibilities within us to teach us exactly what we ought to know about all the things that pertain to our physical welfare; but the trouble is that these instincts are stifled. The lower animals are nearer to their normal, natural state than human beings are. Who would keep a horse that did not know any more about what to eat, and did not behave himself any better in relation to

diet than we do ourselves? Such a horse would be all the time wanting to be excused from work on account of sick headache or pain in the stomach. Why is it that we have a higher standard of morals for the horse than for ourselves?

We have become depraved to such a degree that we do not hear the subtle monitors that are all the time saying to us, "This is the way; walk ye in it." It is only when the conscience of the body is aroused and reanimated by a return to natural habits of life that we are able to hear these natural voices which are teaching us the right way of life.

The only way for us to get right and keep right in the matter of diet is to educate our palates. Mr. Fletcher has shown that if we chew long enough we know just how much to eat; the appetite will crave the right kinds of foods, in the right quantities, and, as Pawlow has shown, will generate the digestive juices adapted to the digestion of the food. In this manner we may, after a while, get our palates so educated that when the food reaches the back of the mouth, if it is not reduced to a liquid state, it will be sent back to be more thoroughly chewed.

No food should be swallowed by a strong muscular effort. One does not have to make a strong muscular effort to swallow water, but it is necessary to make such an effort in order to swallow a pill. Many people get into the habit of swallowing their food as they do pills; the food is simply reduced to pills and then swallowed. Food should be made liquid, and nothing should be swallowed that has not been reduced to this condition.

If the food enters the stomach in a liquid state, it remains there but a little while, being usually passed out in half an hour to an hour; but if it is swal-

lowed in chunks or huge masses, it remains in the stomach from three to six, seven, or even ten hours. Just think what a relief it would be to the stomach if it could have a rest of five or six hours after one hour's work instead of being kept constantly at work.

When one bolts his food, he does not discover when he has had enough; for

some of the food must get into the blood before the hunger center will ring the bell for the supply to cease. So when one hurries food into his stomach, he gets more than he needs before the hunger center finds it out, and he stops only when his stomach is so full that he can not take any more.

J. H. K.

THE CRUELITIES OF FASHION

EVIL is wrought for want of thought." Most women would recoil in horror if accused of torturing birds, and dooming young birds to perish from want of food, yet the egret can be shot only at its breeding-place, when building its nest or rearing its young.

At this time the birds hover around their nests, so that their capture is easy. The plume hunters shoot them down without mercy, and the young birds, unable to look after themselves, are left to die of hunger in their nests,—simply to adorn a woman's hat.

The fashion in feathers is as pitiless as ever, and millions of beautiful birds are slaughtered every year to please the vanity of women. Nor is it only in feathers that fashion is cruel. The fur trade is as bad. No cruelty is too great for the seal hunters, who have been, over and over again, described as "inconceivable savages" and "the scum of the earth."

Gangs of men on the beach entice the seals from the water, and drive them inland, panting and helpless. Then, when the end of their journey is reached, the poor creatures are formed into long columns, three or four abreast, and made to pass between men armed with heavy clubs. As they pass, their skulls are crushed in, and what the scene is like may be imagined from the

statement of a soldier who once witnessed the slaughter of a drove of sealions, which are driven and killed in the same way. "This is the first thing I have ever seen or heard," he says, "which realizes my youthful conception of the torments of the condemned in purgatory."

Even your purse may be made of shell burned by fire from the back of a living tortoise. The shell which has of late come into fashion for the manufacture of combs, hairpins, purses, and trinkets of all kinds for the dressing-table, comes chiefly from the Maldivé Islands and Straits Settlements, and the process by which it is obtained is incredibly cruel.

In his "Naturalist's Voyage Round the World," Darwin tells us that, in the Chicago Archipelago, the natives take the shell from the back of the living turtle by burning charcoal or boiling water. The heat causes the shell to curl upward, and it is then forced off with a knife, and flattened between boards. As often as not the tortoise lives through this fearful torture, and is driven back into the sea to replace itself. Then, when the shell has grown again, the tortoise is treated again in the same way.

Such is the price of vanity. The seal is skinned alive, the tortoise is scalded

alive, the egret is left to perish of hunger—for what? That a woman may wear a pretty hat, a costly coat, a particular comb. The day will come when women will be ashamed to be instruments of torture and deck themselves with vanities which cost so much suffering. The day will come when we shall be ashamed to be amused by performances in which men and women play fast and loose with life. Prize fights

have long since ceased to attract respectable, honest folk, and some day the same folk will be ashamed to find themselves witnessing fools' games in lions' dens or dangerous performances on the trapeze. In that day, too, women will decorate themselves no more with murderous millinery. It is all part of the same religion; it should be part of our common humanity.—*A. M., in The News.*

Apple Day.

Prof. J. T. Stenson, director of pomology at the St. Louis Exposition, claims that the liberal use of apples will improve the disposition and elevate the moral nature, removing disagreeable feelings, and making existence more enjoyable for all. He also maintains that eating raw apples is an infallible cure for alcoholism and the tobacco habit. As a proof of his faith in his theory he purposes to distribute one million apples on September 27, which will therefore be designated "apple day." If all that he claims for the apple be true, the Professor must certainly be regarded as a public benefactor. It would be a good thing for most persons if they would have a periodic "apple day," when the diet should be exclusively of apples. Those who find themselves becoming irritable and disagreeable, might at least try this means of sweetening their dispositions. Now, while apples are so plentiful and cheap, would be a good time to make the experiment.

Cocain.

The following illustration of bad advice in the lecture-room is probably not an exceptional case. A professor of materia medica lecturing on cocain called it one of the greatest of all stimu-

lants and perfectly harmless. He cited his own experience of its good effects, and advised the class to test it personally in debility and exhaustion. Of a class of thirty-two who listened to this advice, five became cocain takers within two years. Ten years later thirteen of this class were drug and spirit takers. In all probability, the use of cocain was the starting-point of their addictions. Four died from the direct use of this drug. Evidently more than half the class had followed the advice of the teacher and were wrecked. A few years after, the professor became an invalid and retired from the profession,—undoubtedly a victim of his own counsel and confidence in cocain.—*Quarterly Journal of Inebriety.*

MISS HILL, in her book on "English Dress," tells us that in 1842 very long dresses were worn in the streets of Paris, and that the following appeared in one of the papers:—

"The administration of the city of Paris has in contemplation to do away with the scavengers in our good town, as they say that it is a useless expense to pay men for doing that which the ladies so kindly perform *gratis* in walking through our fashionable promenades." —*Jennie Cornwallis West, in the Munsey.*

Chautauqua School of Health

THE SHOWER BATH

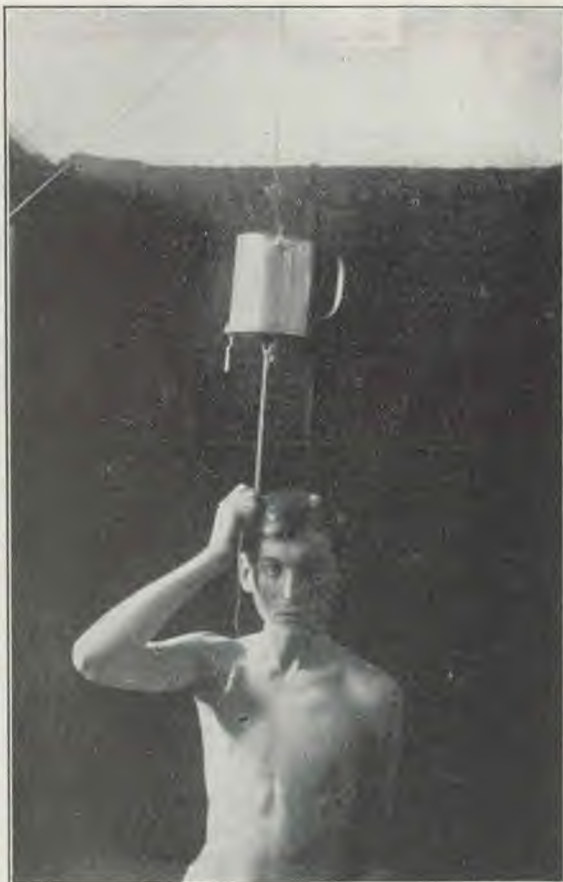
BY J. H. KELLOGG, M. D.

THE cold rain douche is one of the most exciting of all hydiatic procedures. At first the respiratory movements are almost suspended; the breathing is in quick, gasping efforts, the heart is powerfully excited, the blood pressure is raised, and all the phenomena resulting from other general external applications of cold are presented in an intense degree. The brain and nervous system are intensely aroused, and all the vital movements are accelerated.

In the majority of cases in which the cold shower is employed, a preliminary heating should be applied. This measure is, on this account, exceedingly convenient, for the reason that the heating and cooling may be effected by the same apparatus. When required, the rain douche at 100° to 104° may be applied for one to three minutes before the cold application.

While the cold water is falling upon the patient, he turns his body about so as to receive the water upon every part, and rubs vigorously the part on which the water is falling. Thirty or forty seconds is generally sufficient for the duration of the cold shower bath.

Such a bath may be advantageously taken by all healthy persons on rising in the morning. It is an excellent tonic, and one of the best means of maintaining health. It creates an appe-



IMPROVISED SHOWER BATH

tite, and improves the power of digestion. There are few chronic diseases in which the shower bath can not be employed with advantage, especially if the patient has been prepared for this application by means of the wet sheet rub, the cold towel rub, or the cold mitten friction, or other less vigorous applications.

The cold shower may be used with advantage as a tonic measure for anemic persons who are fairly strong; also in obesity where the heart is not seriously involved, and with the chloritic and plethoric.

Care should be taken that the body is well warmed before the administration of the cold shower bath. It should never be given to a patient when he feels cold, chilly, or greatly dreads the bath. Such patients may be given a hot foot bath at the same time with the cold shower bath. Standing in water as hot as can be borne, prevents, to a large degree, the uncomfortable, chilly sensation ordinarily occasioned by the contact of the cold water with the skin.

Generally, the shower bath should be preceded by a warm bath of some kind,

such as a sweating pack, a warm sitz bath, a vapor bath, an electric-light bath, or some other heating measure, so that the skin may be prepared for the contact with the cold water. When

the skin is thus prepared, reaction is prompt, and no discomfort is experienced.

When a prolonged heating bath has been taken, the shower bath should be continued for a longer time. It is best in these cases to use water at a moderate temperature, say 80° to 85° F., for one or two minutes, so that the heat communicated to the skin by the bath may be removed. The shower bath may be terminated with an application of



IN OPERATION

water at 50° to 60° for five to ten seconds. The purpose of the very cold water is to produce a strong tonic effect upon the nerves, thus antagonizing the relaxing and depressing effect of the hot water bath.

After the cold shower bath a sheet should be thrown about the patient and he should be quickly dried and vigorously rubbed. Exercise should be taken for fifteen or twenty minutes after the bath so as to secure a good reaction.

The warm or neutral shower presents distinct advantages. As a hygienic measure, it offers a most convenient and rapid method of cleansing the whole surface of the body,—a most important consideration when large numbers of persons are to be bathed in a short time, as in military barracks, charitable institutions, schools, and public baths.

The neutral shower (92°–96° F.) is one of the most effective measures that can be employed for the relief of insomnia due to general nervous excitability, as it has a remarkably soothing and soporific effect. The application should be made with little force, special attention being given to the legs and back.

The shower bath, which is nowadays supplied by all plumbers in connection with the full bath when desired, being

placed over the bath, may be utilized without running risk of injury to the ceiling below from leakage through the floor, by placing about the shower a rubber curtain, the lower end of which, falling into the bath-tub, directs the water into it. When such a shower bath can not be obtained, a portable shower bath may be easily constructed by perforating the bottom of an ordinary oil-can. By means of a string and pulley, the oil-can, after filling with water, is drawn into position above the tub in which the patient sits. By means of another string the cork is pulled out of the can, when the water will at once begin to flow. A gallon of water is amply sufficient for an ordinary cold shower bath. By this easily arranged apparatus the shower bath and the benefits to be derived therefrom may be available in any home.

REFRESHING DRINKS AND DELICACIES FOR THE SICK

BY LENNA F. COOPER

OF all the bottled and unbottled drinks for the sick, none is so refreshing as a cup of pure cold water. It is as rain to the thirsty land. It supplies a demand of the body which nothing else can fill.

Thirst is not merely an unpleasant sensation in the throat, but is the natural call for water from the innumerable cells of the body. If the body is in a normal condition, and this voice is not too often ignored, the desire for water is a good indication of the quantity needed; but, like all other functions of the body, when disease takes possession, it may also be abnormal. Generally speaking, much more water is needed in illness than in health, because of the increased oxidation accompanying fever, which consumes the liquids of the body,

and also because of the poisons thrown off by the cells as a result of the diseased conditions.

Water is an internal bath. Soon after being taken into the body, it enters the blood, where it circulates among the tissues, answering the calls of the many cells, and removing the waste products with which they are burdened.

A large quantity of water should not be taken at one time, as it causes distention of the stomach, which may produce permanent injury. Half a glass, or a glass full at most, is sufficient for one time, but it should be taken frequently. If the patient has a high temperature, half a glass of water every thirty minutes is none too much. Cold water taken in large swallows is apt to chill the stomach, and therefore should be

taken moderately slow and in small sips.

Iced water is objectionable from the fact that ice is usually taken from rivers and ponds, which are often stagnant or are the receptacles of sewers, which contaminate the water and render it unfit

only questionable water is obtainable.

The use of cane-sugar should be avoided as much as possible, for it tends to produce flatulency and indigestion.

The popular belief that beef soups and extracts are the proper dietary for



STRAWBERRY SHRUB

for use. Many disease germs are not destroyed by freezing, but are merely rendered inactive for the time being. If very cold water is desired, it should be placed on ice, rather than to put ice into it.

Soft or distilled water is more wholesome than hard water, though well and spring waters, if not too hard, and if free from contamination, are not objectionable. Carbonated water, or water charged with CO_2 , is perhaps the best drink for the sick, as it stimulates absorption and is, in itself, a destroyer of germs. It has been found that cholera germs are destroyed within two or three hours after being placed in carbonated water. This may be obtained in siphon bottles for a few cents at a first-class pharmacy.

Acid fruit juices also destroy germs. For this reason they are an important beverage in cases of fevers and gastrointestinal disturbances due to germs. A glassful of water, even when it may contain typhoid fever, cholera, or other germs, is rendered sterile within half an hour after the addition of the juice of one lemon. It is well to remember this when traveling, or when one is where

the sick is very erroneous. They contain little or no nutriment, but the waste products of the animal organism, together with a few extractives and mineral salts, which give the flavor.

Tea and coffee should be avoided, as both contain tannic acid and a poisonous principle,—thein in tea, and caffen in coffee,—which interfere with digestion, and give rise to nervous excitability.

The following are a few recipes designed for the sick or convalescing:—

Carbonated Fruit Juice.—

$\frac{3}{8}$ glass fruit juice or lemonade; fill with carbonated water

Strawberry Shrub.—

1 quart fresh strawberries or one pint of strawberry juice

$\frac{1}{4}$ cup sugar

Juice of one lemon

Meltose dressing

Carbonated water

To one quart of fresh strawberries pressed through a colander, add one-fourth cup of sugar and the juice of one lemon. Set this on the ice and prepare the dressing, which is made by heating one cup of meltose to the boiling point, and pouring it over the stiffly beaten white of one egg. Fill a glass half

full of the strawberry mixture and add a dessertspoonful of the meltose dressing. Fill the glass with carbonated water and serve at once.

Grape Gluten Porridge.—

- ½ cup grape juice
- ¼ cup malted nuts
- ¼ cup 20% gluten
- ½ cup water

To the grape juice add the malted nuts and the gluten rubbed smooth with the water. Add a pinch of salt, and cook two minutes. If a gruel is desired, thin with one-half cup of grape juice or water.

Fruit Beverage.—

- 1 cup cherry juice
- Juice of 3 lemons
- Juice of 3 oranges
- ½ cup sugar
- 2 cups water

Make a syrup of three-fourths cup of sugar and one cup of water. Add fruit juice to the syrup while still hot. When cold, add one cup of ice water and set on ice until ready to serve.

Baked Asparagus.— One can of asparagus tops. Drain, and cover with the following seasoning:—

- 1 cup tomato pulp
- ½ cup cocoanut or dairy cream
- 1 tablespoonful flour rubbed smooth with a little water
- Juice of 1 lemon
- ½ onion grated
- ½ teaspoonful salt

Bake two hours.

Egg Lemonade.— Beat the white of an egg to a stiff froth, then mix with it the juice of a small lemon and one tablespoonful of sugar. Add a half pint of cold water. Or, beat together with an egg-beater a tablespoonful of lemon juice, a teaspoonful of sugar, the white of an egg, and a cup of cold water until thoroughly mingled, then serve at once.

Health Cocoa.— Take a teaspoonful each of health cocoa and sugar, add a small quantity of boiling water, and mix thoroughly. Add, in equal proportions, sufficient boiling water and milk to make one cup. Boil two or three minutes in a granite dish before serving.

HOW TO ARRANGE A BILL OF FARE

It is of the highest importance in arranging the bill of fare to provide the proper proportion of the different food elements. A deficiency of starch may be largely compensated for by an increased quantity of fat. This renders it possible for a person to subsist indefinitely upon a diet consisting wholly of fruits and nuts. From such a dietary starch would be excluded, but would be represented in moderate amounts by its equivalent, sugar, and further replaced by fat. It is impossible, however, to replace the albumin or proteid by any other element; hence it is of importance to make sure that each bill of fare contains the proper amount of proteid;

that is, the equivalent of an ounce and a half to two ounces of dried albumin. The following table shows the amount of peas, beans, lentils, and other foods required to furnish three ounces of albumin for the daily ration:—

	OUNCES
Peas	9.12
Beans	7.4
Lentils	7.6
Almonds	9.4
Walnuts	10.8
Peanuts	9.4
Pecans	18.0
Protose	9.2
Cornmeal	20.6
Whole-wheat bread.....	23.0
Oatmeal.....	13.2
Rice.....	29.8
Potato	91.0
Squash	181.8
Beets	153.8

	OUNCES
Tomato	138.4
Turnips	133.0
Asparagus	111.0
Cabbage	105.0
Apples	500.0
Peaches	285.6
Oranges	250.0
Strawberries	182.0
Cherries	285.6
Grapes	333.0
Bananas	105.0
Porterhouse steak	10.0
Cream	74.0
Eggs	14.0
Milk	48.0

Albumin or some equivalent proteid, such as gluten, is the most essential element. A deficiency in albumin causes pallor from impoverished blood and weakness from wasting of the blood and other vital tissues.

By reference to the above table it will be easily possible to prepare a full bill of fare which shall certainly contain the needed amount of albumin. Two, three, or a half dozen constituents may be selected.

As the amount given for each substance is sufficient to furnish the albumin necessary for one day, we may easily construct a bill of fare by taking of each of the articles selected, the amount necessary to give it the desired proportion of the whole. For example, if one desires to live for one day upon bread and beans, he may take such quantities of each as will give him one-half the needed albumin in the form of bread, and the other in the form of beans. These quantities will be obtained by dividing by two the quantities given in the table: of bread 11.5 ounces, of beans 3.7 ounces,—nearly three-fourths of a

pound of bread, with a little less than a quarter of a pound of beans. If one desires different proportions, they may be easily arranged. To obtain two-thirds of the albumin from beans, and one-third from bread, one would take 4.9 ounces of beans and 8 ounces of bread. A more varied bill of fare may be easily arranged, as, for example, the following, in which four articles are selected in convenient proportions: Peas, 2.3 ounces (one-fourth part); potatoes, 9 ounces (one-tenth part); protose, 2.3 ounces (one-fourth part); bread, 9.2 ounces (four-tenths part). If the food is taken at two meals, the quantity for each meal must be properly proportioned, the amount being such as to aggregate the quantity required for one day's rations. For three meals, the quantities for each meal may be divided by three, or certain of the foodstuffs selected may be taken at one meal, and others at another meal.

It will be observed that the amount of albumin in fruit is so very small that it may be ignored in arranging the bill of fare; *i. e.*, any ordinary juicy fruit may be added to the other foods selected, without running the risk of any harmful results, provided the total quantities are kept within reasonable bounds. The total bulk of the food taken at a single meal must not exceed two and a half to three pints or pounds. In many cases the amount may with great advantage be made considerably less than this by avoiding the use of liquid foods or juicy fruits.

EXERCISE gradually increases the physical powers, and gives more strength to resist sickness.—*Exchange*.

Plato called a man lame because he exercised the mind while the body was allowed to suffer.—*Exchange*.

Body and mind are both gifts, and for the proper use of them our Maker will hold us responsible.—*Exchange*.

When anything is growing, one formatory is worth more than a thousand reformatories.—*Horace Mann*.

TYPHOID FEVER

BY F. J. OTIS, M. D.

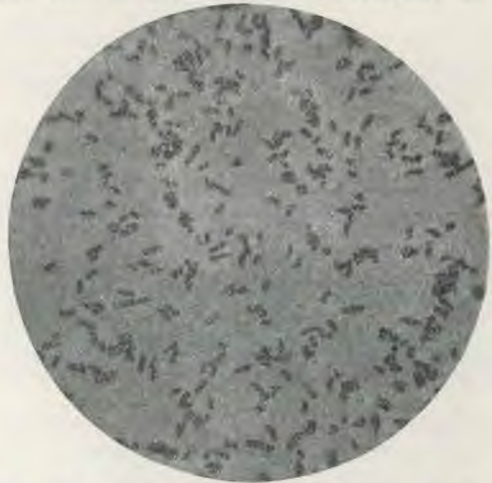
UNTIL a few decades ago all fevers were regarded simply as fevers. There was no distinction between any of them. All long fevers were known as continuous fevers. Not until 1829 was the term typhoid applied to the disease; yet the malady may be traced back for many centuries. Very ancient history tells us that more soldiers died from disease than in battle. It was typhoid fever that was responsible for this. The typhoid fever germ is one of the principal agents of mortality when large numbers of people collect together.

Typhoid fever is caused by a vegetable cell called the Eberth or typhoid bacillus. The accompanying illustration represents some of the cultures of the Sanitarium laboratories. They are magnified fifteen hundred diameters. When stained by a special process, they are seen to have tails, which account for their rapid motion observed when alive. The germ was not known until 1880. Before it was isolated and studied, it was impossible to control the disease thoroughly. Prior to the discovery of the germ, it was observed that certain sources of water supplies were the cause of contamination. Again, some food product seemed to be the center. Sometimes individuals frequenting a certain house contracted the disease.

The typhoid germ has been found to exist in well water for a longer or a shorter period, depending upon the amount of organic material in the well. It may live there a month or more. Where pumps are provided with a little escape-opening or where wells are open, the germs thrown on the surface may be conveyed into the well. As the germs live for a much longer time in the soil, it is possible for the well to be

restocked by every rainstorm or freshet. This is the explanation of numerous cases just after a thaw or a freshet.

The New York Board of Health has had an experience resulting from typhoid fever cases on the Croton Watershed. It has thoroughly investigated the possibility of the germ's living in ice. The germ may live in ice all winter, and after the thaw in the spring, it multiplies as



TYPHOID BACILLI MAGNIFIED 1500 DIAMETERS. MADE FROM A PHOTOMICROGRAPH

readily as ever. This explains the cause of some cases or even epidemics in the spring. However, the disease is most frequent in August, September, and October.

Until typhoid and its prevention was more thoroughly understood, it occasionally happened in some of the New England States that the disease would appear far back from the coast, on some small streams lined with factories. The town farthest up would develop a number of cases in the spring. Usually about a week later there would be a large number of cases in the next town below; and so on, allowing just sufficient time for the germ to pass from the sewer sys-

tem of one town to the water supply of the next.

Water is not the only medium by which the micro-organism may be conveyed to the intestinal canal. Milk is undoubtedly one of the most convenient carriers of the disease. The germ grows rapidly in milk without producing the least signs of its presence. Some germs cause milk to sour; but the typhoid germ has no influence on it whatever, even though each drop may contain millions of germs. These parasites gain access to the milk from two sources: First, by direct contact of the infected individuals employed about the dairy or creamery. The germs being carried on their hands or linen are left in the creamery utensils. Second, the germs in every case get scattered about the yard, and, during convalescence, along the street where the patient has been. Then, mixed with dust, they are blown about the nearby dwellings, and may settle in some article of food, most readily in milk, or in utensils used for milk. Here they multiply unobserved, and may be communicated to members of the family.

Still other articles of diet are excellent carriers of disease. The oyster is one, as it usually lives or is fed in the sewage of the cities. During the fattening process the oysters are placed in beds over which this water flows. Scientific study has shown that the germ lives much longer in the oyster than in the water from which the oyster is taken. Thus the germ may be kept for months. In one instance the germ was found in a fish market. It had either blown there from germs dropped from the linen of passers-by who were convalescent, or it had come there by the intermingling of oysters with the fish. Once established, there was no scalding process to destroy them, so they multiplied readily

in the juices of the fish and contaminated every fresh stock. As a result, a continuous list of cases developed among those who patronized the fish market. While cooking is sufficient to destroy the germs in the fish, yet, in their preparation in the kitchen, utensils and food already prepared or food served raw becomes thoroughly contaminated. So it is essential to avoid foods to be eaten raw, and systematically to scald dishes every time they are cleansed or before some prepared food product is placed in them to be served upon the table.

Food is not the only carrier of typhoid. The house-fly is one of man's worst enemies; for it frequents the out-buildings and all refuse left about the yard, and then, during meals, does not hesitate to visit the pantry or dine with us at the table. Some army officers noticed that typhoid fever was spreading rapidly in the camp. They put some lime in the garbage pit near the hospital tent, and observed that the same flies that had tracked in the lime until particles of lime were adherent to them, were seen on the officers' table, some distance from the hospital tent. It is an easy matter for flies to convey germs in this way. The reader will recall an illustration some months ago that represented the tracks of the fly as it distributed bacteria on a plate of germ food.

Typhoid fever is very readily transferred by soiled linen. Occasionally those caring for typhoid patients develop the disease. The writer recalls an instance where an individual contracted the disease. His attendant took the fever. Later, one who called on that individual was taken down. This was before the true nature of the disease was understood, and even the physician attending the third case became ill, and the nurse who waited upon the doctor

contracted the disease. With our present knowledge of the disorder, there is not much danger, when a case is skillfully cared for; but for the average household it is exceedingly dangerous.

Not every person who swallows typhoid germs contracts the disease. There must be some degree of susceptibility on the part of the body. The fever often follows dietetic indiscretions. A mild inflammation of the bowels may exist for a number of days, after which a severe headache develops; perhaps a slight chill and a rapid rise of temperature; then the fever is on. The germ does not grow very rapidly in the normal digestive canal. It is during these times, when the little openings or atria in the digestive canal are unguarded. Leucocytes, or the white blood cells, gather up material on the surface of the intestines and then enter the glands or Peyer's patches and there destroy the germ. When the typhoid fever micro-organism exists in the intestinal contents, it is carried into these Peyer's patches in the same way, instead of being destroyed by the blood cell. The cell finds it is impossible to overcome the germ. Meanwhile, the latter grows rapidly in the juice of the glands. Its poison sets up an inflammatory process. Again, the blood cells endeavor to destroy the germ, and may carry it to other parts of the body, so that a number of days after the fever sets in, one finds little rose spots over the abdomen and sometimes on other parts of the body. Bacteriologists are able to isolate the germs from these spots. The body does not produce an antitoxin capable of rapidly destroying the germ. An antitoxin is produced, but in small quantities so that it requires five weeks for sufficient to be produced to destroy the activity of the germs. We may use very strong

drugs to disinfect the intestinal canal, yet the germ exists unharmed and untouched in the tissues.

The physician now aims to preserve the energies of the patient, permitting the patient himself to destroy the germ, for the antidote produced in the body is the best specific. The scientist observes the presence of a similar substance when he makes what he calls the Widal reaction. He takes a drop of blood from the patient, dilutes it with some water, and then places in this dilution some of the typhoid germs which he has cultivated in the laboratory. If the patient's body is making a struggle against the germ, there will be in the blood a material that will cause the germs, which usually swim about rapidly, to clump together in little bunches, cease their motion, and undergo a granular degeneration. This phenomena may be observed early in the disease. This has proved a great help, as typhoid fever is difficult to differentiate from other slow fevers. A person suspected of having the disease may send a drop of his blood to the laboratory, where it will be tested, and in a day or so after the reaction is taken, he may know positively whether or not it is a case of typhoid fever. In the Sanitarium laboratories this method is used for people living in other States, sometimes thousands of miles away. Just a drop of blood on a card is all that is required by the laboratory. The substance in the blood causing the phenomena by which this evidence is possible is called *agglutination*. While it permeates all the fluids of the body, yet it is so delicate that the chemist can not separate it and concentrate it to any appreciable mass.

As God is greater than man, so, also, Nature's laboratories are far more wonderful than man's.

SCHOOL OF HEALTH SEARCH QUESTIONS

THE SHOWER BATH

1. In the employment of the cold shower bath, what preliminary measure should be taken ?
2. What are the beneficial results brought about by the shower bath ?
3. How long should one exercise after such a bath ?
4. How may a shower bath be improvised at home ?

REFRESHING DRINKS AND DELICACIES FOR THE SICK

1. What is the most refreshing drink for the sick ?
2. How much is considered a sufficient quantity of water to be taken at one time ?
3. Why is iced water objectionable ?
4. What is a better plan than using iced water ?
5. What is an important beverage in case of fever ?
6. How may water be easily rendered sterile ?
7. Name four things which should never be given to sick people.

HOW TO ARRANGE A BILL OF FARE

1. What is the chief thing to be considered in making out a bill of fare ?
2. What is the proper amount of proteid for the daily ration ?
3. What are the effects on the system of a lack of the necessary proteid ?
4. What is the limit (by weight) of the food to be taken at one meal ?

TYPHOID FEVER

1. When was the typhoid fever germ discovered ?
2. Name the ways by which typhoid may be contracted.
3. How is typhoid most commonly carried ?
4. Describe the most efficient procedure for reducing temperature.
5. How should the room be furnished in which the typhoid patient is cared for ?
6. Give some of the general precautions to be observed in the care of typhoid cases.

Hundred Year Club

MRS. ELIZABETH HANBURY

ONE of the most famous of English centenarians of recent times was the noted philanthropist, Mrs. Elizabeth Hanbury, who passed away three years ago, at the great age of 108 years.

Elizabeth Sanderson was born in London in 1793. An incident in her early life illustrates the prevalent apprehension in England at that time of invasion and conquest by Napoleon. Soon after going to school, little Elizabeth asked her father if she might give up learning French, as it was so much trouble; to which he most gravely replied, "My dear child, don't you know that we may soon all be compelled to talk French?"

When Elizabeth Fry began to visit the prisoners in Newgate, she called one day to invite Elizabeth's older sister to accompany her. Seeing Elizabeth, she took her also, and thus began many years of untiring work among prisoners. She regularly visited other prisons besides Newgate, seeking in every way possible to promote the welfare of the inhabitants.

The convict ships were at that time sent out with scandalous disregard to comfort and even decency in the arrangement for those whom they carried. No matron was provided on the ships for women, and they were under the sole direction of the men of the ship. There was no employment for the convicts dur-

ing the long months of the voyage. Drink was plentifully supplied, and the demoralizing influences were ruinous to young offenders, who often became hardened in vice. Elizabeth Sanderson threw herself energetically into the effort to reform this state of things. The convicts seconded the changes made, and proved willing to obey a matron, to do useful needlework, and to be taught as in school. Every convict ship was visited before its departure, and all that was possible done for the welfare of the many women on board.

On one occasion, when Mrs. Hanbury was pleading before the Home Secretary for the life of a poor prisoner, she was met with the reply: "Mrs. Hanbury I can not alter the law; but, if I were accused, I should like to have you plead for me."

The vigorous energies of this enthusiastic worker were also thrown into the anti-slavery movement. She was treasurer of a society for assisting poor servants when out of situations, and took an active part in various other enterprises for giving sympathy and help to those in need.

Mrs. Hanbury was a recorded minister among the Friends. But though her brief addresses were always well expressed, this work was an evident effort to her very modest and retiring nature. The last occasion of her public

ministry was when, after the completion of her ninety-fourth year, she spoke in a meeting of Friends at Isleworth.

Her sight enabled her to read and write, though with some difficulty, till she was over one hundred; and she daily dressed and went into her sitting-room until about the middle of her 107th year.

Always an ardent lover of poetry

she would frequently quote considerable passages, even to the age of 106 or 107, and sometimes expressed herself in verse. When no longer able to write, she would frequently dictate a few lines to her daughter. In the last year of her life, a message from her, partly in verse of her own composition, was read in the London Yearly Meeting of Friends.

MRS. MARY SHEPARD



MRS. MARY SHEPARD

MRS. MARY SHEPARD, the bright and charming old lady shown in our picture, is one hundred and three years of age. Her lively disposition and venerable age make her a great favorite in the neighborhood of Poughkeepsie, where she resides, and her many friends delight in pleasantly surprising the old lady.

The keenness of Mrs. Shepard's faculties, notwithstanding her great age, is shown by the fact that she not long ago enjoyed her first talk over the telephone, the chief of police, at whose house she was visiting, having made arrangements for this purpose with a newspaper reporter. Since her age brought her into prominence, Mrs. Shepard has been interviewed by reporters until she wonders what on earth they do for a living.

The Oldest Man in the World.

The oldest man in the world is thought to be Bruno Cotrim, of Rio Janeiro, authentic documents showing that he is now in his 150th year.

In Germany at the present time, it is said, there are 778 persons claiming to be over one hundred years old. France claims 213 centenarians; England, 146; Scotland, 46; Norway, 23; Sweden, 10;

Belgium, 5; Denmark, 2; Switzerland, none; Spain, 401; Servia, 573.

Old Age.—An eminent French physiologist once said: "A man is as old as his arteries." When the arteries become hardened and shriveled, a man is old, no matter what the number of his years. So long as the arteries are still supple, a man is young, no matter how many the years he has lived.

.. *By the Editor* ..

THE BUTCHERS' STRIKE

THE butchers are striking. We are glad of it. It is in the butchers to strike. Generally their blows are aimed at the head or the heart of some innocent, defenseless victim. Just now they are striking to better purpose, and are inflicting wounds, though unintentionally, upon some gross, hoary-headed errors which die hard.

The butchers' strike has caused the price of meat to rise, and thousands of people are for the first time in their lives considering the possibility of getting along without meat. Many of the leading newspapers are publishing editorials recommending people to use less meat, and extolling the virtues of vegetarianism. The *Chicago Chronicle*, in a recent editorial, says a lot of good and cogent things which we are glad to pass along to other readers:—

"As fifty thousand meat cutters and butchers employed in the packing-houses of nine different cities threw down their tools yesterday and went out on a strike, hoping also for the support of several sympathetic strikes, it begins to look as if fresh meat might shortly become high-priced and scarce. This is generally regarded as an evil, but, properly viewed, may be considered a blessing.

"This is the time to recall the fact that we all eat too much meat and that possibly some people would be better off without any at all. Scientific men assure us that, at best, meat is only an accelerator of bodily processes, just as alcohol and other stimulants are, so that it enables us to live faster, but causes us to quit sooner,

It is notorious, they say, for producing sudden breakdowns in the human machinery.

" 'In almost every case,' said Dr. J. B. Murphy on one occasion, 'in which men break down suddenly after reaching the age of fifty, they are great meat eaters.' Dr. D. R. Brower, to whom the remark was repeated, immediately corroborated it, as did several other of the leading physicians of this city.

"None of these physicians are vegetarians or believe in the vegetarian theory. All they vouch for is that the American people eat entirely too much meat, and that, while a meat diet produces some agreeable results at first, it is a mere mortgaging of future strength for present enjoyment, and later produces sudden collapse and premature death. On the other hand, it is well known that the hardiest races of people in the world, like the Chinese and Japanese, are vegetarians.

"This sort of preaching has little or no effect on people who are wedded to chops and roasts. They are as hard to reform as confirmed inebriates, although many of them are limping around with rheumatism solely on account of this indulgence. The only hope of saving them lies in a scarcity of meat, and that is what they are soon to experience. When they can not get any meat, they will learn involuntarily how much better they feel without it.

"Almost every strike teaches some important lesson, and the present strike, if it shall last long, will cure many people of diseases which they now regard as incurable."

THE FRUIT CURE

THE "grape cure" has long been practiced in Switzerland, and has proved one of the most effective means of curing various disorders. So-called "bilious dyspepsia," constipation, neurasthenia, general debility, and chronic intestinal catarrh, and other nutritive disorders which have resisted all ordinary means of treatment, frequently yield readily to a course of grape cure. Observations made at different times by competent physicians have shown that cherries, peaches, apples, oranges, and other fruits may be successfully used in the same way.

The reason for the wonderful efficiency of the grape cure, or, as the method should be more properly termed, the fruit cure, has become apparent in recent times by the discovery of the fact that fruit acids destroy germs. It is a most interesting and important dietetic fact that the great nutritive acids of fruit (malic, tartaric, and citric acids) are among the most powerful germicides. There is no disease-producing germ known to man that does not quickly die when exposed to the action of limes and the juices of grapes or apples. Even when considerably diluted, the juices of these fruits are still effective in destroying germs. When eaten, the fruits act as cleansing agents,—natural germicides,—whereby the disease-producing germs which have found lodgment in the stomach and are flourishing in the intestines, are killed off in countless numbers.

The importance of the use of fruits may be readily recognized in view of the fact pointed out by Metchnikoff that there are produced in the alimentary canal every day countless millions of virulent microbes, every one of which is a source of poison. These germs convert undigested and unabsorbed fragments of foodstuffs into deadly poisons, the absorption of which into the body gives rise to a great variety of maladies. As a consequence, various diseases and

many nervous symptoms—indigestion of different forms, weak heart, fatty degeneration of the heart, liver, and kidneys, Bright's disease, dropsy, rheumatism, and other chronic maladies—are produced. Besides, the resistance of the body is lowered, thus making it susceptible to such infections as pneumonia, diphtheria, grippe, and various other tissue infectious diseases.

The importance of the habitual use of fruit can not be overestimated. Fruit acids are an excellent food, being consumed in the body in the same way as starch and sugar, though having a somewhat smaller nutritive value. Weight for weight, fruit acids have about one-half the nutritive value of starch and sugar. The great value of the orange depends chiefly upon the citric acid which it contains. The lemon is still richer in citric acid, but contains less of the nutritive sugar, of which orange juice contains about ten per cent.

Sour apples offer the cheapest and one of the best sources of nutritive acids. The principal acid of the apple is malic. Its power to destroy germs is fully equal to that of citric acid. Fortunately, the apple is a cheap and abundant fruit. Both the nutritive value and the cleansing qualities of the apple are almost exclusively represented in the juice. When apples are plentiful, apple juice can be made and preserved in cans or jugs at a small expense. This places the excellent qualities of this wonderful fruit within the reach of all. It is only necessary to make provision at the proper time for several months' supply. Many chronic invalids suffering from gastric and intestinal disorders may with advantage take two or three pints of apple juice daily. In addition to the disinfectant action upon the stomach and bowels, apple juice contains a considerable amount (ten or twelve per cent) of highly nutritive foodstuffs, ready for immediate absorption, requiring no diges-

tion. Apple juice aids digestion and encourages the action of the liver and kidneys. For most people, apple juice

is slightly laxative, another important quality which contributes to the thorough cleansing of the body.

BORAX IN FOOD

DR. WYLIE, chemist of the United States Department of Agriculture, has during the past year been making an elaborate series of experiments for the purpose of determining the influence upon health of boric acid and borax when used as a preservative of foods. It is well known that borax has long been employed for the preservation of various foods and drinks. It has been a question among sanitarians how much influence a small amount of borax employed for this purpose might have upon the health of those making use of foods and drinks containing this chemical preservative. The Department of Agriculture will shortly issue a bulletin in which the results of Dr. Wylie's investigations will be summarized. An abstract of the report has already appeared in print, from which we quote the following:—

"When boric acid or borax equivalent thereto, in small quantities, not exceeding a half grain per day, is given in the food, no notable effects are immediately produced. If, however, these small doses be continued for a long while, as, for instance, in one case fifty days, there are occasional periods of loss of appetite, bad feeling, fulness in the head, and distress in the stomach. These symptoms, however, are not developed in every person within the time covered by the experiment, for some are far more sensitive to the action of these bodies in small quantities than others. There is no tendency in such cases to the establishment of diarrhea or diuresis, though there is a slight tendency to increase to a very small extent the amount of water in the feces. There is, however, no measurable tendency to increase the volume of the urine.

"When boric acid, or borax in equivalent quantities, is given in larger and in-

creasing doses, there is a tendency to the somewhat rapid development in a more accentuated form of the symptoms above described. The most common symptom developed is a persistent headache, a sense of fulness in the head, with a clouding to a slight extent of the mental processes. When the doses are increased to three grammes a day, these symptoms are established in a majority of cases, but not in every case. They are also sometimes attended by a very distinct feeling of nausea and occasionally by vomiting, though the latter act is rarely established. There is a general feeling of discomfort, however, in almost every case, but the quantities required to establish these symptoms vary greatly with different individuals.

"It is reasonable to infer that bodies of this kind, not natural to nor necessary in foods, which exert a marked injurious effect when used in large quantities for short periods of time, would have a tendency to produce an injurious effect when used in small quantities for a long time. The general course of reasoning, therefore, would seem to indicate that it is not advisable to use borax in those articles of food intended for common and continuous use. When placed in food products which are used occasionally and in small quantities, it seems only right, in view of the above summary of facts, to require that the quantity and character of the preservative, that is, whether borax or boric acid, be plainly marked, so that the consumer may understand the nature of the food he is eating."

In the face of the above facts, it can no longer be considered an open question as to whether or not borax in either large or small quantities is a proper constituent of foods. Borax and boric acid are chem-

ical substances which are not usable in the body. When taken in, they must be eliminated. Professor Wylie showed that eighty per cent of the total amount of borax taken into the body may be recovered from the urine, indicating that the use

of this chemical substance entails an enormous amount of extra work upon the kidneys, to say nothing of the damage done to other tissues in various parts of the body with which it comes in contact.

PEOPLE WHO EAT CATS AND DOGS

THE good people of St. Louis have been considerably agitated by the fact that the United States government supplies twenty dogs weekly to the Ingarrotes, one of the native tribes from the Philippines, which constitutes a part of the Philippine exhibit at the World's Fair. Less attention seems to have been paid to the dog feast in which the government Indians indulge in one of the shows on the Pike. The motive of this squeamishness, it is difficult to understand. Is it sympathy for the Filipinos, or for the dogs whose tough muscles they seem to relish so highly? If it is the Filipinos who are commiserated, it seems natural to ask, Why not eat a dog as well as a pig? The use of both dogs and pigs is forbidden by Holy Writ. Considered as an animal, the dog is certainly in every way more cleanly in its habits than is the pig; and is just as particular about his diet. The pig will eat anything that a dog will, and some things that a dog can not eat. The pig will eat a brother pig or a daughter pig. If a pig dies in a pen, his comrades turn about and consume him. Dogs will not eat dogs, at least not unless driven to the last limit of starvation.

Why not eat a dog as well as a fish? Fishes, as well as dogs, are carnivorous. Big fish subsist upon little fish. There seems to be quite a wide-spread taste for the flesh of carnivorous animals. The

Porto Ricans are fond of cats. A Porto Rican boy, brought to this country a few years ago, when asked what he would like to eat, mentioned a young kitten as a delicacy which he would enjoy. When protest was made, he announced that he would as soon eat a kitten as a squirrel; that one was just as good as the other.

A writer in *Chambers' Journal* recently called attention to the fact that the Piedmont peasants regard the domestic cat as a delicate morsel, and among these people, stray cats quickly find their way into the stewpan.

Some time ago, a San Francisco butcher established a special reputation for sausage, and took several first premiums. A loud caterwauling in the neighborhood of his shop early in the morning led to the discovery that his sausage consisted largely of cats, which were brought to him in bags in the early morning hours by boys that made a business of gathering up stray felines.

From an ethical standpoint, it would seem as right to kill a dog or a cat for food as a sheep or a calf. There is an underlying principle which can not be ignored in the dictum of the ancient philosopher:—

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

WHAT TOBACCO-USERS WASTE

A WRITER in *The Lancet* complains that smokers waste not less than eight thousand tons of precious ashes annually.

This enormous amount of ash, representing not less than five hundred carloads, consists of the most essential elements

of the soil, which are extracted, carried off, and scattered to the winds, thus impoverishing the soil. Says the writer, "It is a great pity that so much valuable material should be forever lost to the soil." He urges that some plan be devised "for the collection of tobacco ash," so that this waste may be prevented.

The doctor is right. The soil is robbed by the smoker; and what he takes from the soil, where it belongs, and renders useful service, he deposits in the air, where it does not belong, and where it is a nuisance and a menace to the health of millions. Thus the air is robbed of its purity and wholesomeness at the same time that the earth is robbed of the elements which support plant life.

But the smoker commits other and greater peculations. He wastes heart energy, and nerve energy, and digestive energy, and muscle energy, and liver power, and kidney work, and lung work; to say nothing of the precious time he wastes in lighting and manipulating his pipe or cigar, and the money that is wasted in keeping alight the consuming fire which he maintains as a sacrifice to Bacchus.

Thus the smoker is a wholesale and all-around depredator.

Look at the charges that are proved against him, and then consider what ought to be done to restrain his perseveringly pernicious activity:—

The smoker steals ashes from the soil.

The smoker steals purity and sweetness from the air.

The smoker steals time and energy which belong to some more useful occupation than burning incense to a dead Indian.

The smoker steals cash from his pocket.

The smoker steals health, entailing disease upon both himself and his children.

How are the damages thus inflicted by the smoker to be repaired? How are the losses which he occasions to be made good? The doctor suggests that some plan be devised for collecting the ashes which the smoker scatters about, so that they may be returned to the soil. Here is an opportunity for a government appropriation for the support of cigar-ash collectors,—a most useful and honorable office; but a collector would be needed for every smoker, and the expense would enormously exceed the returns. It would seem better to let the ashes remain in the soil.

To protect the purity of the air, either an air filter should be supplied to every one who does not smoke, or a tobacco-smoke-and-ash-consuming device must be invented and every smoker must be compelled to use it. A more practical plan would be to suppress the useless practice of smoking.

The other losses which smoking entails are utterly irreparable. Money burned can not be restored. Time and money squandered are forever gone. Health and vitality lost can never be fully regained.

Smoking is an evil practice for which there is no apology, and which ought to be tabooed and outlawed in a civilized and Christian community. There is no reasonable apology for it. All clean-minded men and women should join in an outcry against this abominable practice, which is a crime against the individual, against society, against the State, against the air we breathe and the earth out of which we come.

THE FOOD CURE OF GASTRIC DISORDERS

THE recent discoveries of Pawlow, of St. Petersburg, and others, have brought out the very interesting fact that food generates the digestive juices, and that each particular and natural food contains

elements necessary for developing the digestive fluids required to digest it. Even while food is still in the mouth, notice is sent, through the nerves of taste, to the various glands which secrete the diges-

tive fluids, informing them not only of the fact that food is being received into the digestive tract, but giving also the exact information respecting the nature of the food and the kind of juice required for its digestion. This principle has been proved by Pawlow to apply not only to the stomach and the mouth, but also to the intestinal glands, so that it is now clearly understood that the whole process of digestion is under the control of the nerves of taste, and possibly other nerves which recognize still more subtle qualities in foodstuffs than mere flavors. After the food enters the stomach, other nerves are acted upon which still further stimulate the flow of the digestive fluids in the stomach and intestines. This remarkable influence of food upon the digestive glands is due to the process of substances known as *peptogens*. These are present in larger or smaller quantities in all foodstuffs. In order that they should operate efficiently, it is necessary that the food should be retained in the mouth for a sufficient length of time to enable the nerves of taste to distinguish the peptogenic substances present, so that the proper digestive fluids may be formed in readiness for the digestion of the food after it is swallowed.

This discovery has introduced a new principle into the treatment of gastric disorders. The failure in administering pepsin and other artificial digestive agents becomes at once apparent, for these substances only lessen the digestive power of the stomach, and in a short time lose what little value they may at first possess, and in the end do more harm than good. The natural and physiological method is to select for the enfeebled stomach such foods as are rich in peptogens, and hence capable of aiding the digestive glands to form juices necessary for the digestion of food. Peptogens are not artificial digestive agents, but promoters of digestion. Operating in a perfectly natural way, they aid the digestive organs to recover their lost powers, and if the organs are so far enfeebled that this can not be accomplished, these peptogenic foods may act as crutches, causing a powerful and favorable influence upon the digestive glands, while at the same time being themselves nourishment.

We are convinced that pepsin and the long list of digestive agents will soon be retired from use, and in their place we shall have foods which contain the most powerful peptogens in concentrated form.

HOW A TRAVELING MAN MANAGES HIS BILL OF FARE

THE Battle Creek Sanitarium Food Company recently received from the secretary of a well-known business association, residing in Detroit, the following letter, which gives his bill of fare and explains how he manages to secure a thoroughly healthful diet while almost constantly on the road:—

"Everything I eat, with the exception of fruit and vegetables, is cooked in Battle Creek. My bill of fare is this:—

BREAKFAST

20% Gluten in Huckleberry Juice
 Granola in Huckleberry Juice
 Breakfast Toast in Huckleberry Juice
 Bromose
 Charcoal Tablets

LUNCH

Dish of Canned Plums
 Whole-wheat Bread

DINNER

Whole-wheat Wafers
 Stewed Canned Corn
 Bromose
 Stewed Tomatoes
 Whole-wheat Bread
 Charcoal Tablets

"Once in a while baked potatoes and poached eggs are added, and I generally have a box of cream sticks and fruit crackers on the table.

"This has been my unvarying bill of fare every day for a year, and I still live and enjoy good health, to the astonish-

ment of my meat-eating friends, who, I am sorry to say, do not always enjoy good health.

"I travel in the State a good deal, and pay three dollars a day at the hotels and eat my meals in my room. It always necessitates carrying one large tele-

scope for the commissary department.

"I feel assured that you have the right idea on the health question, and while it gives rise to considerable trouble, I have concluded that I would rather be troubled with a heavy telescope than with a heavy head and stomach."

A SCHOOL OF HEALTH

EVERYBODY wants health, but how to get it is the problem. Chronic invalids are the most industrious of globe-trotters, seeking health and finding none at a thousand much-lauded "springs" and other resorts.

The secret of failure is neglect to recognize that divine and eternal principle expressed in the words of Holy Writ, "Whatsoever a man soweth, that shall he also reap." Ill health is simply the fruit of wrong eating, sedentary life, neglect of exercise, breathing bad air, excesses in various directions. Health is the fruit of right doing in diet, exercise, baths, etc.

What a chronic invalid needs is a course of health culture, a training in correct habits. The blood is the great healing power in the body. The blood is made of what we eat; hence he must know what to eat. This requires a careful investigation of the condition of the stomach, a microscopic and chemical examination of the stomach fluid; in many cases a microscopic study of the blood.

Pure, healthy blood will heal every diseased condition that is curable. Nerve weakness is simply a condition of defective nutrition, which disappears when the nerve centers are fed by healthy blood. Muscular weakness disappears when muscles properly exercised are fed by rich, pure blood. The body returns to health by virtue of the recuperative power within it, the *vis medicatrix nature* of the ancients, when supplied with right conditions.

Common-sense regulation of the habits of life is sufficient to maintain one in good health, but when the health is gone, a nicer adjustment of conditions than can be secured by the adoption of ordinary hygienic rules is needed, to accomplish which requires the application of the methods and means, appliances and principles, which modern medical discovery and scientific research have made available for use in the regulation of the bodily functions. In other words, a chronic invalid who has exhausted the means of recovery available at home, requires to spend a few months at some great health university like the Battle Creek (Mich.) Sanitarium, where, by the aid of extensive research laboratories, diet kitchens, gymnasiums, swimming baths, and facilities for the employment of electricity, scientific hydrotherapy, massage, and every other rational curative agent, sick and diseased bodies are trained up to strong and vigorous health.

There is a vast army of dyspeptics, neurasthenics, and other chronic invalids whose diseases are readily curable by the means above suggested, who might, in a few months, find themselves in the enjoyment of excellent health, but who are drifting along from year to year, sinking each month a little lower in the vital scale, and all the time living in a condition which extends an open invitation to tuberculosis, Bright's disease, and other grave maladies which are powerless to harm the healthy organism, but which readily take root in a weakened and deteriorated body.

Too Much Meat.

The *Chicago American* agrees with numerous other newspapers in recognizing that the average American eats too much meat, and that he could very well get along without it altogether if necessity required. This ably edited paper improves the present opportunity to call attention to the nutritive value of vegetables, and especially to the importance of thorough cooking of all this class of foodstuffs. We quote as follows:—

"It would not be such a very bad thing if the present high price of meat should compel attention to the value of vegetables as food, and especially to the importance of cooking vegetables properly.

"The average meat eater eats *too much* meat, and eats it too often.

"If you eat meat once a day, it is as much as your system requires, as much as it can assimilate profitably.

"Nearly all religions have enjoined fasting on their followers, for longer or shorter periods. The believers—especially among the rich and overfed classes—have been greatly benefited thereby.

"At least nine human beings out of every ten would be better off if they could begin to-day to eat half as much meat as they have been accustomed to eat.

"The question of properly cooking vegetables is so important that the newspapers ought to talk about it at least once a week, and every housekeeper should have it dinned into her ears by the hour.

"The French, the Germans, and others know how to cook vegetables. The Americans as a people are lamentably and stupidly ignorant on that subject. In this country, vegetables are never *thoroughly* cooked—they are served about half raw.

"They are not *properly* cooked—not made attractive, not made digestible.

"If the beef trust could force Americans to know how to cook vegetables, and especially to take interest in the great variety and the unlimited possibilities of the vegetable world, the high price of meat would be in reality a blessing."

Preparation of Unfermented Grape Juice.

The *Farmers' Bulletin*, No. 176, issued by the United States Department of Agriculture, gives the following method for putting up unfermented grape juice, a supply of which should be kept in every household:—

"Use only clean, sound, well-ripened, but not overripe grapes. The grapes may be crushed and pressed in a portable cider or wine mill or by hand. These can be put in a cleanly washed cloth sack and hung up, or the sack can be twisted by hand until the juice is expressed. The juice should be gradually heated in a double boiler or a large stone jar in a pan of hot water, so that it does not come in direct contact with the fire, at a temperature of 180° to 200°. If there is no thermometer at hand, heat the juice until it steams, but do not allow it to boil. Put it in a glass or enameled vessel to settle for twenty-four hours; carefully drain the juice from the sediment and run it through several thicknesses of clean flannel; or a conic filter made from woolen cloth or felt may be used. This filter is fixed to a hoop which can be suspended whenever necessary. Fill into perfectly clean bottles (leaving a little space at the top for the liquid to expand when heated). Fit a thin board over the bottom of an ordinary wash boiler, set the filled bottles (ordinary fruit jars of glass are just as good) in it, fill with water around the bottles to within about an inch of the tops, and gradually heat until it is about to simmer. Then take the bottles out and cork or seal immediately. Grape juice prepared in this way will keep perfectly fresh for an indefinite length of time, and will always be ready for immediate use."

Killed by Sauerkraut.

According to the newspapers, Senator Quay died of inflammation of the stomach due to eating sauerkraut. Many a man

has died of appendicitis from the same cause. Sauerkraut is wholesome food for pigs, or at least these scavengers are apparently able to eat fermenting cabbage and other rubbish with impunity; but human beings have stomachs adapted to a wholly different dietary. The pig has a very powerful gastric juice. It can digest anything from dead rats to rotten pumpkins without dyspeptic qualms. It greets with appreciative grunts the aromatic fragrance of swill and sauerkraut, and lies down to sleep and pleasant dreams after a supper of microbes that would kill a cow or sicken a hippopotamus. No animal but man dares compete with the pig in the heterogeneity of his diet. By nature a fruit eater, having a stomach which demands simple foods in small variety, the "paragon of animals," born to feast as a king on the choicest and daintiest of foodstuffs, has gone down on all fours to eat offal, rubbish, garbage, and swill with carnivorous and scavenger beasts. For his folly and disloyalty to the law of his being, he pays the penalty of his life, either in some sudden taking off like that of Senator Quay, or in premature senility and decay, ending his life by apoplexy, Bright's disease, or some other disorder of degeneration.

What excuse has man, the lord of creation, for his so wide departure from the path of physical rectitude? and what apology can he offer for turning away from nature's delicacies to feed upon the fare of scavengers?—None but the promptings of perverted instincts, of depraved appetites.

Oyster Diet.

The *National Geographic Magazine* calls attention to an investigation which has been carried on by Dr. Moore, of the Bureau of Fisheries, at Lynnhaven, Va., for the purpose of determining how to fatten oysters. It has long been observed that the oysters from certain beds are fat, while those from other beds are lean. Examination of the cause has shown that

the beds in which oysters fatten rapidly abound in minute organisms which grow abundantly in the slime and ooze of the ocean bottom, while in the beds in which oysters do not fatten or in which they fatten slowly, these germs, *diatoms* and *infusoria*, are less abundant. Dr. Moore found that by supplying to these latter beds quantities of commercial fertilizer, oysters fatten rapidly. It seems that the decomposing organic matter supplied by the fertilizer encourages the growth of diatoms and other micro-organisms, and thus supplies the oyster with the food which it requires. This accounts for the fact that oysters thrive so well about the mouth of sewers. Oyster juice always abounds in germs. Typhoid fever germs and colon germs can generally be found in the mouth and intestines of the oyster and in the slime beneath its shell. These facts ought to lessen the appetite of the public for the juicy bivalve, whose proper place is scavengering the ocean bottom rather than squirming in the human stomach.

OYSTER CONCOMITANTS

Courageous was the man who, undismayed,
To eat the slimy oyster first essayed;
Who, not content to dine on viands tame,
The scavenger of scavengers became.
Let him not stop with bivalve, toothless
beast,
But, proving well his mettle, choose a feast
Of snakes and scorpions; filling well his
maw
With spiders, flies, mosquitoes; close his
jaw
On centipedes and beetles, dainty bugs,
Plump maggots, moths which spoil our
parlor rugs,
On devil-fish and sharks from tropic seas,
Earthworms, tarantules, and furtive fleas.
Thus proving man, crown of creation's day,
Degenerate, a prowling beast of prey.

J. H. K.

WHAT we eat to-day is walking around and talking to-morrow. If we would walk well and talk well, we must eat well.

... Question Box ...

10,113. Chicken-pox.—J. S., Oregon, asks what treatment should be given for chicken-pox.

Ans.—This disease is rarely serious enough to require anything more than a spare diet of fruits and grains, and free water-drinking. Take care to keep the bowels open, and avoid taking cold. If the temperature rises so high as to cause discomfort, one or two wet sheet packs will generally control it. A moist bandage should be worn around the abdomen, consisting of a towel wrung rather dry out of cold water, and covered with one or two thicknesses of flannel.

10,114. Dairy Butter.—S. W. S., Ontario: "1. Should all dairy butter be sterilized? 2. What is the best and simplest method of sterilizing?"

Ans.—1. Yes.

2. The best way is to expose the butter to the temperature of boiling water for an hour in a double boiler. The proper method of making sterilized butter is to sterilize the milk or cream. Butter prepared in this way is not absolutely sterile, but all disease-producing germs are destroyed.

10,115. Dizziness — Fruits.—S. M. D. M., California: "1. In the morning I am dizzy and 'blind,' and have severe headache and pain back of the eyes. Generally eat fruit and granose and zwieback at breakfast; can not eat yeast bread or any starchy food with fruit. I take a cold bath every morning and sometimes a cold drink. Eat soup and vegetables for dinner. Sometimes there is numbness of the tongue and jaws with the dizziness. What do you advise for breakfast? 2. What fruits are best for me? 3. Are peaches acid fruit? 4. Is the tomato a vegetable or a fruit? 5. Can a battery be used with profit in my case? 6. Should I take a cold drink on rising? 7. Are two peaches the right amount for one meal? 8. Should the fruit be warmed or eaten cold? 9. Do you advise the exercise mentioned in the December journal for me? My employment is active, but indoors. 10. Do you recommend dates, raisins, figs, and peaches?"

Ans.—1. Granose biscuit, granola, toasted corn flakes, toasted wheat flakes, granuto, gluten biscuit.

2. We see no reason why any good wholesome fruit should not agree with you. Care should be taken to avoid swallowing the skins and seeds of fruits. Masticate thoroughly.

3. There is a small amount of acid in peaches; in some varieties more than in others.

4. From a dietetic standpoint the tomato must be considered as an acid vegetable; botanically, it is a fruit.

5. Probably yes, though it is not absolutely necessary.

6. Half a glass of water at room temperature taken on rising would probably be beneficial.

7. This depends entirely on how much other food you take and the character of the food. If you are living upon a diet of fruits and nuts, a larger amount of fruit should be eaten. If bread or other farinaceous food is taken freely, the amount of fruit required will be less.

8. On the whole, and for most people, it is probably best to take food at about the ordinary temperature.

9. Yes.

10. Yes.

10,116. Coconut Cream — Uric Acid in Meat — Diet — Starch — Sugar.—A Texas correspondent asks: "1. Where can coconut cream or butter be obtained? 2. How much uric acid does one pound of beef contain? 3. On a diet of milk, cream, butter, gluten gruel (made with milk), and eggs, how much of each should be taken? 4. Are these articles sufficient in themselves to build up one who is run down? 5. Is the starch in Irish potatoes digested by the stomach or the intestines? 6. Does the free use of sugar cause kidney trouble or the presence of sugar in the urine?"

Ans.—1. It can easily be made from coconuts. Full directions are given in the new edition of "Science in the Kitchen," by Mrs. Kellogg.

2. Fourteen grains.

3. The amount of food required daily is about two ounces of fat, eight ounces of starch or starch and sugar together, two ounces of proteids. Milk contains four per cent sugar, four per cent fat, and four per cent proteid. Cream contains nearly sixty per cent fat. Butter contains eighty-five per cent fat. Gluten gruel, as ordinarily made (one part 30% gluten to five parts milk), contains in a six-ounce serving about one ounce of starch, half an ounce of proteid, and a third of an ounce of fat. Eggs contain about one-fifth of an ounce of albumin and one-sixth of an ounce of fat.

4. Yes, if taken in the right proportion.

5. Starch, when thoroughly cooked, is largely transformed in the stomach. The saliva converts starch into dextrin and sugar. Any portion which is not digested in the stomach is digested in the small intestine.

6. Yes.

10,117. Ringworm.—F. J. H. wishes to know the cause of and cure for ringworm.

Ans.—Ringworm is a parasitic disease. Paint the part with tincture of iodine, turpentine, or a strong solution of borax. Improve the general health.

10,118. Feet.—G. W. D., Canada: "1. Give practical hints on the care of the feet in winter. 2. Outline treatment for chilblains and other foot ailments."

Ans.—1. Bathe the feet in cold water night and morning. Rub well and apply talcum powder. If the feet perspire, change the stockings every day. Two pair of stockings will answer, each pair being rinsed and dried after being worn a day, in preparation for the alternate day; or, if a little soap is added to the water, and there is opportunity for drying overnight, a single pair of stockings will serve for a week.

2. The alternate hot and cold foot bath is an excellent remedy for chilblains. The hot water should be as hot as can be borne, and the cold water as cold as can be obtained. Allow the feet to remain half a minute in the hot water and fifteen seconds in the cold water. Alternate ten or twelve times. Apply this treatment twice daily.

10,119. Sage Tea.—Mrs. E. B. R., Illinois: "1. Is sage tea a healthful substitute for coffee? 2. Is Japan tea more healthful than coffee?"

Ans.—1. Sage tea is less harmful than coffee, but caramel cereal would be better.

2. No.

10,120. Tobacco.—A subscriber asks if the statement is true in "Home Hand-Book," that one pound of dry tobacco leaves contains enough poison to kill three hundred men.

Ans.—One pound of market tobacco contains about 350 grains of nicotine. One-thirtieth of a grain causes toxic symptoms in man. One drop kills a dog. Nine-tenths of a grain will kill a man. One pound, then, contains more than enough to kill three hundred men.

10,121. Xanthin — Aerated Water.—F. W. F., Africa: "1. Is it true that peas, beans, and lentils contain xanthin? 2. What becomes of the carbonic acid gas of aerated water on entering the stomach?"

Ans.—1. Yes, a small amount; not sufficient, however, to do any one any serious harm. A pound of beans as served upon the table contains about the same quantity of xanthin or uric acid as fifty pounds of beefsteak.

2. The amount that enters the stomach is extremely small. Nearly all escapes during the action of drinking and swallowing. The small portion that enters the stomach may be absorbed, carried off through the intestines, or regurgitated.

10,122. Vitalized Air — Finish for Walls — Good Health Waist.—A. W., Indiana: "1. Is it safe to take vitalized air administered by the dentist in extracting teeth? 2. Do you advise anesthetics for teeth extraction? 3. If so, what? 4. From a sanitary and economic standpoint, what is the best finish for plastered walls and ceilings of dwellings? 5. Will the mill sold by the Good Health Publishing Company grind other foods than nuts? 6. Can one purchase the pattern of the Good Health Adjustable Waist?"

Ans.—1. Laughing gas is safe for most persons. It should be avoided by very aged persons, or persons with extremely weak hearts. It should be given by a competent dentist.

2. If a person chooses to run the slight risk of the anesthetic, he may do so. The writer would prefer to bear the pain.

3. There is nothing better than laughing gas.

4. Hard plaster, well painted.

5. Yes.

6. The patterns are not sold. The waist itself may serve as a pattern.

LITERARY NOTES

OLD age is overtaking men and women in middle life. Under our forcing system people hardly reach full growth before they begin to show signs of decay. What a travesty on life it is to see aged men and women in their thirties and forties!

This pushing and crowding, jamming and elbowing, and rushing at express speed from day to day, from the nursery to the grave, is not life; it is a race for death.—*Orison Swett Marden*, in August **Success**.

Color-printing is a feature of the August number of **Scribner's**. In addition to its colored cover by Ivanowski, it has a colored frontispiece; an amusing series of drawings by Mrs. Preston, printed in colors, and drawings by Guérin and F. W. Taylor, printed in tint.

EVERY COMMON DAY

EVERY common day of our lives is clasped
and jeweled with love;
The stars of night are beneath it, the morning
stars above.
The peace of God broods on it, as a bird on
the nest she built,
And over its weariest moments the music of
hope is spilt.

So when my work is finished, and I go to God
for my wage,
I wonder if he can give me a heavenlier
heritage
Than to feel that each day that I live is clasped
and jeweled with love,
With the stars of night beneath it and the
morning stars above.

—*Ethelwyn Wetherald*, in **Good Housekeeping**.

James Hooper, who contributes another powerful story of the Philippines to the August **McClure's**, writes of that wonderland with authority. For several years Mr. Hooper lived in the Islands as the teacher in one of the Government schools. He has found much interesting literary material there.

The women of Japan, in contrast to their Occidental sisters, have long been noted for their perfect poise and self-possession. Their placidity under what would ordinarily be considered trying circumstances has surprised

American tourists. Patent medicines guaranteed to cure nervousness in its many forms have little sale in Japan. The meaning of the term "nervous prostration" is unknown. Japanese physicians are rarely rich, says Robert Webster Jones, in the August **Housekeeper**.

An explanation of this happy state of affairs has been made by a returned traveler. "To begin with," says he, "there is never any change in fashions, so the Japanese woman has no worries at all on that score. Then, housekeeping is greatly simplified, so the Japanese housekeeper is hurt by none of the jars and frets that rag the nerves and prematurely age her Western sister. The Japanese house has no draperies, no dust traps in the shape of superfluous ornaments. People all put off their shoes on entering the house, so no mud and dirt are brought in. They never sit up nights planning how they may outshine their rivals in dress at some social affair. They do not bother their brains with schemes for marrying their daughters to rich foreigners. They never have to give eight-course dinners with two-course pocketbooks. They live simple, happy, peaceful domestic lives, and live them long."

While we should be sorry to see American women restrict their lives to the narrow sphere of the Japanese, there is no doubt that three-fourths of their nervous worry is caused by "trying to do too much." Simplicity is the keynote of sanity and health, and American men, as well as women, may profit by the example of the happy Japanese.

The August number of **The New England Magazine** is notable in more ways than one. Its leading feature is a lavishly illustrated article on the Woman's Relief Corps by Elizabeth Robbins Berry. The article is of especial timeliness in view of the fact that this is the month of the National Encampment of the G. A. R. in Boston; the annual conventions of the National W. R. C. always being held at the same time and place as those of the G. A. R.

Still another illustrated feature that will appeal especially to artists and art lovers is an interesting account of the annual summer exhibitions of American art held at Poland Spring, South Poland, Me., with a critical estimate of the more important works shown in the collection of 1904.

PUBLISHERS' DEPARTMENT

GOOD HEALTH

A Journal of Hygiene

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

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Single Copies 10 cents : : : :

PUBLISHED MONTHLY BY

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115 WASHINGTON AVE, N.

BATTLE CREEK. MICHIGAN

A NEW SYSTEM OF COOKERY.

COOKERY is as old as civilization. Man is called "the cooking animal." The cookery of antiquity was as simple as the ancient bill of fare. In those days, it was said, "And all the days of Noah were nine hundred and fifty years; and he died."

As human habits have become more and more artificial, the bill of fare more unnatural, confused, and complicated, human life has been shortened, until the present average is

only about one-twentieth that of the earliest man.

Primitive cooks, even those of the present day as found among semi-civilized and savage people, are far better acquainted with the resources and possibilities of the simplest procedures than is the average civilized cook. Among them complicated dishes are unknown; natural foods are made digestible and palatable by simple methods which develop their natural flavors and do not impair their nutritive properties. Civilization has never produced a better bread than the simple barley cakes which the wild Arab woman of the desert mixes with meal and water and bakes on a flat stone or a scrap of tin, or the corn cakes which the Indian woman of Old Mexico, descended from the ancient Aztecs, prepares by the same method. The half-nude Tamils of Northern India prepare steamed rice by roasting in a green bamboo stem, which far excels in toothsome lightness the boiled rice which appears on most civilized tables.

Modern cookery has largely lost sight of the simple, natural, truly scientific principles of

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his necessary art, and has directed its chief attention to the discovery of new and piquant flavors, pastry and palate-tempting combinations of foodstuffs and stuffs not food, even poisons, irrespective of the known or possible effects of these unnatural comestibles, so long as a jaded and perverted palate expresses approval.

"Science in the Kitchen," by Mrs. E. E. Kellogg, A. M., is a presentation of a new system of cookery in which principles long lost sight of, and newly discovered methods and principles are brought into systematic order in the production of a perfectly healthful menu.

The new system, presented for the first time in its entirety in this volume, aims, first of all, to return to original and natural simplicity as far as conditions permit. The original object of cookery was to render available food substances which in their natural state are either indigestible or unpalatable. Palatability is one of the qualities necessary for digestibility. Hence, digestibility is the one great aim of scientific cookery, and in this volume this principle is never lost sight of. Of the nine hundred tasty dishes described in this work, not one is open to criticism as unwholesome or indigestible. Palatability and digestibility are, for once, successfully combined. Every home needs this volume. Every nurse needs it. It is a veritable *vade mecum* of information on the subject of nutrition. Write the publishers for a circular. Address,

Modern Medicine Company,
Battle Creek,
Mich.

A TIMELY AND PRACTICAL ARTICLE.

"Home Tests for Vision and Hearing," by Dr. J. F. Byington.

IN the October number of GOOD HEALTH will appear a very valuable paper by Dr. J. F. Byington, of the Battle Creek Sanitarium staff, entitled "Home Tests for Vision and Hearing."

Being the time of the year when pupils and teachers resume their school duties, which are more or less taxing to the eyes, and because so many people suffer unwittingly from eye troubles, this article will come as a veritable blessing to many.

It will be a splendid presentation of the subject in direct, lucid language, and invaluable to every member of the family.

Accompanying the article will be a four-page folder, giving a chart such as is used by the oculist in testing the eyes. This can easily be detached from the magazine, and may be kept for future reference.

THE PRIZE HEALTH STORY.

OF more than a hundred articles submitted in response to our call for health stories, that by Edith E. Adams has won the first prize, \$25.00. The story is called "A Meeting of Extremes," and relates the amusing experience of a number of invalids in search of health at the same place.

Miss Jessie Rogers, of Everett, Wash., is the winner of the second prize, \$15.00. "One Summer Time" is the title of the story, and inwoven into it in the most delightful vein are some good, practical points. The writer has a particularly happy style of expression.

These stories will be published in succeeding numbers.

A WONDERFUL SPRING.

AN Arkansas farmer, describing to a tourist some of the wonderful properties of the mineral springs of that State, said, "Do you see that spring over there, stranger?" He said that he did, whereupon the farmer added: "Well, that's an iron spring, that is, and it's so mighty powerful that the farmers' horses about here that drink the water of it never have to be shod. The shoes just grow on their feet nat'rally."

THE HUMAN FAMILY AT ST. LOUIS.

Strange Peoples that Have Been Gathered within the World's Fair.

OF mechanical devices, all more or less familiar to persons even ordinarily well-informed, the supply for the amusement of the masses is almost limitless at the great World's Fair now at the height of its beauty and impressiveness in St. Louis. But nothing pleases the intelligent visitor more than the strange and wonderful peoples from distant countries or remote parts of our own fair land whom the Louisiana Purchase Exposition, as it is called, has gathered within the corporate confines of the metropolis of the Mississippi Valley. The most interesting, because the better known, are the tribes of North American Indians, concerning whom even the school-books of to-day have little to say, yet a study

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of whom will add considerable to anyone's stock of general information.

At the Cliff Dwellers' Exhibit there are more than three hundred of these remarkable inhabitants of the Painted Desert of the Colorado River in Arizona and New Mexico. They call their home the Painted Desert because the earths of which the rocky soil and the hills about them are composed have, under the action of the wind and the rain during thousands of years, put on all the hues of the rainbow. Despite the beauty of this color-scheme, the home of the Moki, the Zuni, and the Pueblo Indians, the descendants of the ancient Cliff Dwellers, is a desert. These Indians live in the clefts of the rocks, hundreds of feet above the surrounding country, and to-day occupy caverns that thousands of years ago were the habitation of the cave bear, the mountain lion, the puma, and the wolf. But the Cliff Dwellers and their descendants were always a peaceful people, and it is perhaps for this reason that they still survive, and with them their ancient, wonderful arts still flourish. The most remarkable feature of their diversional exhibit is their Snake Dance, in which ten to twelve young men of tremendous strength and endurance take part. This dance is an invocation to Gitche Manitou, their deity for rain. During this wild Terpsichorean orgy, the dancers charm rattlesnakes, cobras, gila monsters, and the terror of mankind—the cobra di capella, or hooded snake of the desert, whose bite is death to any white man in thirty seconds. The Moki and Zuni priests and snake dancers inoculate themselves with a virus before entering upon the dance only

to be seen at the Cliff Dwellers' Exhibit at the World's Fair, and in this way alone are they able to withstand the consequences of a sudden assault of these venomous reptiles as the dancers carry them in their mouths, to the terror of their white spectators.

THE great building of the Battle Creek Sanitarium was never so completely filled as at the present time. Every room in the main building is occupied. The surgical ward is full. The doctors and managers have had to surrender their offices to make room for patients. East Hall, formerly occupied by nurses, is also filled, and every one of the twenty cottages is occupied. There are a few nurses still rooming in West Hall, but if the number of patients increases, they will very soon have to vacate. The treasurer reports that his weekly receipts are greater than ever before at this season of the year, and the amount is increasing from month to month.

THE Battle Creek Sanitarium Exhibit at the World's Fair attracts more attention than any other exhibit in the great building in which it is placed. It fortunately occupies a prominent place, and under the supervision of Dr. Moran, all the exhibits have been arranged in a very effective manner. Dr. and Mrs. Moran and their assistants have their hands full in explaining to the crowds of interested inquirers who constantly throng the exhibits, the aims and principles of the institution and the work which it represents. The Battle Creek Sanitarium is the only sanitarium given a place at this great World's Exposition. All the allied institutions are represented so far as they have supplied photographs and literature.

"THE PLEASURES OF MUNCHEON"

[MUNCHING parties are the latest outcome of the craze for good health. The guests of these new fashionable meals are invited only on condition that each mouthful of food is bitten thirty-two times before it is swallowed.—*London Mail*.]

The "smartest" invitations now
Are not to dine or lunch;
The hostess, keen on hygiene,
Invites her guests to "munch!"

And they, upon their part, agree
To neither bolt nor scrunch
The food she may for them purvey:
Their duty is to "munch!"

Do this (so certain doctors say),
And blessings in a bunch
Will be your fate if you but wait
And munch—and munch—and munch.

Whilst as to breakfast, dinner, tea,
And what is now called luncheon,
Henceforth be leal to but one meal:
And let that one be "muncheon."

—*London Truth*.

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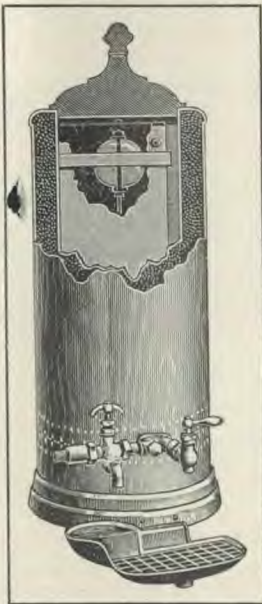
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Any Congress discussing what, when, and how to eat and live would be incomplete without the Battle Creek Sanitarium, so there is to be a Battle Creek Sanitarium Day, arranged, for not by the Sanitarium but by myself and other grateful patients who wish the world to know the great good being done by this philanthropic institution and the movement which it represents. On that day the men and women who with the Battle Creek Idea of health training have called back from sickness and despair into life and health so many suffering people will be there to tell how it is all done. To tell of the years devoted to the investigation of the influences of diet on man's health and to tell of what has been accomplished, not only here in our own country, but in many lands beyond the sea. The Battle Creek Sanitarium was among the first, if not the first, to put to practical test on a large scale the non-flesh diet. Therefore, the vegetarians of the world who gather at the Vegetarian Congress will carry away with them much practical knowledge, gained from the greatest of all Vegetarian Sanitariums. September 29th will be known at the World's Fair as Battle Creek Sanitarium Day.

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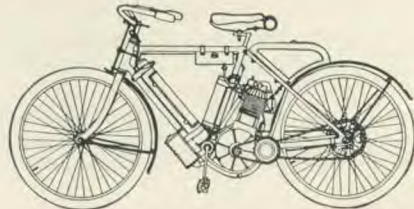
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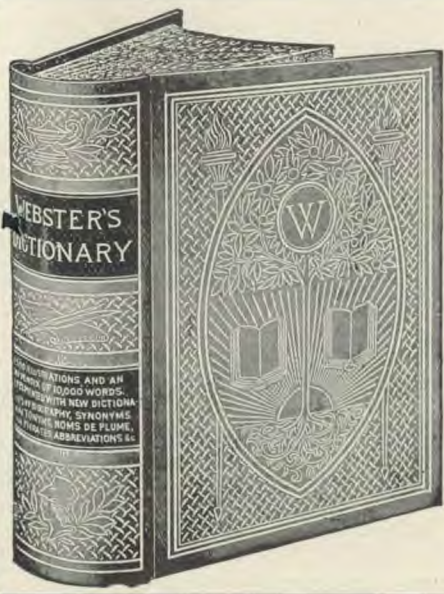
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