Life & Health

THE NATIONAL HEALTH MAGAZINE

June 1916

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LIFE AND HEALTH

June, 1916

Contents

Entered as second-class matter June 24, 1904, at the post office at Washington, D. C., under the Act of Congress of March 3, 1879. Published monthly by Review and Herald Publishing Assn., Washington, D. C.

PRICES, POSTPAID

Yearly subscription	$1.00	**Six months**	$ .50
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ROCK CUT ABOVE ROOSEVELT DAM

In the distance is the reservoir formed by the waters impounded by the dam.

VOL. XXXI
No. 6

Life & Health
THE NATIONAL HEALTH MAGAZINE

JUNE
1916

AIM: To assist in the physical, mental, and moral uplift of humanity through the individual and the home.

G. H. HEALD, M. D., Editor — L. A. HANSEN, Associate Editor

ANNOUNCEMENTS

Withdrawal of Premium

OWING to the marked increase in price of aluminum ware, we have been obliged to withdraw our premium offer of the aluminum set.

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Please note on pages 289, 290, 291, 292, 296, our combination and premium offers on books relating to the preservation of health, by which subscribers may effect a substantial saving. From time to time other appropriate books will be added to our combination and premium list.

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Young people who are ambitious to earn a scholarship in one of our schools should write for our proposition. If you mean business, we can help you through school next year.

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We invite suggestions from subscribers for a more appropriate name for the department As We See It, a name descriptive of the department, but not now in use by any other publication. Each suggestion, to be considered, must be from a subscriber to LIFE AND HEALTH who has paid to the end of the year, or must be accompanied by a year's subscription or a renewal to LIFE AND HEALTH. No member of the office force will be permitted to compete. The name and address of the winner will be published in the first issue after the award.

The Next Issue

Long-lived people are nearly always simple in their dietetic habits. The simpler the food, the more healthful it is, provided the diet is not so restricted that some important food principle is deficient or wanting. In the next issue two articles — one on simplicity of diet and one on the disturbances caused by too restricted a diet — will make this plain.

Mr. Cornforth will furnish a valuable article on the preparation of cereals.

LIFE AND HEALTH, WASHINGTON, D. C.

DEEP-BREATHING EXERCISES

James Frederick Rogers, M. D.

THERE has been more tomfoolishness over the matter of deep-breathing exercises than over any other means suggested for obtaining health.

Among the most flattering promises offered for enticing the subject to expand his chest more fully is that, by working his air bellows to their full capacity for a few times each day, his blood will be washed free from all impurities, become surcharged with life-giving oxygen, and he will be refreshed and invigorated for the intervening periods when he must perforce let nature attend to his respiratory activities.

If such exaggerated rewards induce those who lead a sedentary life to take breathing exercises, we ought not perhaps to disillusion the exerciser by pointing out the error in theory involved; however, the breather learns soon, by experience, that he has been promised too much, that instead of having found a short cut to health he is in a blind alley. The consequence is that, in discouragement, he stops his deep breathing altogether, and seeks some other more promising pathway to the realm of bodily perfection.

The machinery of external respiration, or what we ordinarily mean by the breathing apparatus, carries on its work only for the purpose of supplying the blood with oxygen as needed, and for carrying away from the blood the waste carbon dioxide and watery vapor, which it is ready to give off. The oxygen needed and the amount of carbon dioxide given off depend altogether on the chemical activities of the moment in muscle, nerve, bone, gland, etc., in all parts of the body. If this activity is quickened, if we work our arms or legs vigorously, exercise our brain, or digest a meal, there is more demand for oxygen and more waste from oxygenation; the machinery of breathing works harder; we breathe more rapidly and more deeply. No amount of mere breathing will increase this chemical activity in the body. It is true that with deep-breathing exercises, the oxygen in the blood is increased, and the carbon dioxide reduced slightly, but there is no proof that the effects go farther, and the blood returns within a few minutes to the former so-called " impure " condition.

More than this, if the breathing be sufficiently deep and frequent, the person will become dizzy and faint, and respiration will suddenly stop. This is due to the fact that too much carbon dioxide has been " washed out " of the blood; for this substance, once thought so poisonous, is of much use in the body, and is always kept on hand by the blood in large amount,— much larger, in fact, than oxygen. It would be a bad thing if deep breathing did wash away this substance. Deep breathing as a means of " cleansing " the blood is not therefore a success.

Deep-breathing exercises are a good thing, however, notwithstanding the fact that such promises do not hold water. In the first place, one can scarcely take in a good deep breath without assuming an excellent posture. In order for the chest to take in its largest amount of air, the spine becomes straight and the body erect. This in itself is good, and it is even better if we keep this fact in mind and try to maintain the posture so attained.

In the second place, deep breathing quickens, through the mechanical action of the movements of the chest, the circulation of the blood through the whole body, and at the same time helps the heart with its work. It therefore tends to relieve any local congestion that may have taken place in those who are sitting still.

Lastly but not least, deep respiration brings into play parts of the lungs, especially the upper portions, which are not so much used in ordinary breathing,

and no doubt improves the nutrition of these parts. Parts of organs which fall into disuse are liable to be poorly nourished because of having their blood supply reduced, and to become a prey to disease. It is for this reason that those who have lung trouble or a tendency in that direction are benefited by deep breathing.

When it comes to methods, the way to breathe deeply is to breathe deeply. The deepest breaths can be taken standing or sitting without support. We are taught by many teachers who believe they are correct, to raise our arms forward, or sideward, or forward and upward, or sideward and upward, as we inspire, in order to get best results. As shown by the author's experiments, one cannot take a deeper breath under these conditions than without the arm raisings, and often not so deep a breath; therefore they involve a waste of energy so far as the expansion of the chest and the taking in of air is concerned.

Vigorous exercise, like running or swimming or even rapid walking, necessitates deep breathing, and causes all the lungs to be brought into play. Deep-breathing exercises always become a bore and are apt to fall into disuse. On this account singing, and playing on wind instruments, are of advantage, as these exercises are never injurious, are easily kept up if one is at all musical, and are always accompanied by deeper breathing than usual.

Deep-breathing exercises are good for chronic diseased conditions of the lungs and bronchi by improving the circulation of the parts, but should be supervised to some extent, especially in tuberculosis, by a physician.

To review: Deep-breathing exercises are not always all they are made out to be; they never cleanse the blood, and never of themselves bring abounding health. They are good, however, in their effects on posture and on the general circulation for the time, in preserving the less-used parts of the lungs in good nutrition, and for improving diseased structures within the respiratory tract. The use of certain arm movements during deep breathing is of no advantage, though they do no harm. Singing, and playing on wind instruments, not carried to the point of overfatigue, are doubly beneficial, as they make deep breathing pleasurable.

TO DRINK OR NOT TO DRINK WITH YOUR MEALS

Leonard Keene Hirshberg, A. B., M. A., M. D. (Johns Hopkins)

The experimental work described in this article, and similar work performed by other investigators, seem to indicate that for the normal stomach a moderate amount of water with meals is beneficial rather than harmful. But in certain abnormal conditions the case is different, and water with meals is likely to prove harmful, as has been suggested by Dr. Hirshberg.

THAT large question of physiologists, Shall you or shall you not drink water with your meals? has now at last been answered by the professor of physiology of the Southern College of Pharmacy, Dr. George Niles. This research worker, after four years of painstaking experiments, says, " By all means drink water with your meals, unless you are exceedingly fat."

There is a widespread idea that the habit of drinking water or any other fluid while eating, is harmful to the digestion; that it dilutes and weakens the gastric juice, and therefore interferes with the proper functioning of the stomach. So fixed is this belief that many physicians, when instituting a dietetic régime, as a matter of routine prohibit water with meals; while the printed diet list of a certain stomach specialist bears the injunction, "Do not take more than one and one-half glasses of fluid with any meal."

According to the Atlanta professor, the wholesale indictment is wrong, being based on erroneous physiological conclusions, and promulgated more by tradition than by painstaking study or observation.

He unhesitatingly asserts that a generous quantity of good and not too cold water taken with the daily meals, instead of being injurious, is conducive to health, and is contraindicated only in certain diseased conditions, which will be mentioned later in this study.

The older works on physiology taught that the contents of the stomach were kept in a general rotary movement, so as to become more or less uniformly mixed; that each portion of the contents was thoroughly " churned," as it were, so that the gastric juice would quickly and effectively permeate the whole mass; that the salivary digestion of starchy foods ceased as soon as the stomach was reached; and that the musculature of the stomach exercised a decided triturating power.

In recent years the subject has been studied with great success by means of X rays, of tambours introduced into the stomach to measure the pressure changes, and in other ways. The researches all unite in emphasizing one fundamental point; namely, that the fundic [or upper] end of the stomach is not actively concerned in its movements, but serves rather as a reservoir for retaining the bulk of the food, allowing the ptyalin more time to continue its work. By the normal tone [contractile power] of the fundus as well as of the whole organ, the food is gently forced down into the main body and pyloric region of the stomach, as is required by orderly digestive progress. Furthermore, the observations of Walter B. Cannon, and also of Professor Grutzner, indicate that the successive portions of a meal as taken, instead of being speedily mixed, are arranged in definite strata. The food first taken lies next to the walls of the stomach, while the succeeding portions are arranged regularly in the interior in a concentric fashion. Such an arrangement of the food is more readily understood when one recalls that the healthy stomach has never any empty space within; its cavity is only as large as its contents, so that the first portion of food eaten entirely fills it, and successive portions find the wall layer occupied, and are received into the interior. The ingestion of much liquid into an atonic stomach would in-

terfere somewhat with this stratification, but not so in a stomach of normal tone.

As to the order in which the different elements are evacuated from the stomach, it has been demonstrated that, when liquid food alone is taken, it can be forced into the duodenum in a few minutes, and when a mixed meal is taken, the liquid part is first expelled, then the major part of the carbohydrates, then the major part of the proteins, and lastly the fats. Fats remain long in the stomach when taken alone, and when combined with the other foodstuffs, markedly delay their exit through the pylorus. On account of the stratification of the food as it is taken into the stomach, that taken first has the position of advantage. If it is starch and sugar, it is ejected into the intestine; but if it is protein or fat, the passage of the "carbohydrate" will be delayed. Water, however, finds a ready exit when taken at any stage of a meal.

This will demonstrate that water does not to any great extent permeate a mixed meal in the stomach, and consequently cannot to any appreciable degree dilute or interfere with the potency of the gastric juice.

Theoretically the ingestion of much water during meals would dilute the gastric juice and impair digestion, but practically this does not seem to be the case.

The conditions in which much water with meals is contraindicated [that is, when it would be harmful] are, fallen stomach, on account of the weight of the water, which drags heavily on the already relaxed and inefficient stomach support; dilated or atonic stomach, a stomach in which splashing sounds can be easily elicited, there being insufficient tone to the musculature to evacuate the contents properly, and an excess of water added to a meal promotes further atony and dilation; weak heart or uncompensated heart lesion. Occasionally, where there is a marked tendency to colic or spasms of the pylorus, water should be drunk very moderately with meals. Copious drafts, of course, of ice-cold water gulped down during fatigue or profuse perspiration are both unhygienic and dangerous.

On the other hand, a large percentage of persons coming under notice for poor nutrition, constipation, intestinal troubles, and numerous other states of disordered digestion, are those who drink no water with their meals, or, if at all, very sparingly.

Desiring some additional data on this subject, Dr. Niles enlisted the aid of sixteen young men, sophomore students at the Atlanta School of Medicine, who cheerfully agreed to submit for one week to a series of experiments along this line.

These young men were of healthy physique, with good digestion, and, with one exception, reported daily evacuations of the bowels. Their ages ranged from twenty to thirty-three, and their weights from one hundred and twenty to one hundred and sixty-eight. All had normal hearts, lungs, and kidneys, and their stomachs were of proper size and in correct position. Each one was in the habit of drinking one or two — not more — glasses of water or other fluid with meals.

Eight of these young men were instructed to drink no water or other fluid with meals, and between meals to drink no more than demanded by actual thirst. The other eight were instructed to drink four glasses, or one quart, of water with each meal, and between meals to drink it or not, as desired.

These young men were carefully watched, regularly weighed, and each symptom was recorded as it appeared. The detailed reports would be wearisome, but a summary of the results is as follows: Of the eight who drank no water, all lost in weight,— from eight ounces to two pounds,— with one exception. This exception remained at exactly the same weight, and it might be of interest to mention that this young man was holding his position as a railway mail clerk in addition to his college work,

that he was so accustomed to irregular habits that cutting off the water did not affect him like the others. In addition to the loss in weight, each one complained of headache and more or less constipation, with the above-mentioned exception. Only their loyalty made them hold out to the end of the week, and they all seemed glad to get back to their wonted allowance of water.

The eight who drank four glasses of water at each meal fared much better. One of them said that four glasses rather crowded his stomach, but did not make him feel uncomfortable otherwise. Of these eight, all gained weight — from four ounces to two and one-half pounds — except one, whose weight remained the same. Not one reported headache, constipation, or any form of digestive discomfort; and the one who was constipated at the beginning of the experiment found his bowels more regular in five days. Not one of the eight suffered a single qualm of indigestion, either gastric or intestinal, during the week of this experiment.

One objection which some of the Fletcherites might interpose is that an abundance of water taken with food prevents thorough mastication and salivation. To this, Dr. Niles answers that the careless or hurried eater will be careless or hurried whether he takes water or not; while the one who masticates his food sufficiently will not be deterred by allowing water in liberal quantity.

Dr. Niles favors adequate mastication, but we should remember that a part of the legitimate functions of the stomach and its juices is to reduce the semisolid to a liquid, soupy mass; and when the zealous apostle of Mr. Fletcher robs the stomach of much of its proper duty, the stomach will to that extent be weakened, just as any other active part of the body would be impaired by disuse.

During the digestion of every meal an increased amount of blood is required by every one of the organs concerned, and required promptly, if the meal is to be well digested and got out of the way of the next meal. At this busy period, therefore, an abundance of water ejected into the blood stream increases the intestinal secretion and peristalsis, to say nothing of its cleansing and solvent properties.

The human body in both its sanitary and its constructive housekeeping needs an abundance of water in order to perform well these manifold duties. The very tissues of the body are aquatic in their habits.

OBESITY

D. D. Comstock, M. D., Supt. Glendale Sanitarium

THE majority of the habitually half-sick persons in this country may be readily classified according to two quite distinct types. One presents most or all of the following characteristics: Nervousness, dyspepsia, constipation, prolapse of the stomach and other organs, anemia, subnormal weight, and deficient neuromuscular endurance. The other class is characterized by a stout figure, large waist measure, good digestion and appetite, and a tendency to liver insufficiency, obesity, headache, rheumatism, neuralgia, high blood pressure, and kidney and heart diseases.

To this second type most of the overstout persons belong. Therefore, the first cause of obesity is usually an inherited tendency,— a constitutional fault,— which, of course, cannot be entirely removed; and ordinarily there are but two other causes, and for all practical purposes they are the only ones worthy of mention here.

One is an average daily intake of food in excess of the requirements of the body, and the other an inability on the part of the tissues of the body to oxidize, or burn up, an excessive or even a normal intake of food. Therefore, the rational and logical treatment for obesity, it seems, is obvious.

Since it may be several generations too late to do anything with the hereditary factor, we must confine our attention to the other two, and endeavor to increase the power of oxidation in the tissues, or to diminish the amount of food substance taken into the system, and quite probably we should do both. In fact, both can and usually should be done; and to the obese person who will undertake intelligently and systematically, and with a reasonable degree of persistence, to adjust his program to meet these demands, it can be almost guaranteed that he not only will be relieved of the burden of his unnecessary fat, but will be surprised to find that many other ailments, such as rheumatism, headache, and neuralgia, from which he may be suffering, will also disappear.

Many stout people do not eat more than persons of their height, age, and state of activity normally should. The important thing to be accomplished for them, then, is to accelerate the processes of oxidation in the tissues; and since the muscles are the principal thermogenic tissues and are at once the furnace and incinerator of the body, it is evident that their capacity in this respect should be increased. This can be done only through muscular activity. Therefore, systematic daily exercise to the point of free perspiration, in the open air if possible, is essential. Cold bathing with friction will also accelerate oxidation.

For a beginner who is rather tender or advanced in years, it is important that both the exercises and the cold frictions be graduated, beginning mildly, and increasing the amount of work and lowering the temperature of the water from day to day. As these persons improve, the tendency will be to eat more, which they should avoid if they wish to diminish in weight. Many do not observe this point, and will exclaim that the harder they work, the fatter they get. In fact, the harder they work and the better they react, the better the appetite; and the better the appetite, the more they eat; and the more they eat, the fatter they get.

It is impossible for a person to get fat if he does not eat more than the body burns, and, again, he is bound to lose in weight if he eats less than the body burns. Consequently, where the diet can be readily controlled, the treatment of obesity is very simple.

In sanitariums where the heat- and

energy-producing value of each serving is stated in the menu (see accompanying cut), the dietitian simply orders such articles of food from the menu of the day as will make the daily ration total, say, 250 calories (food units) of protein, 250 of fat, and 700 of carbohydrates (sugar and starch), giving a total of 1,200 calories. On this ration the average person will lose about three pounds a week during moderate activity, and more during greater physical activity. In the home, although the diet cannot be so scientifically supervised, yet with a little care it is possible for any one very satisfactorily to adjust his diet so that he can burn up his excess fat.

The following suggestions will suffice: Make the reduction entirely among the sugars, starches, and fats, and let the scales guide you. The protein and cellulose foods should not be reduced. This is where many fail in their efforts to reduce. The protein is cut down with the rest, and weakness, palpitation of the heart, and other unpleasant symptoms result, and, becoming alarmed, they give up the effort. The body needs a regular amount of protein daily, regardless of the other foods. If one reduces the quantity of his food one third or one half, he must naturally select his diet from things relatively richer in protein, in order to keep from reducing this element of food below the actual needs of the body. Eschew practically all sugar, butter, oil, cream, pies, cakes, pastries, starchy puddings, potatoes, and nuts, and make your selection principally from green and other vegetables,— such as string beans, spinach, asparagus, cauliflower, cabbage, carrots, lettuce, and turnips,— fresh fruits, buttermilk, cottage cheese, eggs, skim milk, lentils, peas, gluten, whole-wheat and Graham bread. Remember that butter, oil, and cream, if used as seasoning, will add greatly to the food value of vegetables or other foods, and must therefore be reckoned with. It is better to season only with salt, or where desirable, with lemon juice.

Glendale Sanitarium Glendale Cal.

DINNER

THURSDAY OCT 8

	Oz.	Prot.	Fat	Carbo.	Total
SOUPS					
Lentil Soup	5	25	0	55	80
Vegetable Broth	5	3	10	10	23
RELISHES					
Summer Salad	2	2	20	6	28
Cottage Cheese	2	40	24	10	74
Lettuce	1	1	1	5	7
Sliced Tomatoes	4	4	4	25	33
Celery	1	1	0	4	5
Olives	1	2	65	5	72
ENTREES					
Spanish Eggs	2	18	62	6	86
Baked Green Pea Puree	3	26	40	54	120
Nut Cero Stew & Egg Dumpl'gs	4	28	72	73	173
VEGETABLES					
Baked Potatoes	3	10	1	85	96
Asparagus Tips	2	5	16	5	26
Corn on Cob	2	7	6	44	57
Spinach	3	10	3	15	28
Summer Squash	3	3	5	40	48
BEVERAGES					
Cereal Coffee	4	0	0	12	12
Cream for Coffee	1	3	40	5	48
Sugar	1 spoonful	0	0	25	25
Buttermilk	6	25	10	40	75
Nectar	5	0	0	70	70
BREADS					
Graham Bread	2	20	8	120	148
White Bread	2	18	6	126	150
Fruit Crackers	1	12	27	72	111
Butter	¼	0	50	0	50
DESSERTS AND FRUITS					
Blackberry Pie	4	43	77	230	350
Fruit Mold	3	3	2	114	119
Junket	4	14	40	40	94
Almonds	½	12	73	10	95
Casaba	8	5	0	80	85

These foods are suggested because they are nearly all relatively high in protein. They are rich in vitamines and organic salts, which favor tissue activity and health, and in cellulose, which encourages bowel activity. Bear in mind, however, that of these preferred foods, one should eat only sufficient partly to maintain himself, that he may lose from one to four pounds a week.

It is not wise to attempt to reduce too rapidly, as hunger and faintness may prove too annoying. When hunger proves to be an ever-present disturber, some find it helpful to omit the morning

meal, at which time the appetite is not keen anyway, that they may be more liberal with themselves at luncheon and dinner.

It may not be out of place here to urge caution against becoming fascinated with the various advertised obesity cures and easy routes to a "sylphlike form without dieting, exercise, or anything else unpleasant"—except of course to pay the fee, which we suppose should be a pleasure. More truthfully speaking, many of these seem to be designed to reduce the weight of the pocketbook rather than the weight of the patient. Others are undoubtedly injurious, and reduce the body weight at the expense of health and strength.

The rational way is to balance more evenly the food supply and the demand. Some should work more — increase the demand. Others should eat less — decrease the supply. Still others should do both. The obese person who attains his normal weight in this way, will increase his health and efficiency in every respect, and, as sort of profitable by-products, will obtain freedom from many other minor ailments besides.

Glendale, Cal.

Courtesy Washington Sunset Route

VIEW OF ROOSEVELT DAM FROM ABOVE

Taken before the reservoir had been filled. At high water the surface of the water comes well up on the pier of the bridge.

UNCLE SAM'S NATIVE REPUBLICS

Don Duffie

This is the second of a series of articles on the natives of the Southwest. Another of Mr. Duffie's articles will appear in the next issue. A good example of the pueblo pottery is shown on the front cover of the May issue.

WITHIN our United States there exist twenty-six tiny and more or less independent republics. Some of them are but a few years old; others appeared to be centuries old when Coronado found them, seventy-odd years before the landing of the Pilgrims at Plymouth.

These little countries contain just one city each, called a pueblo, and the inhabitants are either Pueblo or Hopi Indians. They of course must reluctantly recognize the sovereign authority of the federal government, though some of them almost refuse to do that.

The New Mexico Pueblo Indians are not reservation specimens, but United States citizens. But since they are neither allowed to vote nor required to pay taxes, this citizenship evidently consists mostly in owning their lands. In the pueblo, they elect their own officers, make and execute their own laws, as one of the New Mexico statutes permits, "according to their ancient customs."

These ancient customs they strive desperately to preserve, in spite of what many consider most senseless antagonism on the part of the United States Indian Bureau. It is a pleasure to observe that the great United States "steam roller" has been none too successful in this matter. It may still be said, as it was said in the days of Coronado, that "their manners, government, and habits are different from all the nations that have been discovered in these Western regions."

When the train stops anywhere between Lamy and Laguna, some of the more mercenary of these Pueblo people, probably women in striking attire, come alongside with baskets of cheap pottery on their heads, to tempt the tourist at the car window. These venders are usually Indian school graduates, speaking English and regarding themselves as much more shrewd and progressive than their simple and untaught brethren at home. But these home folk are much more interesting and kindly, it being almost proverbial that if one receives any rude or insolent treatment among them, it is from the "educated."

PUEBLO GIRLS GETTING WATER
The dipper is a gourd. The water is as brown as coffee.

A PUEBLO FIREPLACE

The piece of wall on which the pot rests is to protect the open fire from the draft of the open door. The bunch of straws on the floor serves, one end as a broom, the other as a hairbrush. Absence of furniture is noticeable.

It is not strange that their old men insist that the white man's education is not good for the Indian.

These people are farmers, irrigation farmers, each man being allotted his share of the community fields to work. For, contrary to our general impression of Indians, the men work. Where they see any advantage in the white man's methods, they seem ready to adopt them. Studebaker wagons and Oliver plows are much used.

It has been the writer's privilege to be a self-invited guest in the pueblo of Santo Domingo, one of the largest of these little republics; that is, he invited himself in, then after a few days he was waited on by a most dignified committee from the "governor," and invited to leave! The humiliation of the experience was much alleviated, though, on learning that it was because of some of their mystic pagan rites about to be performed that the departure was requested. This pueblo has "embraced" the Catholic religion, yet the priests afterward told me that when the pagan ceremonies are celebrated, they themselves are not allowed in the village. In fact, the Indians would not even let me photograph the church *for the priest,* and in his presence.

Some insist that any form of Christianity accepted by these people is taken on merely as a diversion, and that at heart they are devout pagans forever. But very decent sort of heathen they are. Back about 1560 A. D., Coronado's official note taker said of them, "It certainly seems to me that they must have received some light from the cross of our Redeemer, Christ, and it may have come by way of India, from whence they proceeded."

The manufacture of pottery, as done in the pueblo, is a most interesting craft. One may, though, be around the pueblo a long time without seeing any of the art except the firing. The ware is strictly handmade, not even the an-

A PUEBLO POTTERY KILN

A small fire of wood, intensified by slabs of dried manure piled around, does the firing. The woman is about to pile on more pots.

cient and perfectly respectable device of the potter's wheel being used. The process is that known as coil work. Clay is rolled out into rolls, say three quarters of an inch in diameter and perhaps a foot or two long. These rolls are deftly cemented together in a coil, by the judicious use of water and clever fingers, till a rough, thick-walled pot is thus formed. At this stage the pot is laid aside to dry till it is "leather hard," then scraped down till thin and perhaps graceful. The design is then applied as "slip"—thin clay mixed with pigments, the name and nature of which the gentle potters firmly refused to tell. All these operations are carried on in the houses, for protection from sizzling desert winds, which quickly parch the moist clay into unworkable stiffness. When thoroughly dried, the pots are fired in surprisingly simple kilns, which the women set up for the occasion in the street before the house. The kiln floor consists of a grating made of pieces of scrap iron; firewood is under the grate, and the pots are piled upon it. The fire is lighted, the whole is then inclosed by leaning slabs of dried manure up against the pots on all sides, with a covering of the same over the top. When ignited by the kindling, the inner surface of these slabs glows with heat intense and lasting enough to "cook," as they say, the clay to about the hardness of common brick, at the same time bringing out the coloring of the design.

So beautiful and artistically correct are many of these simple designs that they are held up as models in art schools. Each village, as well as each workman, has a personality, a style, so that it is said an expert can tell from the appearance of a pot which pueblo it came from. In Santo Domingo one group of craftsmen produce exquisite pieces of ceramic art, decorated with plain geometrical designs, though, being so near the railroad, many seem to cater to the tourist trade, daubing the pots with weak floral sprays that can

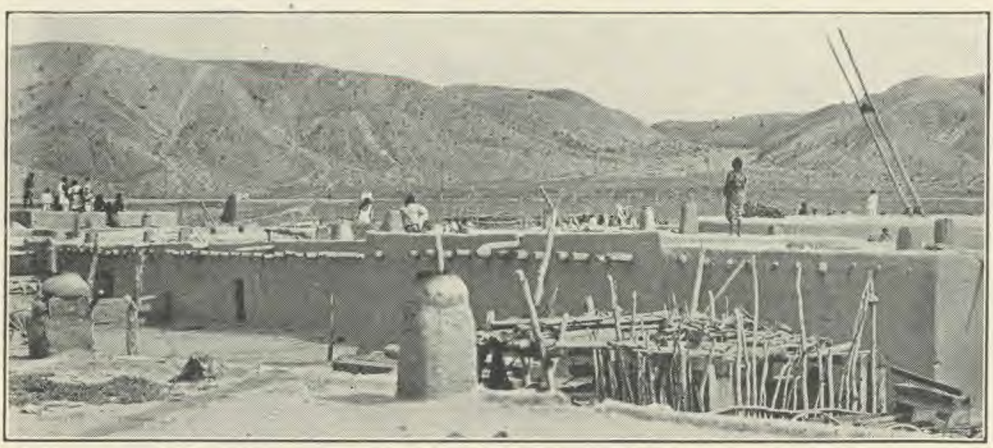
A PUEBLO MILL AND THE MILLER

Bread made from the product of such mills is good, but the teeth find a little grit worn from the millstones.

scarcely be called a design. At some pueblos an elegant black ware is made by smoking the piece before firing, till it is black, then rubbing to a polish. But the educated Indian, having at least learned to regard that as too much work, has introduced the improvement of using paint for color and varnish for shine, in some cases to our painful knowledge even having the nerve to send the article forth *unfired*. Then when the innocent buyer of the pot gets home with it, and his wife proudly fills it with water and daffodils, a bit later she finds the water in a puddle on the floor, with the flowers slumped in a little heap with sticky pieces of clay.

At Cochiti, ten miles up the Rio Grande from Domingo, some progressive redskin has brought out in the past few years something that seems to be new in pottery. It is a plain red ware glittering with shining bits of gold embedded in the clay. At first thought, one naturally says this "gold" must be pyrites. That substance, though, would be decomposed by the heat of firing, so that at last accounts these secretive natives still had every one guessing. The conventional pot from this pueblo bears a floral design, with usually one or two fearful and wonderful birds, meaning that the pot is so thin and light that it can almost fly!

This suggests a bit of symbolism to be found on nearly all pueblo arrows: One straight and one wavy line are carved on the shaft, meaning, they told me, that the rays of the sun may waver and go crooked, but this arrow will always go straight. For while these Indians are farmers first and last, they do a little hunting on the side. The hunt given during my stay seemed a sort of festival, nearly the entire male population taking part, armed, some with guns, more with bows and arrows, nearly all with a reserve fire of a sort of war club boomerang that they throw at rabbits from on horseback. Nor did the Nimrods appear at all crestfallen that the net result of two or three hundred wild horsemen scouring the hills from perhaps three in the morning till after-



INDIANS AT SANTO DOMINGO WATCHING THE GAMES

The flat housetop is much used as an observatory. The photographer, not being allowed to picture the games, skulked to the rear and attempted to get the audience, when all but these instantly vanished.

noon was three rabbits, two unidentified birds, and a skunk. They seemed to have had a perfectly glorious time. It takes so little to make them happy.

Yet again it seems that they go to most desperate lengths for amusement. One barbarous game, which it is claimed was introduced to them by wandering genteel whites from proud Virginia families, is the chicken pull. This entertainment, as locally rendered, consists of an unconfined Wild West show performed all over the bare, sagebrush-strewn hills and plains, with a foreground of adobe houses, whose flat roofs make a grand stand for safe observation of the game. A preliminary to the real event is a picturesque procession of old men and boys (the committee on prizes) that straggles through the pueblo streets, stopping and dismally blowing a battered bugle in front of each house. The good wife within comes out and laughingly hands them a rooster, a red bandanna, or any not too fragile article that an Indian might like. When the donations are all received, a rooster is tied by one leg to the end of a rope, and dangled just out of reach over an affair like a football goal, erected in the bare plain just outside the village. The other end of the rope comes down into the hand of an alert redskin. The performers are anywhere up to half a thousand yelling Indians from fifty miles around, together with a few Mexicans, and two or three whites who think they can ride, all mounted on tough ponies. These horsemen surge through, one at a time, under the goal affair, making a grab for the swinging rooster; but just as one horseman almost has it, the rope-man lightly jerks it out of reach. The crowd laughs, and the next man is clutching for the bird, only to get more laughs from the crowd and squawks from the terrified rooster. Then some one catches the bird's head, which, with a positively last squawk, likely comes off in his hand, leaving the fluttering body hanging dripping from the rope. Finally some rider gets a good hold, down comes the bird, and with a terrific yell, the whole horde starts after the lucky man to get it away from him. The game is for him to try to get home with it and toss it into his house, so he leads the mad mob thundering down the peaceful pueblo street, where dogs and chickens scatter wildly for cover, while women and girls on the housetops shake with laughter at the risky chase. If headed off from reaching the pueblo, he may make a detour of a mile into the hills in the attempt to shake his pursuers, like as not loping back again, holding up one remaining wing that he has left of the rooster, to show

that they didn't get it all away from him. On one occasion an unlooked-for delight was furnished by a horse stumbling in a sharp turn on the bank, throwing himself and rider splash into the irrigation ditch.

These copper-hued farmers face one difficulty that to us not acquainted with irrigation seems anomalous. Their fields never lack for moisture except when it rains. The Domingo ditch taps the muddy Rio Grande about ten miles upstream, winding along the contour of the hills at a lesser descent, till by the time it reaches the pueblo it is high enough above the river to water all the broad flats, which are the Indian fields. The banks of the ditch being but earth, a small, blustering thunderstorm anywhere up in the hills can send a little deluge of water down one of the dry arroyos, washing away the banks of the ditch where it crosses, leaving the fields beyond dry. That night does the town crier pass through the pueblo streets, weirdly chanting sonorous gruntings which friend host interprets as being a call to shovels; and when the leisurely guest arises next morning, he meets the men returning from having repaired the ditch six or seven miles away.

For a most delightful description of this people, the reader is referred to "The Indians of the Terraced Houses," by Saunders, published by Putnam & Sons.

In the next article Mr. Duffie will describe the Hopi Indians, who live in Arizona, in the desert, miles away from the railway. This article will give an account of an adventure on the desert, will describe Hopi Indian agriculture, and will give a defense of the Hopi antagonism to the civilization of the whites. Every serious contribution to the knowledge of our native populations is worthy of our careful study. Be sure to obtain a copy of the July LIFE AND HEALTH, which will contain this article.

PUEBLO OVEN

A Zuñi Indian baking.

A FEW SUGGESTIONS ON BATHING

L. A. Hansen

A PLAIN bath is probably one of the simplest and most commonly used procedures of hydrotherapy, though we do not usually think of it as a therapeutic measure. To one who is considerate of his personal habits it is more a matter of cleanliness than of treatment.

The bath, however, is a valuable means of preventing and curing disease. Improperly taken, it may cause harm. As a remedy it is employed at different temperatures and under a variety of conditions. A bath, in the real sense of the term, is a full immersion of the body, though we also speak of baths for local parts, such as the foot bath, the leg bath, etc.

A hot bath ranges from 100° to 110° F. It is used to cause perspiration, to relax spasm and general convulsions, to warm the body, and to relieve pain and inflammation. It is a valuable means of relieving retention of urine. It may also be used as a stimulant in case of collapse.

Great care should be exercised in giving a hot bath to a very sick patient, and except in case of emergency it should not be given without the advice of a physician. A hot bath should not be prolonged to the point of producing exhaustion. The attendant should watch the patient closely, to guard against fainting. The temperature of the water should be tested with a thermometer. The head should be kept cool by means of a cold compress. Cold water to drink may be given freely. It is best to begin the hot bath at 98° or 100° F., gradually raising the temperature. A hot bath should be followed with an application of water of a cooler temperature.

A warm or neutral bath is given at a temperature of 90° to 100° F. It has a very soothing effect on the nerves, and is best taken just before retiring. It will give relief to muscular soreness and pain, and to physical weariness. It has a relaxing effect, and tends to relieve cramps.

A warm bath taken just before retiring is often an excellent means of inviting sleep. Where it is prolonged for this purpose, care should be exercised that the temperature of the bath is not allowed to become too low. A sheet drawn over the tub will help to avoid chilliness. This bath may sometimes be continued for three or four hours, though its usual length is from twenty to thirty minutes. When given for sedative effect, the patient, on stepping from the bath, should be dried with a sheet without vigorous rubbing. It is well at the close of the bath to reduce the temperature two or three degrees, in order to prevent chilliness by contact with the air.

The tepid bath ranges in temperature from 80° to 90° F., and has no very decided physiologic effect, though it may be used for reducing temperature. It is usually employed for cleansing purposes.

The cool bath, 70° to 80° F., and the cold bath, 40° to 70° F., are used to reduce temperature, to stimulate a sluggish circulation, to reduce inflammation, and as a tonic. The temperature is determined by the condition of the patient, and the effect desired. Obviously the greater care needs to be exercised in administering baths of the lower temperatures. The duration of a cold bath

is from only a plunge to twenty minutes or more. If it is prolonged, rubbing the patient at frequent intervals will be necessary. Cold water should be applied to the patient's face before he enters the water.

The physiologic action of the cold bath is to contract the blood vessels of the skin, sending the blood to the internal organs. The respiration will at first be quicker and deeper, the temperature will be lowered, and the pulse rate lessened. On coming from the bath, if it has not been too prolonged, a reaction takes place with dilation of the cutaneous blood vessels, accompanied by a feeling of warmth and glow. The pulse and respiration will become normal. A proper reaction is the test whereby we determine whether the cold bath has been successful in its purpose. The reaction may be aided by vigorous rubbing with a towel. A feeling of lassitude accompanied by headache after the bath indicates that there has not been a proper reaction.

The best time for the usual cold bath is before breakfast, soon after rising if possible. Where available, the shower bath is an excellent means of giving the cold bath for tonic effects, the force of the water pressure on the skin adding to the stimulation. If neither a tub nor a shower is available, a fair substitute is offered by a sponge and a bowl of cold water.

While it is true that not every one can take a cold bath, the exceptions are few.[1] Training to it may be necessary. Heroic measures, such as cutting a hole in the ice and plunging into the water, are not to be recommended for any one. Elderly persons will need to use caution in beginning the use of the cold bath in any form.

A successful way to train into the cold-bath habit is to take the bath on the instalment plan. Have the body covered with a sheet, and bare a part at a time, bathing it either with a sponge or with the hand. Then dry that portion, cover, and follow with another part, an arm, a leg, the chest, the abdomen, the back. See that the temperature of the room is such as not to cause chilliness.

In training into the cold bath the temperature of the water should be reduced gradually as the bather becomes accustomed to it. It would be well to begin the habit of cold bathing in a warm time of year, thus preparing for the winter. The daily cold bath is a good means of developing immunity to colds.

[1] Persons with high blood pressure may receive more harm than good from a cold bath.

HOME COOKING SCHOOL

METHODS OF WORK—A FEW SUGGESTIONS

George E. Cornforth

THE center, or most essential, of the kitchen equipment is the stove or range. This piece of equipment should be thoroughly understood. Take off the covers and examine the inside of the stove. Learn the arrangement of all the drafts and dampers. Learn how the heat is drawn around the oven to heat it on all sides. Find out where the opening is from which to remove the ashes that, in time, collect under the oven. Remember that a stove needs to be frequently cleaned out, and the ashes removed from the top of the oven and from beneath it.

Because many people find great difficulty in successfully making a coal fire, I will describe the way it should be done. First, clean out the stove by dumping the grate to remove all the ashes. If there are any ashes or pieces of coal on top of the oven, scrape them into the fire box, to be removed with the ashes. Open all the drafts and dampers. Place a few shavings, or paper that has been crumpled or twisted so that it will lie loosely, on the grate. On this lay some small sticks of dry soft wood (kindling wood); on top of this lay a few pieces of dry hard wood, arranging the wood loosely so as to allow air to be easily drawn through it. Be sure that the wood fills the ends as well as the center of the fire box. Put the covers on the stove. Twist paper into a roll. Light one end of it with a match, then hold this burning paper close up under the grate to light the fuel. A little kerosene poured on the wood before the fire is lighted will hasten the process. The danger in starting a fire with kerosene is in pouring the oil on after the fire is lighted. If the fire has to be started early in the morning, it is a help to "lay the fire," that is, get it all ready to light, at night; then as soon as one comes into the kitchen in the morning, the fire can be lighted.

When the fire is burning briskly, place a shovelful of small pieces of coal on the burning wood. As the coal begins to burn, add a little more, and continue adding a little coal at intervals till a bed of clearly burning coal is formed. Then close the direct draft, so that the heat will be drawn around the oven. Never fill the fire box above the level of the top of the oven. Keep the drafts closed except when a very hot fire is needed. Otherwise much fuel is needlessly burned. To keep a fire at a steady heat, add fuel frequently, in small quantities, so as not to cause any appreciable decrease in the degree of heat, thus keeping up the fire instead of allowing it to burn low before adding more fuel. Occasionally shake the grate or rake out the ashes at the bottom of the fire to permit a free draft.

It is a matter of economy to sift the ashes and save the partly burned pieces of coal.

The kind of fuel that is most economical depends upon the locality. In country places or on a farm, wood is most economical. In cities, coal is more economical than wood. In regions where natural gas can be obtained, that is most economical; and where manufactured gas can be obtained, at a reasonable price, that is economical,

especially in summer. Gasoline and kerosene are economical fuels to use in the summer time, because no fuel is wasted in making a fire, and none is left to burn out after the cooking is done. Gas, gasoline, and kerosene are far less economical for heating ovens than for other cooking, and if much baking is to be done, other fuel will be found more economical.

I believe that electricity has not yet been made an economical means of providing heat for cooking, except in the electric fireless cooker, and, of course, the cost of these is considerable.

In using gas stoves great care should be taken to keep all parts, especially the burners, clean. The inlet to the burners is so arranged that both air and gas are let into the burners, and there is an arrangement for controlling the amount of air. To get the greatest amount of heat, the gas that reaches the burner must be mixed with a certain amount of air. When the mixture is right, the flame burns blue and produces the maximum amount of heat. If the flame burns yellow, it smokes the cooking utensils, and does not give the greatest amount of heat. This yellow flame indicates that the air inlet is not properly adjusted. When gas stoves come from the factory they are usually properly adjusted. In lighting a gas burner the gas should be turned on before the match is applied to the burner. If the match is held at the burner when the gas is turned on, the flame will not light properly. When lighting a gas oven, the oven door should be left open, the gas turned on, and then a match applied.

There should be plenty of ventilation in the room in which gas, gasoline, or kerosene stoves are used. It would be well if these stoves were connected with the chimney as gas stoves are in the western part of the State of New York, where natural gas is used; for while these stoves do not produce smoke, they produce carbon dioxide gas, and sometimes carbon monoxide, which renders the air less wholesome.

Gasoline and kerosene stoves should always be kept clean, especially the burners. In using gasoline stoves it should be made certain that there are no leaks in the pipes. The stove should not be burned when the tank is nearly empty. The gasoline can should not be kept near a fire, and should be well corked. If proper precautions are observed, gasoline is perfectly safe.

If cooking utensils become blackened with soot, gasoline will remove the soot.

The most durable and most sanitary cooking utensils are those made of aluminum. Next to aluminum in desirability are agateware utensils. Iron, tin, or copper utensils should not be used for cooking, because some of the acids in foods act upon these metals, producing poisonous substances.

If food becomes cooked onto an agateware utensil, lye may be boiled in the vessel to remove the food. Lye should not be boiled in an aluminum vessel. The only way to clean aluminum is to scour it with a brush and some kind of scouring powder.

When the proportion in which different substances are used in cooking is known, it is possible to make many simple things without reference to recipes. It is well therefore to have in mind the following —

Table of Proportions

(Measurements of teaspoons, tablespoons, and cups are level)

Thickening Agents

(Flour should always be sifted before measuring)

1 tablespoon flour to one pint liquid for soups.

4 tablespoons (¼ cup) flour, to 1 pint liquid for gravies.

3½ quarts (3½ pounds) flour to 1 quart liquid for doughs.

The thickening power of cornstarch is about twice that of flour.

4 tablespoons (¼ cup) cornstarch to 1 pint milk for cornstarch blancmange. Proportion, 1:8.

4 tablespoons (¼ cup) farina to 1 pint milk for farina blancmange. Proportion, 1:8.

8 tablespoons (½ cup) cornstarch or farina to 1 pint liquid in cornstarch or farina fruit mold. Proportion, 1:4.

⅛ cup pearl tapioca to 1 pint water in tapioca fruit pudding. Proportion, 1:6.

3 tablespoons sago to 1 pint water or fruit juice in sago fruit pudding or sago fruit mold. Proportion, 1: 10.

2 eggs to 1 pint milk for cup custard.

3 eggs to 1 pint milk for custard pie.

¼ ounce vegetable gelatin (agar-agar) stiffens 3 cups liquid.

Shortening

Fats are added to doughs to counteract the adhesive properties of the gluten and starch, and to make the product brittle, tender, "short."

Pastry flour contains more water than bread flour, and its gluten seems to be less adhesive. For this reason less shortening is required with pastry flour.

Pie crust No. 1: 2 cups (½ pound) flour, ½ cup oil, ¼ cup water; or ½ as much oil as flour, and ½ as much water as oil.

Pie crust No. 2: 6 cups flour, 1 cup oil, ⅔ cup water; or 1-6 as much oil as flour, and ⅛ as much water as flour.

Yeast bread: 1 to 2 tablespoons oil to 1 quart flour.

Yeast buns: ¼ cup oil to 1 quart flour.

Flavoring

SALT

1 teaspoon salt to 3 cups liquid in soups or gravies.

1 teaspoon salt to 3 cups water for cereals.

1 teaspoon salt to 1 quart flour in doughs.

1 teaspoon salt to 3 cups total volume in seasoning vegetables.

½ teaspoon salt to a 3-egg sponge cake.

1 teaspoon salt to 3 quarts total volume in desserts.

1 teaspoon flavoring extract to 1 quart material to be flavored.

SUGAR

For frozen desserts, as ice cream and sherbets: 1 cup sugar to 1 quart liquid.

For most puddings and custards: ½ cup sugar to 1 quart.

For blancmange and junket: ¼ cup sugar to 1 quart.

For apple pie: ½ cup sugar to ¾ quart sliced apples, ¼ teaspoon salt, 2 tablespoons water.

For blueberry pie: ½ cup sugar, ⅛ teaspoon salt, 3 tablespoons flour, to ¾ quart blueberries.

For rhubarb pie: 1 cup sugar, ¼ teaspoon salt, ⅓ cup flour, to ¾ quart rhubarb.

For squash or pumpkin pie: 1 quart milk, ¼ quart squash or pumpkin, ¾ cup sugar, 3 eggs, ½ teaspoon salt.

MISCELLANEOUS

Cream rice pudding: 1 cup rice to 15 cups milk, ½ cup sugar to 1 quart milk, 1 egg to 1 quart milk.

Creamy rice pudding: 1 cup rice to 10 cups milk, ½ cup sugar to 1 quart milk, ½ cup raisins to 1 quart milk.

Tomato bisque: ½ strained tomatoes, ⅔ water; 1 pound peanut butter to 6 quarts soup.

Cream rice or cream barley soup: 1 measure of rice or barley to 32 measures of liquid.

Tomato macaroni soup: ⅓ strained tomato, ⅔ water; 1 pound peanut butter to 8 quarts soup; 1 pound macaroni to 16 quarts soup, or 1 ounce to 1 quart soup.

Bread pudding: 1 quart milk, 2½ cups diced bread, ¾ cup sugar, 1 whole egg and 2 yolks. The two whites for meringue.

Pop-overs: 1 cup milk, 1 egg, 1 cup sifted flour, ¼ teaspoon salt.

Puffs: 1 cup milk, 1 egg, 1¾ cups sifted flour, ½ teaspoon salt.

Cream pea soup or cream corn soup: 1 can peas or corn for 1½ quarts soup.

Bean soup, split pea soup, or lentil soup: 1 cup dried peas, beans, or lentils for 1 quart soup.

CONTRIBUTIONS TO THE KNOWLEDGE OF PELLAGRA

A Contribution to the Cause of Pellagra

NESBITT, health officer of the city of Wilmington and the county of New Hanover, North Carolina, has furnished in the *Journal A. M. A.* of February 26, data which seems to substantiate the new theory that pellagra is a deficiency disease, caused by the lack of certain elements in the food.

Figures are given showing the general death rates and the death rates from enterocolitis, typhoid, and communicable diseases for the years 1911, 1912, 1913, 1914, 1915, showing a general improvement. This, we are told, is due to improvement in sanitation, certified to by sanitary surveys made by officers of the Public Health Service and of the North Carolina Board of Health. The figures for pellagra, however, did not follow this rate, the rates per hundred thousand population being, 1911, 38.83; 1912, 21.38; 1913, 16.69; 1914, 38.26; 1915, 64.6. The lowest rates were for 1912 and 1913, after which there was a marked rise.

Nesbitt informs us that the years 1912 and 1913 were marked in this section with exceptional prosperity. The trucking and other industries in the country were good, the cotton market was active, wages were good, and the price of food was fifteen to twenty per cent lower than it is now. But with the outbreak of the war in the middle of 1914 there was an immediate depression. "The increase in the incidence of pellagra and increase in the death rate of this disease follow this business depression very closely," says Dr. Nesbitt, who believes that the following conclusions are justified: —

"1. There is no existing relation between soil pollution and the incidence of pellagra.

"2. Close supervision of all cases, disinfection, fumigation, isolation, and the other usual means of controlling infection have no influence on pellagra incidence.

"3. Business depression, lack of employment, a limited market for products, and increased price of food, with consequent increase of indigence, increase the incidence of pellagra indefinitely."

Perhaps, as with tuberculosis, pellagra exists in a latent form in many communities, and needs only a favorable opportunity to manifest itself.

* * *

Is Pellagra Caused by Unsuitable Diet? Experience Among Southern Miners and Farmers

WE have recorded our conviction that it is yet too early to designate a vegetarian or an unbalanced diet as the cause of pellagra, though the diet may be a contributing cause, as it is of tuberculosis and other diseases.

But fairness requires that we state the evidence upon which the dietary theory of the causation of pellagra is based. We have already outlined the work of the Public Health Service. Dr. Carl A. Grote, in the March issue of the *Southern Medical Journal*, gives reasons which tend to confirm the theory that pellagra is caused by a one-sided diet.

In a certain section of Alabama, largely peopled by poor whites who formerly raised their own supplies,— milk, eggs, etc.,— coal mines have been

developed. The farmers have abandoned their farms and flocked to the mines; and not being good miners, they earn poor wages and subsist on the poorest fare. Pellagra, formerly unknown in the district, has broken out among this class. There were two mining camps controlled by one corporation. In one camp were the officers and the white and colored skilled laborers, receiving good pay and eating good food. In the other camp were the poor whites from the farms, earning low wages and buying the poorest food. The open-back surface privy was in general use in both camps, and so could not have been instrumental in developing the disease.

In the first camp there was practically no pellagra. In the second camp the disease was constantly present. Both camps bought their food from the same store. The difference was in the quality. In the words of the doctor: —

"The storekeeper told us that they bought the poorest kind of food, rarely buying a piece of steak or fresh meat. By visiting the homes in this camp we found that they lived largely on cornbread, molasses, brown gravy (melted lard thickened with flour), and white meat. There were no cows in this camp. And this was the camp shot to pieces by pellagra."

In other communities it was also noted that where farmers had cows and supplied their families with a good diet, they did not have pellagra,—

"but in other districts we did find it. We found three families in each of which there were five cases of pellagra. These people were the poorest of the poor, and we were not only convinced that the diet they had was deficient in proteins, but that they often went hungry. Upon a liberal diet, which we were able to assist in securing, all of these patients, with one exception, are now apparently perfectly well."

The doctor quotes from another physician who wrote to him the following: —

"During the year 1915 I treated sixty cases of pellagra and had one fatality. This death occurred before I began earnestly the use of a protein diet in its treatment. I have had just as good results with those patients I treated without any medicine as those given medicine in addition to diet. I am convinced that an unbalanced diet, lacking in proteins and excessive in carbohydrates, is the essential element in the causation of pellagra. Not a single one of my patients owned a cow when the disease developed, but I am getting them to understand the problem and to secure cows."

The Soil as a Possible Medium for the Spread of Pellagra

Dr. C. C. Parrish, of Fort Worth, Tex., believes that pellagra is an intestinal infection spread by the soil. There are others in Texas who assert that in that State pellagra is by no means confined to the poor and undernourished. In the *Southern Medical Journal,* March issue, Dr. Parrish gives his experience:

"When I treated my first case in 1909, I gave it thymol because I thought it was a case of hookworm infection, notwithstanding the fact that it had been diagnosed pellagra by a county medical society where they had seen more than a dozen cases. And when the case recovered from that attack as the result of the thymol, I wrote an article calling attention to the similarity of the symptomatology of the two diseases, and advised the giving of thymol to pellagrins, which I am doing to this day."

He suggests that the cause of the disease may be an ultramicroscopic germ (one too small to be seen by the microscope, as in yellow fever, dengue, etc.) in the soil: —

"Why [may] not [pellagra be due to] some ultramicroscopical germ in the soil of the yard or garden, which the women and children, we know, are more exposed to than the men, and especially the women, who have the disease more frequently than the men, which may be explained by the greater frequency in which women visit the gardens?

"In rural districts where there are no sanitary sewer connections, and the open privy is a common source of contaminating the soil with human excreta, we find the greatest proportion of pellagra. In our very large cities, where the people are not exposed to the soil, we have little or no pellagra. It is one disease that travels *from* the country toward the cities, and stops, so far as origination is concerned, where the cultivation of the soil stops and the sanitary sewer connections begin, or where the soil ceases to be contaminated with human excreta. In other words, pellagra stops where the cultivation of the soil around the surface privy ends."

He suggests as a means of preventing pellagra to stop cultivating the soil where human excreta has been deposited. He gives some very interesting histories which certainly seem to confirm his view. For example: —

"The grandmother suffering with pellagra had lived with the family the year before, and had used the privy located in the highest elevated corner of the garden. The next year the only three members of that family of seven that worked in that garden contracted the disease. The father was away from home all day, the oldest sister was in school in a distant town, and the two youngest children were too small to be of any assistance, and they all escaped, while the mother and the only two children who subsequently worked in this garden contracted the disease.

"Second, in a family where the grandfather died the year before of pellagra, the last six months being confined to his bed, I noted that the excreta of the patient had been thrown in the weeds of an adjacent lot. The next spring the adjacent lot was turned into a garden, and the following summer of the same year all of the members of that family contracted pellagra simultaneously, except the baby, which was too young to work in the garden."

Admitting this, why did the Alabama farmers contract the disease after they had left the farms and entered the mines?

What we do not know about pellagra would make a large volume.

Whatever be the theory regarding the nature of pellagra, we know that an impoverished and unbalanced diet has something to do with the causation of the disease, and that the situation could be relieved by the substitution of an adequate diet, particularly in the matter of proteins. Meantime we can continue searching for the ultramicroscopic intestinal germ.

AMERICA'S GREATEST NONFATAL DISEASE

Hay Fever

HAY FEVER, or pollinosis, is one of the most prevalent of nonfatal diseases. It is found in all parts of the United States, being more prevalent here than in Europe. There has been some tendency in the past to attribute to the mind the regularly recurring attacks of this disease, and in some cases, at least, an attack of hay fever was thought to be merely a pretext for a vacation. The regularity with which it appeared at about the same day of a certain month every year gave plausibility to this theory. It has been known for some time, however, that hay fever has a definite causation, that it is an irritation, really an intoxication or poisoning, caused by the pollen of certain plants, usually weeds, coming in contact with the mucous lining of the nose. The time of the flowering of the weeds, or of the patient's coming in proximity with the weeds while in flower, determines the time of the attack. This explains why attacks occur at a definite time of the year.

The old names "hay fever," "rose cold," etc., indicated that the people in former times were not far from the truth in their supposition that the disease is caused in some way by plants. Coming near the harvest time, it was supposed to be caused by the hay, and in fact some cases of spring hay fever are probably caused in this way.

Hay fever begins, like a cold in the head, with sneezing. There is difficulty in breathing, usually worse when the patient is lying down, and free watery discharge from the nose, with some fever, followed later, perhaps, by subnormal temperature. The patient is more or less depressed. If he also has asthma, his sufferings are greatly increased.

Hay fever is probably often mistaken for an ordinary cold. An attack is coincident with the pollination of some plant in the patient's neighborhood. In case of doubt the patient may approach a field of the suspected plant, or may be made to smell a bag of the suspected flowers, when, if he is a hay fever subject, he will have a slight reaction.

Persons susceptible to the pollen of plantain or dock may have an attack in spring or early summer. The pollen of Johnson grass may cause an attack any time after May, and cocklebur any time after June. But the most common cause of hay fever in this country is probably ragweed, which begins pollination in August.

There are numerous other pollens that may set up a reaction if a quantity comes in contact with the nostrils of susceptible persons. But the pollen of most plants does not fly in sufficient quantity for that purpose.

Probably every one would be susceptible to a sufficiently large dose of pollen, and after one attack the susceptibility seems to be increased. It is possible that every hay fever subject has at some time been exposed to a large enough quantity of flying pollen to bring on a first attack, after which a minute quantity of the same pollen suffices.

A very important preventive measure is to cut, before the time of pollination, all weeds whose pollen is carried by the wind, especially the ragweeds, in this country.

In some cases, spring hay fever, especially in Europe, seems to be due to pollen from cultivated plants. The patient suffering from this form of pollinosis must be careful to avoid proximity to the offending crops during the time of pollination.

Efforts at minimizing the symptoms and curing attacks are not very successful unless the patient gets away from the influence of the pollen.

SCIENCE AND ALCOHOL

Is Alcohol a Food?

Scientists Say It is Not

THE question as to whether alcohol is technically a food is constantly recurring. Some scientists believe that as it is burned in the body it should be so classed. Others, including Winfield Scott Hall, professor of physiology, Northwestern University Medical School, Chicago, believe that alcohol, though burned in the body with the production of heat, should not be classed with the foods.

You say it is merely a matter of definition, perhaps, and not worth the words used in discussing it. It would be, were it not for the fact that the liquor interests, who have never been accused of being too particular as to their methods, make use of the statements of scientists in such a way as to lead young men to believe that liquor is actually beneficial. For this reason it is well to know how a prominent physiologist looks upon alcohol. In his paper, "The Relation of Alcohol and Alcoholic Beverages to Nutrition," Professor Hall says,—

"When one eats a real food, it is assimilated largely by muscle tissue, and is oxidized for the purpose of liberating the life energy. When one ingests alcohol, it is carried by the blood to the tissues, mostly to the liver, where it is oxidized as any toxin would be for the purpose of making it harmless.

"Its oxidation liberates heat energy, but this energy cannot be utilized by the body, even for the maintenance of body temperature. *If a food is defined as a substance which, taken into the body, is assimilated and used either to build up or repair body structure, or to be oxidized in the tissues to liberate the energies used by the tissues in their normal activity,* then alcohol is not a food.

"The fact that alcohol is oxidized in the body has been generally misunderstood. The first impression naturally was, Foods are oxidized; alcohol is oxidized; therefore alcohol is a food. As logically might one reason, Man is an animal; the lobster is an animal; therefore man is a lobster. The fallacy must be apparent. Not all things that are oxidized are foods. Many poisons which from time to time get access to the body are readily oxidized in the body, but nobody has contended that these poisons, because of their oxidation, should be looked upon as foods, with the one exception of the protoplasmic poison, alcohol.

"When a food is oxidized there is liberated the energy of muscular action, of gland action, or of nerve action. There is also liberated heat which maintains the body temperature, but the oxidation of alcohol disturbs muscular, glandular, and nervous activity, and the heat which is liberated incident to its oxidation does not maintain body temperature."

He makes this distinction between the oxidation of foods and the oxidation of alcohol: —

"All body oxidation may be classified in two groups: (1) *Active oxidations,* which take place in the active tissues,— muscles, nervous system, or glands,— and take place incident to action. Active oxidations are under the perfect control of the nervous system, and are proportional to normal activity. (2) *Protective oxidations,* which take place in the liver. This class of oxidation is wholly independent of

the usual tissue activity, and is proportional to the ingestion of toxic substances, and independent of muscular action, brain action, or gland action (other than liver action).''

New Evidence Against Alcohol by Carnegie Nutrition Laboratory

In an editorial article entitled ''New Evidence Against Alcohol,'' the *Journal A. M. A.*, March 4, says,—

''If laboratory and clinical evidence shows that alcohol in so-called moderate quantities (social moderation) produces definite ill effects, such as lowering the resistance to disease, increasing the liability to accident, and interfering with the efficiency of mind and body and thus lessening the chances for success in life, to say nothing of any toxic degenerative effect on liver, kidneys, brain, and other organs, the excess mortality that unquestionably obtains among moderate drinkers as compared to total abstainers must be ascribed chiefly to alcohol.''

According to the writer of the article, the '' extremely voluminous '' data already collected ''may be said to be tinged with almost inevitable traces of personal bias, for the subject is one on which many persons have firm convictions, often based on ethical, social, or economic grounds rather than on physiologic evidence.'' He continues,—

''Nothing is more convincing in this field, however, than clear-cut indications furnished by strictly objective scientific investigation of the possible effects of alcohol in moderate doses — for these alone are worthy of debate — on the functions of the human organism. Duplication of results and frequent repetition of the experiments by independent investigators in a matter of such fundamental importance will call forth no criticism of wasted scientific energy.''

Then follows a reference to the work of the Nutrition Laboratory of the Carnegie Institution of Washington, ''ideally equipped for a reinvestigation of the alcohol question under the best auspices,'' which has '' taken up the subject anew with a thoroughness and on a scale which it is expected will satisfy the majority of scientists as to the dependability of the results.''

After giving a brief account of some of the investigations, the article continues: —

''These observations bring further evidence of the general depression of the neuromuscular processes at all levels of the cerebrospinal system. There is depression of even the simplest forms of motor processes, such as are found in eye and finger movements. Certainly nothing in all of this suggests any true stimulation — any increase in psychologic or physiologic efficiency. Impairment seems to be the keynote expressed by the depression.''

"Booze and Safe Driving do Not Go Hand in Hand"

The Detroit United Lines, the street car company of Michigan's metropolis, in an attempt to educate the Detroit populace regarding the importance of safety measures, as quoted in a recent motor journal,[1] gives three principal reasons for collisions between motor vehicles and street cars: —

''1. Failure to have the motor vehicle under control when approaching a street-car track.

''2. Eagerness to speed up and pass the car for the purpose of driving on the clean car track.

''3. Lack of knowledge how to operate the motor vehicle.''

Then comes the following very significant comment, which, coming from such a source, should have added weight: —

''Many of the accidents coming within the first two reasons result from a mental condition of recklessness created by a degree of intoxication. Booze and safe driving do not go hand in hand.''

The use of booze is not conducive to safety in any avenue of life.

Alcohol is Handmaiden of Pneumonia, Declares Public Health Service

The United States Public Health Service issues a series of bulletins which are sent to publishers who will use them. These bulletins contain in simple language some of the results of medical discovery and experience as applied to the preservation of health. These bulletins bear somewhat the same relation to the health of individuals that the publications of the Department of Agriculture do to the improvement of the farmer's condition.

[1] *Motor Age*, Feb. 3, 1916.

A recent bulletin on "Alcohol and Pneumonia" contains the following significant statements: —

"The United States Public Health Service brands strong drink as the most efficient ally of pneumonia. It declares that alcohol is the handmaiden of the disease which produces ten per cent of the deaths in the United States. This is no exaggeration. We have known for a long time that indulgence in alcoholic liquors lowers the individual vitality, and that the man who drinks is peculiarly susceptible to pneumonia."

The United States Public Health Service is a conservative body. It does not engage in alarmist propaganda. In following out the line of its official duties it has brought forcefully to the general public a fact which will bear endless repetition. The user of alcoholic liquors will do well to heed this warning.

BUSINESS AND BOOZE

Big Business Bars Booze; Sees in It an Enemy to Prosperity

ACCORDING to Mr. C. W. Baines in the *Sunday School Times,* an investigation was made among the great steel and iron plants of Pennsylvania, West Virginia, Ohio, Indiana, and Illinois, composing 140 companies capitalized at more than a billion dollars. Of these, 113 sent replies. Of this number, 107 absolutely prohibited the use of strong drink in their works. "Almost without exception they testify that the abstainer is more efficient, more reliable, and that teetotalers alone are considered when promotions are made." One hundred of these companies report that they are doing everything possible to prevent drinking by employees out of working hours. Eighty-three of these concerns, when employing or promoting men, discriminate against users of alcoholic liquors, even though they drink only outside of working hours. Ten of the concerns prohibit drinking by employees at all times. The following are quotations from some of the replies sent in: —

The Lockhart Iron and Steel Company, of Pennsylvania, replied: —

"When it becomes necessary to reduce the force, regular drinkers are the first ones let go."

The Interstate Steel and Iron Company, of East Chicago, said,—

"We do not allow any liquor on the premises, discharge immediately any man under the influence, preach abstinence through foremen and bulletin board literature, and we are succeeding famously. Most important is the fact that our men also see the good of it."

In the reply of the Follansbee Furnace Company, Follansbee, W. Va., was this statement: —

"The efficiency of a man is reduced in exact proportion to the amount of alcohol he drinks. The total abstainer ranks above the moderate drinker in reliability and efficiency in all classes of work nearly as much as the moderate drinker does above the heavy, regular drinker."

From the Crane Company, Chicago, came the reply,—

"The moderate use of liquor tends to impair efficiency and reliability, and we do not knowingly employ men who drink, nor advance them to positions of authority if they are employed."

These corporations are not fighting liquor because the officers are Sabbath school superintendents or Good Templars or members of the Band of Hope, but because they know that liquor, even in moderate quantity, gradually lessens the efficiency of their men, increases the blunders and the number of accidents, and hence makes for smaller profits and a lessened dividend. It is a cold business proposition; but when business is fully awake to the fact that liquor is hurtful, and only hurtful, liquor is doomed.

Prohibition an Asset — Dry Towns Better Off

NOT only is a town better off socially and morally for prohibition, but the business men have better times and the municipality itself is better off. This

is the testimony of those who know. The following recently appeared in the Kansas City *Star* concerning a Missouri town: —

"Those who predicted that Independence would go into bankruptcy after the saloon revenue was cut off, are to be disappointed. The financial condition of the city is just as good, according to a report made last week, as it was a year ago, and the moral and physical condition of the city is a whole lot better. When the dramshop revenue of several thousand dollars a year was cut off after the local option election, the city officials did a little pruning of expenses. There were no saloons, less crime, and less poverty and distress, so it was easy to reduce expenses. With an increase in revenue of about $3,000 from general taxation, the city was enabled to make a splendid financial showing, justifying it, even on a financial basis, in closing the saloons.

"Business men who strongly opposed closing the saloons now are the most sincere advocates of the saloonless town. Men who formerly spent their earnings in saloons, now buy clothing and food for their families, pay their bills, and are an asset to the town. Poverty, distress, and crime have been greatly reduced since the saloons were closed. More public improvements are being added than ever before, and greater interest and pride taken in making the town more attractive."

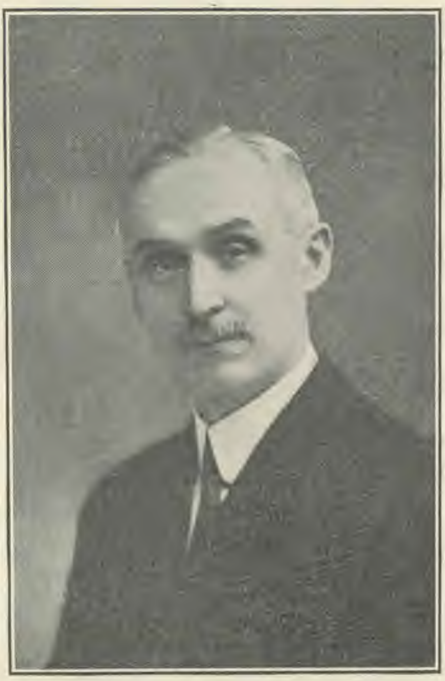
THANKSGIVING SERVICE AFTER BATTLE

It is a curious thing about war psychology that every warring country is sure that God is on its side. Would it not be more rational for each country to have its national god than to appeal to Him who is the Father of all men?

NARCOTIC DRUGS, THEIR PAST AND PRESENT USE IN MEDICINE

D. H. Kress, M. D.

THERE is no country in the world whose people are more addicted to the use of drugs than are Americans. Practically two thirds of the revenue of every drug store comes from the sale of proprietary remedies or patent medicines. More than three hundred million dollars is invested in this industry, and more than one hundred million dollars is annually paid out by the people of this country for such products. America, not China, stands at the head of the opium-consuming nations in the world. Last year there were imported over four hundred thousand pounds of opium. Austria-Hungary, with a population one half as large as that of America, used but six thousand pounds, and Italy, with a population one third that of the United States, consumed but three thousand pounds.



Dr. Kebler, of the United States Bureau of Chemistry, is responsible for the statement that ninety per cent of the opium imported is employed for illegitimate purposes. It is estimated that we have from two to four million victims of opium and cocaine in the United States. One month of morphine taking is sufficient to make a victim of almost any one. Most frequently the habit is acquired through the prescription of a physician or through the use of proprietary medicines. The use of these drugs is usually begun to relieve fatigue, to get rid of headache and other pains, to drown sorrow and depression or some other minor trouble. The drugs are also dispensed in cough sirups, pain killers, headache remedies, consumption cures, catarrh sprays and snuffs, etc.

These narcotic drugs bring immediate results. This is what patients demand of physicians. The physician who can bring instant relief to his patients is in demand. The people are in a measure excusable, for they do not realize the dangers lurking in these remedies which bring such apparent gratifying results. Upon the physician should rest the burden to enlighten them. In every case, whether secured in a drug store or prescribed by a physician, remedies which bring immediate results have in them some habit-forming narcotic drug, and ought to be regarded with suspicion if not entirely shunned. Doctors sometimes prescribe these drugs to satisfy impatient patients.

Some of the narcotic drugs which were in general use among practitioners in the past have more recently been thrown aside as un-

reliable, worthless, and even dangerous. There are others which will in the future meet the same fate.

A certain English professor, it is said, each year in his closing remarks to the graduating class, recommended most highly a certain narcotic drug which he had employed with apparent success in his practice, and in which he had the utmost confidence. While traveling in France, being called to the bedside of a patient, as was his custom he prescribed his favorite drug. The patient, however, instead of getting better, failed rapidly and died. This shook his confidence somewhat in his favorite remedy. After this, it is said, in his closing remarks to his graduating classes he would speak as highly of his drug as before, but in conclusion would say, "Remember, while it cures an Englishman, it will kill a Frenchman."

Drugs which bring instant relief to one who has a vigorous heart may bring the same relief but prove fatal to one whose heart is weak. It is the physician who has just been graduated who relies most upon drugs in his practice. Observing physicians, after years of practice, place less and less confidence in them.

Narcotic drugs are deceptive. They conceal the symptoms which enable the physician to make an intelligent and correct diagnosis upon which to base his treatments. It is difficult, if not impossible, for him to know of a certainty whether his patient is improving or not, while he is under the influence of a narcotic drug. The patient may have a stronger pulse, and may feel better and appear better, and yet be worse. The physician has no way left of determining the condition of his patient.

Symptoms are of value to the physician, not merely for diagnostic purposes, but because they indicate to the observing physician what nature is endeavoring to do. His efforts should tend to assist nature in her work. A cough is not necessarily a bad thing to have. It may be and often is a blessing. A cough may indicate that there is some accumulation in the lungs or bronchial tubes that needs to be expelled. It is therefore most unwise merely to arrest the cough by administering an opiate. Nature should be aided instead of hindered. Many a consumptive has been cured of the cough to his own injury.

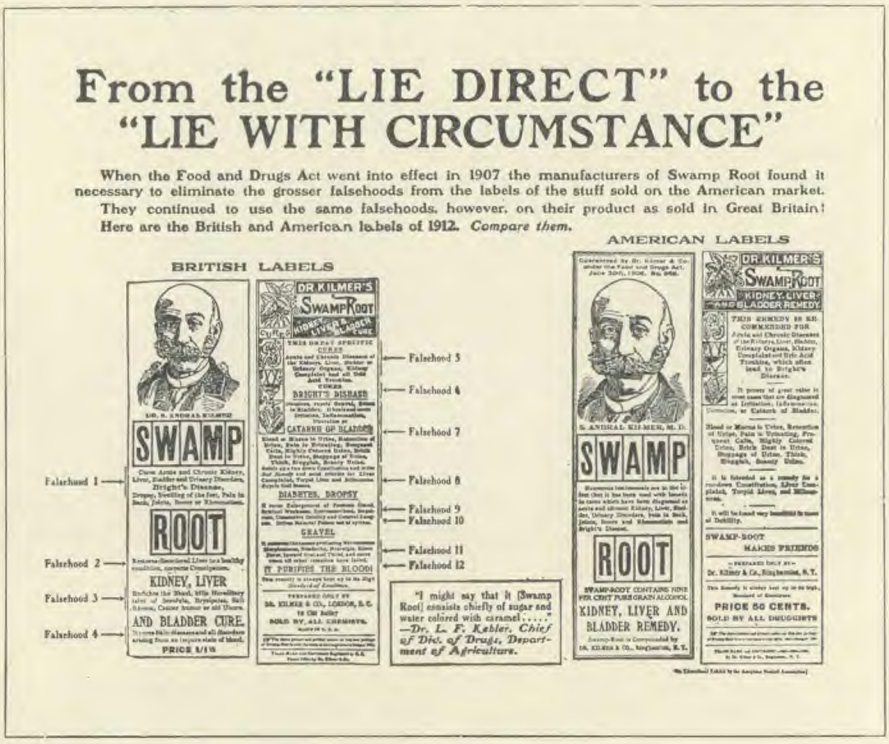
Fever is an effort on the part of the body to burn up and get rid of certain poisons. It is not the fever which needs to be got rid of, so much as that which is responsible for it. To check a cough or reduce the temperature with drugs may interfere with nature's efforts, and result in death, or else leave the patient with a wrecked constitution after apparent recovery takes place.

The closing remarks of one of the professors of the University of Michigan to the class of '94 were: "Remember, when called out to your first case, you are treating a patient, not a disease. Do not lose sight of your patient. It is possible," he said, " to kill a mosquito on a man's forehead with a club, but remember you may kill the man."

In the remote past, drugs, it seems, were as generally employed as at present. Dr. Robert Wilson, in a most interesting little book, says, " The Hindus at an early date were well abreast with the most advanced medical science of today." Materia medica was one of their chief studies, and opium, strychnine, and many other drugs now in general use were then freely employed. Schools of medicine had been established as early as 1570 B. C. Moses, it seems, " who was learned in all the wisdom of the Egyptians," received his training in one of these schools. Being educated as a priest-doctor, he was familiar with all the remedies then employed, yet, strange to say, in his writings he omits all mention of these drugs. Much stress is laid by him upon hygiene, upon sanitary science, upon isolation and quarantine, and upon the need of implicit obedience to the commandments of God, in order to keep in health or to regain health. Only once do we find mention of a poisonous herb in his writings, and that is evidently a symbol of a sin upon

which a distinct curse is pronounced. Deut. 29:18. Later we read of Asa, who, when afflicted with disease, "sought not to the Lord, but to the physicians." The curse rested upon him as a result, and he died a miserable death. 2 Chron. 16:12. This is the only mention made either of poisonous drugs or of physicians who dispensed them in to administer poison." It is evident that this oath was aimed at the general practice of drugging. Through his teaching, a change in public sentiment was brought about among the more intelligent classes.

Cato, in cautioning his son Marcus, said, "I forbid you to have anything to do with physicians." The public sen-



Old Testament times. Moses evidently laid aside much of the knowledge he had acquired in the schools of Egypt as of no real merit.

The Greeks, we are informed, received much of their knowledge of medicine from the early Egyptians. Hippocrates was termed the "father of medicine." He aimed to bring about a reform in his school. Students who received their training under him were called upon to take the following oath: "I swear I will prescribe such medicines as may be best suited to the cases of my patients according to the best of my judgment; and no temptation shall ever induce me

timent against drugging grew to such an extent that "medical practice," we are told, "was finally brought to a rude standstill in Rome, and the teachers and practitioners of medicine were expelled from the city," and for six hundred years Rome was without a physician.

Pliny says, "Medicine is the only one of the arts of Greece that, lucrative as it is, the Roman gravity has hitherto refused to cultivate." Rome was no doubt better off without this class of physicians.

Luke the evangelist received his training as a physician in the Grecian

schools. Yet in all his writings we do not read of his advocating a poisonous narcotic drug. He calls attention to some of the simple agencies employed by the Saviour, and records the marvelous results which followed their use. He tells of the miraculous healing of the man sick of the palsy, of the lunatic and epileptic child, of the man who was a cripple from his birth. He tells of the healing of the woman who had spent all her living upon physicians, but had gradually grown worse, "neither could be healed by any." On entering Christ's school, Luke's training was of a different order, and yet the graduates from this school were sent forth not only to preach the gospel but to heal the sick, and they met with remarkable success.

If narcotic drugs are so essential in the treatment of disease, why was Moses, a graduate from the Egyptian school of medicine, and Luke, a graduate from a Grecian medical school, so silent about their use? Why did not Christ in his teaching, or his disciples in theirs, refer to the need of making use of them in the treatment of disease? In our modern medical practice, are we advancing along the line of true science, or are we going back to the old Egyptian practice? With all our boasted knowledge, facts and the statistics in the United States seem to indicate that our tendencies have been to go backward instead of forward.

Courtesy Washington Sunset Route

ROOSEVELT DAM SEEN FROM DOWN THE RIVER

The reservoir is full, the spillways overflowing. Webb Lodge is seen in the distance.

ITEMS OF INTEREST

Will Benefit State.—According to Judge W. A. Rucker, of Colorado, who was formerly a member of Congress, prohibition is destined to prove a wonderful blessing to his State.

No More Liquor Articles.— The *Public Ledger*, Philadelphia, will publish no more liquor publicity articles, according to the decision of the owners, the Curtis Publishing Company.

Decline Liquor Advertising.— More than eight hundred daily newspapers published in the United States, having a combined circulation of about five and a half million, refuse to accept any liquor advertisements.

Liquor Inspiration.— A Chicago boy confessed that drink had inspired him to commit a number of robberies. As a result of his mother's complaint to the authorities, several saloon keepers were prosecuted for furnishing liquor to the boy.

Perhaps There's a Reason.— At the recent election in Pennsylvania, the various brewing companies and distilleries, so it is said, contributed a vast sum of money to defeat the amendment providing for woman suffrage. How the instinct of self-preservation will manifest itself!

Laws Against Liquor Advertising.— Colorado, Maine, North Dakota, Oklahoma, Oregon, West Virginia, and Washington have laws forbidding the advertising of liquors within the State. Similar laws have been passed and will soon be in effect in Georgia, Mississippi, South Carolina, and Virginia.

When Inyo Went Dry.— When the county of Inyo, California, abolished the saloon, its jail was full, and an old barn was rented for the housing of the harmless drunks. Now it is empty. For the last year, under the license régime, it cost the county $3,600 to keep the prisoners. The next year the cost was $300.

Bishop Denounces Liquor Traffic.— In an address given at the Majestic Theater, the bishop of the Episcopal Diocese of Chicago said: "It is probable that we will look back upon our tolerance of the liquor traffic as we now look back upon slavery as an institution. Every man and woman of the Episcopal Church should take a leading part in this great movement."

Drink Water in the Tropics.— In the February issue of *Travel* magazine, A. Hyatt Verrill, giving advice to Americans who contemplate visiting the tropics, says, "Above all, *never* use spirituous liquors to excess; if you must drink [how many there are who think they *must!*], drink sparingly; liquor has killed more men in the tropics than all the fevers, insects, snakes, and diseases combined." Arctic explorers are as emphatic in their condemnation of alcohol. It is only in the favored temperate zone that man dares abuse himself by the regular consumption of alcoholic poison. And even there, man is learning that "he that is deceived thereby is not wise."

A Temperance Lecture.— Men were hastening by to their labor as a man standing in the doorway of his shuttered shop said to a friend, "Those are my slaves; they will come and bring me their wages tonight." Slaves indeed! Even if they had heard the remark, it would not have prevented their spending their money for drink.

Liquor, Not Prohibition, to Blame.— In reply to the assertion of the liquor men that prohibition had bankrupted the State of Alabama, Wm. H. Manly, cashier of the Birmingham Trust and Savings Company, states that the State deficit "was incurred during the administration of Governor O'Neal, while Alabama was not under prohibition régime."

From Beer to Macaroni.— In Omaha, Nebr., the production of beer has decreased $700,000 the last year. At the same time the production of macaroni has increased $375,000. It is said that a leading brewer is a prominent owner of the macaroni plant. Perhaps he has learned that there are other ways to make a profit on grains than to turn them into poison.

Prohibition Increases Library Attendance.—A Boise, Idaho, paper reported January as a record breaker for the Carnegie Library. "Never in any previous month have there been so many readers, the attendance almost doubling that of other months. This is thought to be due to the closing of the saloons. Men who have never before been in the library now appear almost daily."

Attorney-Generals Defend West Virginia Law.— The attorney-generals of fifteen prohibition States have filed with the Supreme Court a joint argument supporting the Constitutionality of the West Virginia law prohibiting the receipt and possession of intoxicating liquors for personal use, and of the Webb-Kenyon federal law prohibiting the shipment of intoxicating liquors into States for use in violation of State laws.

Drastic Mississippi Legislation.— By an overwhelming majority of both houses of the Mississippi Legislature, a bill was passed making it unlawful for a person to bring into the State more than a quart of spirituous liquor every fifteen days, and no person is permitted to have more than a quart in his possession at one time. The possession of more than one quart of liquor is *prima-facie* evidence of running a "blind tiger."

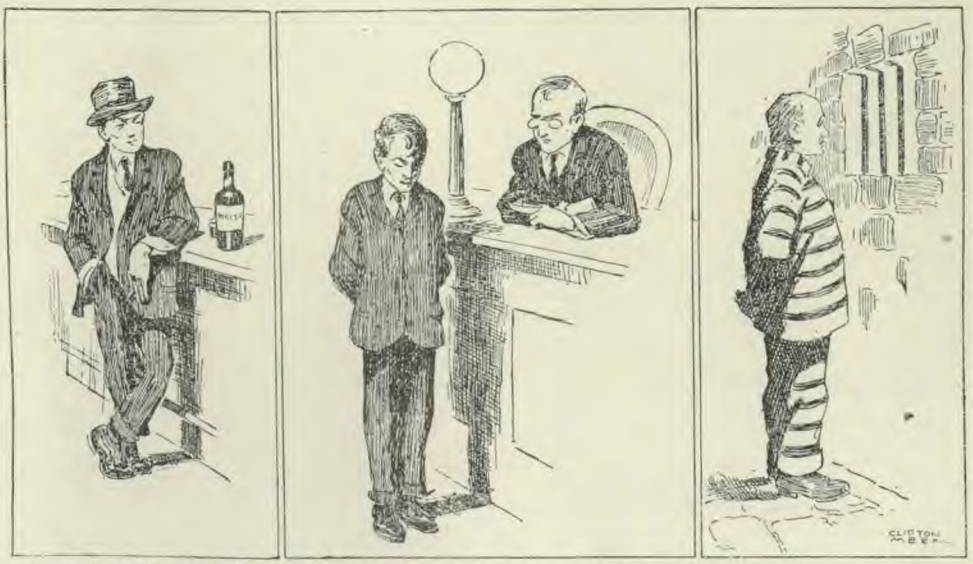
Origin of Kansas Prohibition.— The tearing down of the old Methodist church building in Leavenworth revives the story of the beginning of the prohibition movement in Kansas. A saloon was run on the corner opposite the church. The congregation demanded that it be closed during services. The saloon keeper refused to do this. As a result, the Methodists of the State banded together and drove out all the saloons. And they have been out ever since.

Dry Law Booms Automobile Business. — Since prohibition went into effect in Colorado, there has been an unexpected boom in the automobile business, which H. D. Federspeil, of the Colorado Motor Company, attributes solely to the prohibition law. He said, "I believe prohibition and nothing else has had to do with the fact that the volume of our business last month was larger than that of January, 1915, by four hundred per cent. I believe that it will increase the business of every motor car merchant and accessory dealer in the city."

Two Mayors. — Philadelphia's mayor, Thomas B. Smith, has barred liquor from ten thousand persons, in prohibiting drinking by the city employees while on duty. He says, "Rum and efficient public service are impossible." On the other hand, the mayor of New York is said to have prevented the distribution of the bulletins issued by the department of health, which gave warnings against the danger of using alcoholic drinks. New York has long been in the clutches of the Tammany gang. Does that mean that it is also dictated to by the liquor gang? Rumor has it that Tammany headquarters has a very intimate acquaintance with the liquor interests.

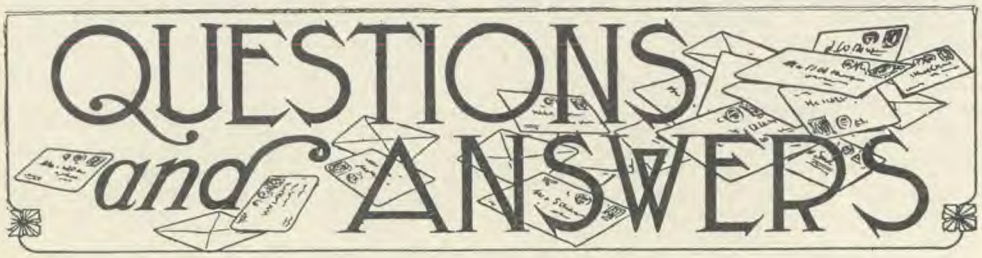
Set Good Example to Dog. — Frank Higgins is an evangelist to the lumberman. At one of the lumber camps, when he was invited to drink, he said, "I'll tell you what I'll do, boys; if my dog will drink the stuff you fellows are imbibing, I'll join you." He offered the dog some of the liquor, but it turned away; then, turning to the men, Mr. Higgins said, "Can't do it, boys; I'd hate to set a bad example to my dog. She has good sense, and you had better follow her lead."

Prohibition Lessens Some Kinds of Activity. — Certain institutions are going out of business under the prohibition régime. In the Polk Hospital for Inebriates, at Knoxville, Iowa, the patients have been dwindling away till there are only half as many as there were a year ago. Recently it was reported that there were only forty-one prisoners in the Spokane jail, as against an average of two hundred and thirty before prohibition. The Spokane *Review* of March 11 reported, "A year ago today there were twenty-five women confined at the county jail, the majority of whom were drug and whisky victims. Tonight there will be but one woman at the jail to be cared for."



From Erie (Pa.) "Times"

THE THREE BARS — ALL CONNECTED



Questions accompanied by return postage will receive prompt reply by mail.

It should be remembered, however, that it is impossible to diagnose or to treat disease at a distance or by mail. All serious conditions require the care of a physician who can examine the case in person.

Such questions as are considered of general interest will be answered in this column; but as, in any case, reply in this column will be delayed, and as the query may not be considered appropriate for this column, correspondents should always inclose postage for reply.

Baby's Sore Eyes.—"Our baby, nine months old, has a sore eye. The right one has been sore from birth, waters freely, and matter flows from it. At times it is very red. It is just a little smaller than the other one. What should I do for it?"

You should go to an eye specialist, or at least to a good physician, and have an examination. This is probably a dangerous infection, one that may cause serious damage to the baby's eye if it is not remedied. It is possible that the use of a solution of sterile boracic acid, dropped into the eye occasionally, may be a help; but the probability is that it will require more radical measures than you can give in the home.

Diet for Flatulence.—"Kindly send me suggestions for diet in case of flatulence, or gas on the stomach."

Use the cereals, including zwieback, granola, and other forms of oven-dried cereals, together with milk and cream. The starchless vegetables in most cases are acceptable, but in some cases the cellulose in these vegetables seems to form gas. Eggs should be eaten occasionally. It is better to avoid fruits and all sweets. You may be able to use to advantage thoroughly baked potato, or potato mashed and then browned, but without grease.

There are certain foods which are more likely to ferment than others, and these vary with different persons. The food that would be most fermentable with one person might not be with another. It is an advantage to take a cup of hot water before meals.

If the teeth and mouth are in a bad condition, no permanent benefit can be secured without thorough treatment by a dentist. It is a good practice to use a mouth wash before meals; and if the tonsils are diseased, it may be necessary for you to have them removed before you can have permanent relief.

Milk and Sugar in Combination.—"What is the objection to the use of sugar and milk in combination?"

Milk and sugar eaten freely together may result in serious fermentation.

Starchless Vegetables and Nonacid Fruits.—"Kindly give me a list of the starchless vegetables and nonacid fruits for a case of fermentation with production of gas."

Starchless vegetables are string beans, cabbage, lettuce, spinach, asparagus, radish, cauliflower, and perhaps vegetable oyster, parsnip, turnip, beet, etc. Green peas contain practically no starch, but some sugar, and in some cases might be objectionable on this account, as might also some of the root vegetables.

There are no nonacid fruits, except, perhaps, the banana.

To relieve the gas it might be well for you to abstain from all fruits for a while, using such foods as milk, zwieback, and cereals. Use Graham bread in preference to white bread, for its laxative effect. This will take the place of the fruits left out of your diet. And you might take a tablespoonful of bran in a glass of water before breakfast. Massage the abdomen regularly. If necessary, use some mechanical laxative, such as agar or liquid paraffin.

Rupture.—"My little girl, five years old, has a small rupture. The physician who examined it says that the proper treatment would be either a truss or an operation. What should you advise? I do not want to have her operated on, as it is not a bad rupture."

I should advise an operation even though it is a small rupture, for a small rupture is one that is most apt to be strangulated sometime, and then it might be necessary to operate in a hurry to save the child's life.

Butter Color.—"Is the color used in butter injurious?"

I do not know that butter coloring in the quantity ordinarily used has an injurious effect.

Why Cheese is Harmful.—"We are informed that cheese is not fit to enter the stomach. Why is this?"

There are many kinds of cheese. Cottage cheese is practically the same as buttermilk or sour milk, with the liquid squeezed out. It is probably perfectly harmless to most persons, although it tends to constipation.

There is a great difference in persons regarding their reaction to cheese. With some it agrees much better than with others. There is also a great difference in varieties of cheese. Some of the milder cheeses are practically as harmless as cottage cheese.

Any cheese which is not thoroughly masticated will cause more or less digestive trouble, on account of the indigestible lumps, which tend to decay; and in the putrefactive cheeses there are injurious germs, which may cause much harm.

Hacking Cough.—"Kindly advise a remedy for a hacking cough thought to be a bronchial cough."

The hacking cough is possibly tuberculosis, and may require the regular treatment for this disease. In any case, to cure a cough it is necessary to cure the condition which produced the cough, and your first step would be to have an examination and learn what condition is responsible for the cough. For temporary relief you might use lozenges of slippery-elm bark. But temporary relief is not a cure. Relief may also be obtained by inhalers, either the pocket variety or the larger variety, making use of one of the solutions which accompany these inhalers.

Dizziness when Arising.—"Kindly tell me the probable cause of dizziness when arising from bed, and when arising from a chair after sitting longer than usual."

Dizziness caused from sudden change in position is due to temporary anemia of the brain on account of the changing of position. This might occur to almost any one, but is more likely to occur where there is insufficient intra-abdominal pressure.

Coated Tongue; Constipation.—"I have a a white coating on my tongue that does not come off, whatever I do; am constipated. I do not take medicines, do not eat sweets, and I live as clean a life as I know how, and have no bad habits of any kind. My occupation is clerking. I usually get thirty minutes' exercise in the morning, and as much at night."

The tongue may be cleansed by scrubbing it with a toothbrush.

Use freely of Graham and bran bread, avoiding white bread. Take exercises to strengthen the abdominal muscles. We expect soon to issue a book on constipation.

Milk with Sweets.—"Having read that milk and sugar used together in large quantities is very harmful, I should like to inquire if this statement applies to the natural sweets, such as honey and maple sirup? That is, is it all right to sweeten cereal with honey instead of sugar? Also, does it apply to molasses?"

I think you are better off to use milk with your cereals, with very little sweets of any kind. The fact is that there is a tendency to use too much sweetening.

Maple sugar, so far as its chemical constituents are concerned, is practically the same as cane sugar. The flavor is simply the impurities.

If maple sugar were refined the same as cane sugar is, it would look and taste exactly like cane sugar. That is not saying anything against maple sugar, but it merely indicates that if one is injurious when in combination with milk, the other might be also.

Roasted Peanuts.—"If heating an oil hot enough to brown it produces a poisonous acid, how about roasting peanuts?"

Browned peanuts are not good.

Gas after Meals; Painful Movements.—"After any meal my bowels seem to fill up with gas, which greatly distresses me for an hour or two. About two or three hours after my morning meal I begin to suffer with hard aching, and soon after have a movement of the bowels; but instead of relief, the pain is much harder for an hour or two after the movement. It is terribly distressing. When it passes away, I feel perfectly well and can do my work with ease."

Your physician can tell much better what your condition is, after an examination, than I can tell without an examination. It may be some particular food you are eating that causes the gas. Very often fruits or vegetables may do this. It may be necessary to give up entirely some kinds of food. Some persons cannot eat apples, others cannot eat cabbage. It may be that with the use of a food consisting largely of milk with some cereal, especially the dry cereal, such as zwieback or one of the flake foods, you would have much less trouble.

Regarding the pain. You may be suffering from a fissure. But this could be determined only by an examination.

Old Sore.—"What is the best remedy for an old sore of five months' standing? Is it necessary to operate, or can the dead flesh be burned out with caustic? How does the flesh look when it is dead? Do you think there is danger that the bone will become affected? When it hurts to touch it with caustic, is that a sign that there is no dead flesh there?"

From your description I am unable to give you much information regarding the sore you mention. A sore that would yield to one treatment might not yield to another.

You will get over this trouble quickest by having the personal attention of some competent surgeon or skin specialist.

Falling Hair.—"My hair is coming out by the combfuls. What can I do to prevent it?"

You might get some relief from a dermatologist, that is, a skin specialist, although it is not easy to relieve a condition of falling hair. If it is impossible for you to see a skin specialist, you might try the following, although I would not guarantee it to help matters any: —

Once a week give your head a thorough shampoo with soap and water, and then rub a little carbolated vaseline into the scalp, using considerable friction. It might be better for you to have your head shaved or clipped entirely, or at least that portion that is becoming bald. You can then treat it more rapidly. It

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Mouth Hygiene, by John Sayre Marshall, M. D., Sc. D., formerly Examining and Supervising Dental Surgeon, United States Army; President of Board of Examiners.

A book prepared to meet the needs of the dental profession, trained nurses, school-teachers, sanitarians, and the general public. Comprehensive but not too technical.

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Food in Health and Disease, by Nathan S. Davis, Jr., A. M., M. D., second edition.

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$3.50, $3.75, $7.00.

The Milk Question, by Walter J. Rosenau, Professor Preventive Medicine and Hygiene, Harvard Medical School.

Considering the fact that milk is practically a necessity, and that it offers one of the most frequent means of transmitting disease, there is no more important branch of public hygiene than that of securing a pure milk supply. No one is better prepared to write on this subject than Professor Rosenau.

$2.15, $2.35, $4.00.

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With some advice to the gouty, rheumatic, and diabetic.

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Meat poisoning. Poisoning through fish and mollusks. Poisoning through cheese. Poisoning through ice cream and puddings. Potato poisoning. Poisoning through canned goods. Metallic poisoning. Many cases of obscure food poisoning are the result of ignorance of the facts brought out in this book.

$1.00, $1.35, $1.50.

THE WORKING PEOPLE: THEIR HEALTH, AND HOW TO PROTECT IT, by M. G. Overlock, M. D.
A plain book, written in a plain way by a plain man for plain people,— the toilers, whose health is their principal asset, and who cannot afford to be sick.

$1.62, $1.75, $2.50.

THE REDUCTION OF DOMESTIC FLIES, by Edward H. Ross.
Considers the house fly as a cause of disease, and describes practical methods for its extermination. Recognizes that fly extermination must be a community work. Illustrated.

$1.60, $2.00, $3.00.

would be well to give it a vigorous rubbing with carbolated vaseline every other day.

As dandruff is an infectious condition, the combs and brushes you have been using should be sterilized in boiling water; or better, you should get new ones, because the old brushes would continually reinfect your head.

Breads Without Baking Powder.—"Can you tell me how corn bread, pie crusts, cakes, etc., can be made without baking powder or baking soda?"

It would be impossible for me to give you full directions for baking, and I would suggest one of the hygienic cookbooks, such as "Friend in the Kitchen."

I think bread made with a little baking powder is less harmful than some of the heavy bread that is made without it. However, there are ways of making bread light without baking powder, but they require some practice, and it would take more than a letter to describe them.

Onions.—"Is there any nourishment in onions? Are they fit to eat, from a health standpoint? If so, are they more wholesome raw or cooked?"

There is little nourishment in onions. Their principal use is as a relish. Some persons are injured by the use of onions; others seem to handle them without much trouble. As to whether the raw or cooked onions would agree best would depend on the individual.

Diet for Child.—"Kindly suggest a balanced diet for a child two years of age; also state the number of meals most consistent, and the hours. I inclose list of present feeding schedule."

I do not specialize on infant feeding. There are a good many specialists, and so far as I know no two of them agree.

I have never found it necessary, and I do not think it best, to give meats or even eggs, at least at this age. Without knowing the quantity of these materials you give, I suspect that you are giving an excess of protein. For the child and also for the person nearing the end of life, milk is a much better form of protein than meat, and in my experience a child at this age has very little need for desserts.

Five meals may be necessary at eighteen months, but I should not be long in reducing the number to four and even to three. I fear that your 11 A. M. and 3 P. M. meals are unbalanced, lacking in protein. If you take the selection of cereals that you have given, with macaroni, mashed potato, asparagus tips, the fruits, and milk, including junket, you could make a menu that would give everything that a child of two would need.

In preference to almost any cereal that needs to be boiled, I think I should use bread, preferably whole wheat or Graham bread, dried thoroughly in the oven, and only slightly or not at all browned. This, broken up in milk, is the equal of any high-priced breakfast food, and is a good substitute for the boiled cereals, which too often are insufficiently cooked.

Difficult Breathing; Poor Hearing.—"Kindly inform me what causes difficulty in breathing through the nose, and how it can be avoided. What are the symptoms caused by adenoids? Do adenoids affect the hearing? Everything I hear sounds far away."

The difficulty in breathing through the nose may be caused in various ways. It may be the result of a deviation in the nose on account of some injury during childhood. It may be caused by hypertrophy of the turbinated bones, by polypi, or by adenoids.

Adenoids usually cause mouth breathing, and a somewhat vacant stare, and sometimes are accompanied by slowness in learning.

Adenoids may affect the hearing. For the difficult hearing and ringing in your ears, you should consult an ear specialist,— not a traveling man, but some man who has a good reputation.

I think your trouble can be remedied. The difficulty of hearing may not be due to adenoids, but to an accumulation in the outer ear, or to some other condition.

Canned Salmon.—"Food specialists claim that there is great nutrition in canned salmon. Is it a wholesome food?"

It is true that there is an abundance of nutrition in canned salmon. There is even more nutrition in pork. If that were the only consideration, it would not be difficult to pick out a dietary on this basis that would be exceedingly nutritious.

I do not know that canned salmon is any worse or any better than fresh salmon. It is a fact that salmon is, on account of its very oily nature, a little more difficult to digest than some other fish. If one wishes to eat animal food, I do not know that there would be any more objection to eating canned salmon than there would be to eating any other fish.

Gallstones; Appendicitis.—"What are the symptoms of gallstones? Is a pain on the right side of the bowels due necessarily to appendicitis?"

The principal symptoms of gallstones are sharp pains in the region of the liver, sometimes followed by a yellowness of the skin. A disease of one part of the intestinal tract is apt to be accompanied by disease of other parts. If the stomach is diseased, there is a chance that the intestines are diseased as well.

The soreness on the right side of your bowels may be from some other cause than appendicitis; but in view of the danger in case it is appendicitis, you should have a careful examination. It is impossible to determine from symptoms whether or not appendicitis is present.

Piles.—"Is there a cure for piles without an operation? Piles bother me only when I take a physic. Can piles be doing any harm as long as one feels no pain except when taking a physic?"

I know of no permanent cure for piles without an operation. I do not know that there is any serious injury from them when they are not giving trouble.

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To take advantage of these rates, cash must accompany the order.

Nostrums and Quackery.

For years the government has been putting out of commission one medical fraud after another; but no sooner is one dislodged by the difficult processes of the law, than another springs up to take its place; and before it can be controlled, it has succeeded in swindling a large number of needy persons. This book explains the methods of these different frauds, so that the reader may be on his guard.

$1.50, $1.75, $2.50.

How to Live — Rules for Healthful Living Based on Modern Science, by Irving Fisher and Eugene Lyman Fisk, M. D.

A description of this most excellent book on the conservation of life and health appears in the April Life and Health, page 193. It is the work of two eminent authorities in life conservation, who were assisted by a committee of one hundred sanitarians. The book can be relied upon as containing the last pronouncement of science on the preservation of health.

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The Sexual Instinct; Its Use and Dangers as Affecting Heredity and Morals, by James Foster Scott, M. D.

"A plain-spoken, yet scientific treatise, by a man of experience and eminence on a difficult but most important subject concerning which there are few good books."

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Food and Cookery, by H. S. Anderson.

Although small in size and cheap in price, this is a very practical health cookbook, classifying foods, and giving their constituent elements, nutritive values, and proper combinations, with a large number of tested health recipes. One hundred and twenty-eight pages, bound in durable flexible cloth, with a supplement of twenty-four pages on healthful living.

$ .35, $1.10, or one new yearly subscription.

Wreckage, by J. Hartley Manners. $1 net, Dodd, Mead & Co., New York.

This play was dedicated by the author to the victims of the drug habit who think there is no hope, and to the many who run the risk of forming the drug habit.

The preface is written by Charles B. Towns, well known as a man engaged in rescuing victims of the drug habits, including alcohol and tobacco. Mr. Towns says, "The work comes at the right moment. The subject is of the greatest sociological import and interest at the present time."

He believes that "every drug taker, every one interested in any person who takes drugs, every physician, every one concerned in the social welfare of the country, every legislator, every one in the State or government service, every member of every board of health should read" the book, and that it should find its way into every library.

Fishers of Boys, by William McCormick. $1 net. George H. Doran Company, New York.

Mr. McCormick, editor and proprietor of the Reading *Herald*, author of "The Boy and His Clubs," and a leader in boys' work, evidently an adept in the psychology of boyhood, believes that the individual boy can be best reached through the gang. "The baited hook is not the way of the wise man who goes a-fishing for boys. He had best equip himself with an ample net, calculated to catch swarms of boys, all at once; schools and shoals and gangs of them. He will find the task pleasant, and the luck good."

This is certainly one of the most useful books for the inspiration and guidance of the leader of boys — whether he be connected with a Sabbath school, or a Y. M. C. A., or a boys' club — that it has been my pleasure to read, and no worker with boys can read the book without benefit. I might say more. No worker with boys, unless he is having all the success he desires,— and who does? — should fail to read the book.

Side-Stepping Ill Health, by Edwin F. Bowers, M. D. Price, $1.35 net. Little, Brown & Co., Boston.

This very readable book serves up in an attractive manner a large amount of information regarding the preservation of health and the prevention of disease.

Never tedious, the author holds the interest of the reader to subjects usually counted dry.

The references to Pithecanthropus Erectus are of course conjectural, and are probably intended to be taken allegorically.

The condemnation of vegetarianism is too sweeping, and seems to have been written without an adequate study of the subject.

The doctor seems rather too optimistic regarding the cure of pyorrhea by emetine, if we may trust the reports of the Public Health Service and of recent investigators.

The following chapter headings are indicative of some of the excellent instruction furnished in this book: —

Eating to Live, The Sluggard Bowel, Colds and their Causes, That Tired Feeling, Why Does a Head Ache? The Demon of Insomnia, The Screaming Nerve, Side-Stepping Stoutness, Hair and Heads, Rheumatism, Children's Diseases.

Living the Radiant Life, by George Wharton James. Price, $1 net. The Radiant Life Press, Pasadena, Cal.

"From the standpoint of religion the lives of 'good' men and women may be divided into two great classes; namely, those who do no active wrong, whose conduct is based upon the 'Thou shalt nots' of the Bible, the law, and society, and those whose every thought is to do some active good. I am far more interested in the latter than the former class."

Beginning his "foreword" with this classification of "good" men and women, Dr. James informs us that this book is substantially the application of principles to his own life —"a record of personal aspirations and longings, of spiritual hopes, of living prayers and desires." He has written, he says, "in the sincere hope that they will help others to put into similar form their own half-formed thoughts, desires, and aspirations."

As one well-known writer has said, every person is surrounded with an "invisible atmosphere" of influence for good or evil. Whether he knows it or not, every man or woman is radiating a good or an evil influence. The purpose of this book is to help the reader to radiate the good.

Armageddon and the Kingdom of Peace. Profusely illustrated. Paper, 25 cents; cloth, 50 cents. Review and Herald Publishing Association, Washington, D. C.

This timely little book is meeting with a marvelous reception, *fifteen thousand copies* having been ordered before it was off the press. It is a companion volume to "The World's Crisis," which has had a phenomenal sale. The authors of these books believe that the Bible fully explains the meaning of the present world upheaval and what is coming after.

To Fight Trachoma.— The Kentucky State Republican Convention has instructed its representatives to secure, if possible, a clause urging the continuance of the federal appropriation for fighting trachoma.

Relief of a Cough.— Dissolve slowly in the mouth a lump of sugar on which six or more drops of tincture of benzoin have been dropped. Several lumps of sugar so prepared may be taken early in the morning to lessen the cough for the rest of the day. It should be remembered that this is only a treatment for relief of the symptom, and does not in any way cure the condition which produces the cough.

New Method of Preserving Food.— The French now preserve milk products and other perishable foods by sealing them in containers with an inert gas. The tins are filled with food, and entirely sealed with the exception of the small hole in the top. They are then placed in a chamber from which the air is exhausted, after which a valve is opened, allowing nitrogen to flow in to fill the space in the cans, which are then soldered.

Fire-Prevention Ordinance.— In order to lessen the fire hazard, the aldermen of New York City, at the request of the fire commission, have enacted an ordinance making it an offense to throw away any lighted match, cigar, or cigarette within any building, boat, or passenger vehicle, unless it be to deposit the same in a noncombustible container provided for this purpose. Smokers are responsible for a large number of blazes and even conflagrations.

Oil of Chenopodium for Hookworm.— Two physicians of one of the Canal Zone hospitals, Drs. Bishop and Brosius, have been comparing the advantages of thymol and oil of chenopodium in the treatment of hookworm disease. They prefer the oil of chenopodium for the reason that its administration is much simpler, the results of its use are less severe on the patient, it is nontoxic, and is a better remedy for hookworm infection than thymol. The cost is about the same.

Survey of Oyster Beds.— Surveys of the oyster beds in Connecticut, New York, Maryland, and Virginia have been made in laboratory boats, careful examination being made of oysters taken from the various beds, in order to determine whether or not the oyster beds are polluted with sewage or other dangerous matter. Float tests have also been made, by starting floats at a source of sewage and observing whether it is carried to the neighborhood of any oyster bed.

Cost of Smallpox.— Manitowoc, Wis., paid $3,000 to the hospitals for caring for smallpox patients during a recent epidemic, in addition to the cost of supplies for quarantined families. This contrasts with the $800 paid by the city after the beginning of the epidemic, for free vaccination of all unvaccinated persons.

Musk Loses Weight.— It has long been supposed that musk in giving off odor loses no weight. By means of especially constructed scales, a piece of musk was found to lose fourteen per cent of its weight in seven months, and at the end of the time it had ceased to give off odor. The odor was not restored by moistening, crushing, or exposing to air.

Falls Two Hundred Feet, and Lives.— A Chicago girl fell headfirst from the sixteenth floor of the Transportation Building, a distance of two hundred feet, and landed fortunately in a truck filled with paper boxes. She suffered a severe scalp wound and a broken arm, and was sent for repairs to St. Luke's Hospital, where she was soon out of danger.

Sanitation in Phœnix.— The West is progressing faster than some parts of the East. Phœnix, Ariz., has adopted an ordinance declaring all cesspools, open vaults, and privies within the city limits to be nuisances and subject to summary abatement. The owner of any property containing such a nuisance is required forthwith to remove or fill up, and abate the same.

Vaccination Lessens Blindness.— Smallpox, which has been quite prevalent in Argentina, has resulted in much blindness. Since vaccination has become more generally practiced in that country, there has been a marked reduction in smallpox, and consequently in the amount of blindness, we are informed in a report sent out by the National Committee for the Prevention of Blindness.

Schools for the Children with Defective Eyesight.— Boston will soon be obliged to open a second if not a third class for semi-sighted pupils. Favorable reports of the success of the class for semi-sighted pupils in Springfield, Mass., have been received, and it is the expectation of the school authorities that much good will result from maintaining this class. Cambridge has voted to open one or more centers for the education of public school children with seriously defective sight. Other places are showing interest, notably Lynn, where a class for semi-sighted children will probably be opened in the near future. Perkins Institution is cooperating in this movement.

No Yellow Fever in Porto Rico.— Major-General Gorgas, returning from a visit to Porto Rico, reported the island entirely free from yellow fever.

Better Heating of Trains.—At the suggestion of physicians the Union Pacific Railway last winter ordered its coaches to be kept at a uniform temperature of 70°, the sleepers, however, to be kept at 60° during the night.

Prize to Pennsylvania.— The grand prize for the best-conducted health department was awarded to Pennsylvania by the Panama-Pacific Exposition, and personal praise was ascribed by the judges to Dr. Samuel Dixon, State commissioner of health.

To Destroy Flies in Manure.—According to a Department of Agriculture bulletin, a cheap and efficient method of destroying fly larvæ in loose manure is to use one-half pound of hellebore dissolved in ten gallons of water for each eight bushels of manure.

Peroxide for War Wounds.—A Philadelphia physician reports that peroxide of hydrogen, sprayed into wounds after the removal of gangrenous parts, has been the means of saving many soldiers from serious operations and death.

Tuberculosis in United States.—According to Dr. George M. Kober, of Georgetown University, President of the National Association for the Study and Prevention of Tuberculosis, there were 143,000 deaths from tuberculosis in the United States in 1913, indicating that there are in the neighborhood of 1,430,000 persons suffering from that disease.

Animal Charcoal for Indigestion.—Strauss, in a German medical weekly, asserts that he has success from the administration of animal charcoal in the treatment of infectious intestinal troubles, especially dysentery. He prefers to have the charcoal pulverized as fine as soot, and has given it for weeks at a time to patients, with no impairment of appetite except in rare cases.

Foodstuffs Containing Arsenic.— For selling shellac which contained minute quantities of arsenic, a New York dealer was convicted under the United States Pure Food and Drugs Law. The shellac was sold for glazing cheap candies. The dealer made the plea that the amount of arsenic was too small to be injurious to health, but he did not succeed in convincing the jury, who rendered a verdict of guilty.

A New X Ray.— Charles H. Stanley, of the university at Seattle, who, since his graduation fourteen years ago, has been experimenting with radiology, has discovered a new ray, for which it is claimed that it gives better results than the Roentgen ray, and that it is not injurious to those who use it. If these claims prove to be true, the Stanley ray will probably soon replace the Roentgen ray both for diagnostic purposes and for treatment. The new ray is being investigated by Surgeon Lavinder, of the United States Public Health Service, and by a number of other physicians.

Vitamines from Brewer's Yeast.— The Hygienic Laboratory of the United States Public Health Service reports the successful production of vitamine from brewer's yeast. By means of this vitamine in small doses pigeons were kept in good health, while on a diet of polished rice, which, when fed to pigeons exclusively, ordinarily develops polyneuritis, corresponding to beriberi in man. It also cured paralyzed pigeons.

Health Publicity.— The New York State Department of Health has obtained permission from five railway systems in the State of New York to post health bulletins in their stations. Bulletins are thus shown in more than a thousand stations, where thousands of people passing each day will see them. The railways cooperating in this health publicity movement are the Delaware & Hudson, Erie, Lehigh Valley, New York Central, and Pennsylvania systems.

Vaccine Treatment for Trachoma.— Two prominent physicians have recommended the use of material from trachomatous granules as a remedy for the disease. The material pressed out from granules is rubbed up in a mortar with normal salt solution, and is injected hypodermically into the patient. No reaction follows the injection, but about eight or ten days later the disease begins to improve, and in four or five weeks is all practically healed over. In some cases the restoration of vision was remarkable.

School Lunches.— In the belief that a hot dish at noon, if only a bowl of milk soup or a cup of good cocoa, is highly important to school children, many schools throughout the country are either supplying a regular hot luncheon to school children, or providing a single hot dish with which the children coming from a distance can supplement the cold food in their lunch baskets. In most cases the children bring money with them, and buy the dishes at cost price. Those in charge of the lunchroom see to it that nothing is for sale that would be hurtful to the children, and direct them in their purchases so that they will not buy merely sweets or pastry. This overcomes the danger of the child's spending his money unwisely or patronizing an insanitary shop.

Saponin Barred from Food Products.— The addition of saponin to food mixtures which are sold for use in place of white of eggs is regarded by the Bureau of Chemistry of the Department of Agriculture as constituting adulteration within the meaning of the Food and Drugs Act. Saponin is used extensively in so-called substitutes for white of egg, for the purpose of producing foam, and thus giving the article a fictitious appearance of body and therefore of food value. Saponin is a substance that, when dissolved in water, foams like soap. It is extracted from such plants as soapbark and soaproot, by boiling them in water. Its name is derived from the Latin word *sapo,* which means soap. When saponin is added to the so-called substitutes for white of eggs, it produces a foam similar in appearance to the foam produced by genuine white of egg.

No Anthrax Danger.— Some time ago there was a scare in New York City over the alleged anthrax infection of a number of persons by means of furs made from catskins. The Department of Health, after careful investigation, reports that this alarm is groundless, as there is no evidence of any such source of infection. Anthrax is rare in this country. It usually affects persons who have handled hides of animals dead of anthrax.

Sore Eyes in Babies.— About twenty-two out of every one thousand babies have sore eyes, according to a report from the New York Department of Health, five to eight cases being serious enough to result in visual impairment if neglected. The gonococcus was found to be the exciting cause in only a small percentage of suppurative cases. In other words, "babies' sore eyes" is the result of a bad disease in only a very small proportion of cases. But when it is the result of specific infection with the gonococcus, it almost surely results in blindness, unless proper treatment is given at once.

Pyorrhocide not Antiseptic.—According to the official bulletin, the New York Department of Health has made tests of the proprietary tooth powder "pyorrhocide," and finds it is not an efficient destroyer of either germs or endamebas. The statement is made: "Ordinary cleansing of the teeth with water is quite as efficacious as pyorrhocide in reducing the number of organisms in the mouth." The new dentifrices professing to be especially valuable in pyorrhea, or Riggs's disease, are probably of as little value as pyorrhocide. It has been shown that emetine and ipecac do not keep the mouth permanently free from endamebas.

Registration of Births.— The Bureau of the Census has established a temporary registration area for births for the year 1915, including Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, Pennsylvania, Michigan, Minnesota, and the District of Columbia. The compulsory registration of births works no hardship on any one. The record may be of immense value in later years to the persons registered, and the data will permit of much more accurate study into the problems of infant mortality and the usefulness of various child-hygiene measures. As State laws providing for the registration of births are perfected, the area will be increased.

Americans First.— The Packard Motor Car Company makes the announcement that henceforth promotion to positions of importance will be given to those only who are native-born or naturalized citizens of the United States, or those of foreign birth who have relinquished their foreign citizenship and have filed with our government their first citizenship papers, which application for citizenship must be diligently followed to completion. A prerequisite to employment in this company must be loyalty to our government and to our flag, in addition to loyalty to the company itself. Doubtless the recent criminal acts of a few so-called "hyphenated" Americans will cause many other companies to adopt similar restrictive measures.

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Maize Flour.— J. McCrae reports in the *Journal of Hygiene* results of some work from which he concludes that "fine white meal, produced after removal of the husk and a considerable proportion of the germinal portion of maize, is a defective foodstuff which may give rise to some form of deficiency disease. By grinding the maize in such a way that practically the whole of the grain is converted into fine meal, this defect is remedied." But meal ground in this way can be used only for immediate consumption, as it deteriorates quickly.

Questions Dietetic Causes of Pellagra.— Dr. W. J. MacNeal, director of the Department of the Laboratories, New York, Postgraduate Medical School and Hospital, in a communication to the *Journal A. M. A.*, gives some strong reasons for doubting that Goldberger produced actual pellagra by the restricted diet of the Mississippi prisoners. In concluding his letter, he says, "Meanwhile, the claim that pellagra has been produced by a restricted diet should be regarded with suspicion, and it would be well for those who have not yet acquired a knowledge of this disease by personal observation or by somewhat comprehensive study of its literature, to retain an open mind concerning the essential factors in its causation." A reply from Dr. Goldberger and Wheeler follows Dr. MacNeal's letter.

Defective Eyesight in Children.— More than eighty-three thousand children in the rural schools of Pennsylvania were discovered to have defective eyesight during the medical inspection made in the school year of 1914-15, under the direction of Commissioner of Health Samuel G. Dixon. Of this number, 1,184 had defects of the right eye, 1,750 had defects of the left eye, and 53,814 had defects of both eyes.

Road Photograph Prize Contest.— General DuPont, of Wilmington, Del., and Charles Henry Davis, C. E., of South Yarmouth, Mass., are offering $2,600 in prizes for the best photographs of roads, in the effort to prosecute the good roads campaign. A contestant may submit any number of photographs, each to be of some road within the United States. The competition will be kept open for eight months, closing at noon, Tuesday, November 7. For further information address "Good Roads Everywhere" Photograph Contest, National Highway Association, Washington, D. C.

Recurring Colds in Children.— McCornac, in *Western Medicine*, March 15, says that children with recurring colds usually eat too much, especially of carbohydrates and fats. He suggests that the sugar be reduced or eliminated, that skim milk be given in place of whole milk, and that there be a reduction in the amount of meat taken. The clothing should be light and warm. The children should have a warm bath daily, followed by a cool sponge and a brisk rub. The bowels should be kept open. The children should have fresh air day and night. He advises the use of soda bicarbonate for the lithemia.

The Negro and Consumption.— The Negro is particularly prone to tuberculosis. This is partly the result of a racial predisposition, partly because of bad housing conditions, there being much more tuberculosis among the blacks now than in slavery days; yet this may be due in part to the tendency of the Negro to neglect his minor ailments. He is content to let a "cold" run, until it is too late to arrest the condition. So long as the disease is permitted to flourish with the blacks, it will be a menace to the whites. For this reason, if for no other, the whites should do all in their power to help free the Negro from this disease.

Blind from Wood Alcohol.— Nine out of twelve men in Seattle, who recently drank wood alcohol, have died as a result, and one of the three escaping death will be partially blind for the remainder of his life. Commissioner of Health J. S. McBride has issued a warning as to the menace to life and vision from the use of wood alcohol, and much publicity is being given to his statements throughout the Northwest. These tragedies, all too frequent, should not occur, and would not if the public would demand from its representatives support of legislative efforts which would prohibit the use of wood alcohol in any article intended for the internal or external use of man, and provide for the labeling of this dangerous spirit with the "poison warning," with explanation of the possible results from its use.

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Natal Health Institute, 126 Longmarket St., Pietermaritzburg, Natal, South Africa.

River Plate Sanitarium, Diamante, Entre Rios, Argentina, South America.

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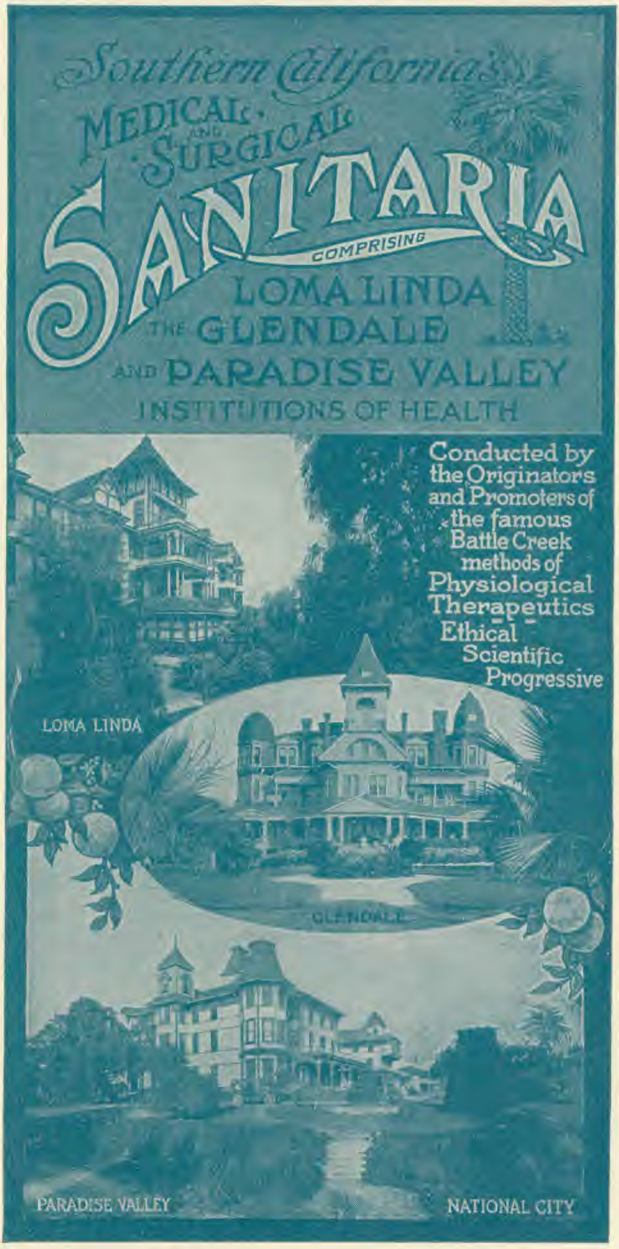

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