Life & Health

THE NATIONAL HEALTH MAGAZINE

AUGUST

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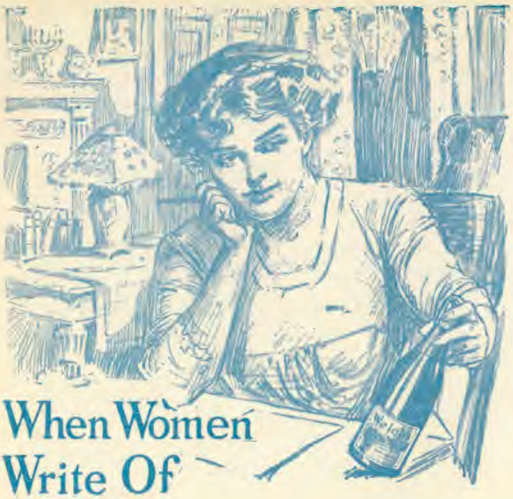

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This Striking Magazine

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LIFE AND HEALTH readers will be interested in the August number of the *Signs*, especially the article on the Beginning of the Modern Health Movement, or the Origin of Graham Bread, by David Paulson, M.D.

OTHER ARTICLES

"The Sabbath—Its Real Significance," by Mrs. Adelaide D. Wellman. A new and interesting setting of this grand truth that will appeal to you.

"Fire," by A. O. Tait. Its place in history and fulfilling Bible prophecies.

"This Generation Shall Not Pass." This prophecy of Christ vividly portrayed by the Editor. God's work accomplished in generations.

The Universal Proclamation of the Gospel and the Terrible Religious Declension, a sign of the times. This preaching a remedy, the present conditions the result of rejection. By Frank S. Weston.

"Are Seventh-Day Adventists False Teachers and Impostors?" By T. E. Bowen. A study of the work, progress, and place of this people.

"All Past Time," by the Editor. The second instalment of this interesting study on a definite creation.

A number of others, with a good line of current topics. Well and appropriately illustrated throughout. If the agent doesn't call on you, send 10c for a copy to—

Signs of the Times Monthly
Mountain View, Cal.

This Issue

ARE we as a nation on the road to vegetarianism? Mr. Lome thinks so, and has massed statistics in proof. And he seems to believe that this change in the national dietary is an excellent omen.

Whatever its cause, constipation is one of the evil results, and is itself a contributing cause of many other evil results, of our methods of living. The editor has attempted to give some rational and practical directions for the relief of this unfortunate condition.

Prof. Edmund C. Jaeger, who has had an extended experience as a teacher, and as a temperance and antitobacco lecturer, believes that all teachers might exert a more potent influence against the alcohol habit. He has given some excellent suggestions to teachers, which may be equally valuable to parents.

Mr. Cristadoro is an enthusiastic believer in a simple dietary. Old LIFE AND HEALTH readers will remember his articles on bread and wheat. He may possibly have too exalted an idea of the raisin as a protein food, but his article, "The Unrecognized Value of Raisins," is well worth reading.

Dr. G. K. Abbott, who has recently issued a book on hydrotherapy for physicians, and who has in preparation a simpler book adapted to nurses, gives in this issue the first of a series of papers taken largely from his forthcoming book, which shows the value of water treatments in certain abnormal conditions.

George E. Cornforth has an article on "Melons, Bananas, and Pineapples." Perhaps most of us would have supposed we knew how to dispose of these without any directions.

The September Issue

Anne Guilbert Mahon, "Some Physical Exercises for Business Women." Illustrated by photographs.

F. W. Fitzpatrick, "Our School System." A Protest.

A. E. Schelin, "Guard the Health of Your Children."

George E. Cornforth, "The Canning of Fruit."

G. K. Abbott, M. D., "Effects of Hydrotherapy Through the Nervous System."

G. H. Heald, M. D., "Man's Struggle for Existence," being the first of a series on "The Intestine and Health."

CONTENTS FOR AUGUST

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SET ANY CHILD HERE, AND SEE HOW QUICKLY HE MAKES FRIENDS WITH THE OUT-OF-DOORS

VOL. XXVI
No. 8

LIFE & HEALTH

THE NATIONAL HEALTH MAGAZINE

AUGUST
1911

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

Published Monthly GEORGE HENRY HEALD, M. D., EDITOR Washington, D. C.

CONCERNING TYPHOID FEVER

Typhoid fever has a mission.

It teaches us to be clean.

It forces us to look after the source of our drinking-water, and milk, and other foods.

It compels us to wage fiercer warfare against the fly.

It is getting ready to give us another annual lesson.

We have blamed nearly everything in sight for typhoid,— city water, milk, flies, "carriers," and the like.

And yet there are many unexplained cases.

We may now look for the annual rise in the curve of typhoid mortality.

Is it due to the warm weather?

Some of the hottest places do not have typhoid.

How about the vacation?

There you have it!

City people, who are not immune, leave their reservoir water and filtered water ——

And imagine that any water in the country is pure.

The converse is more nearly true.

Shallow wells and small streams are almost always contaminated.

Not infrequently outhouses are built over a stream, or at least in such a way that the rains wash everything into the stream.

Wells on farms very frequently reek with human filth.

And yet they may be clear and cold and sparkling!

There is danger in the well!

But why do not the farmer's family come down with typhoid?

They have all had it — perhaps in light form — and are immune.

But the vacationists, many of them, are not immune.

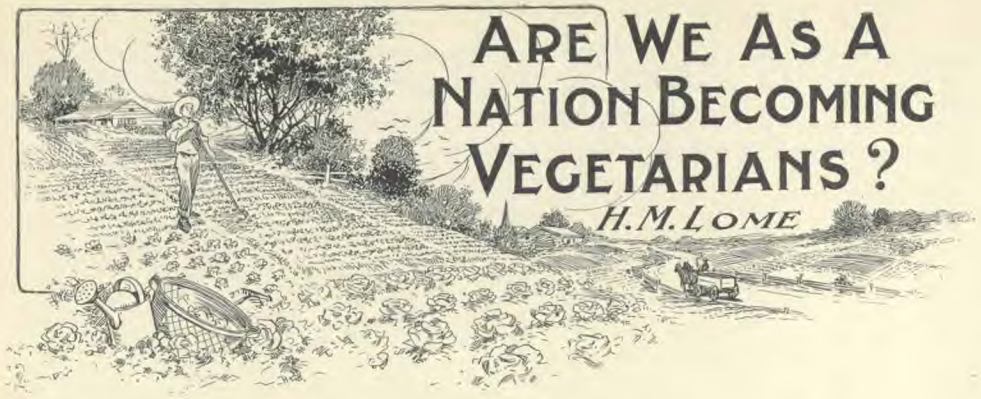
A typhoid well and a non-immune vacationist is a bad combination!

Just note the fresh crops of typhoid fever as people return to the city from the vacation.

But be sure that you are not among the number.

You can avoid it if you will be careful.

By drinking pure, or at least boiled, water when in the country, you may avoid being one of the number.



ARE WE AS A NATION BECOMING VEGETARIANS?

H. M. LOME

IF the character of a race depends upon the food that it consumes; and if — as the vegetarians assert — a non-meat diet makes for endurance, industry, and peace, then the outlook for civilization is bright indeed; for carefully collated statistics bearing on the subject, which are now in the possession of government authorities at Washington, D. C., prove that the eating of flesh foods is dying out with measurable rapidity, and that plant foods are taking their places. This statement applies to all countries peopled by white races, including Australia and New Zealand. The extent of this change from animal to vegetable food in the United States is positively startling.

IT IS VERY EASY TO OVEREAT

Space will permit of only a limited reference to the Washington figures. As a preliminary, a glance may be taken at the vegetarianism tendencies and industries of this country and those of Europe. Thus, cereals, from which bread is made, together with potatoes and rice, form the chief foods of mankind. Last year, the leading countries of the earth produced 128,000,000 tons of potatoes, 74,000,000 tons of wheat, 39,000,000 tons of rye, and 80,000,000 tons of rice. Wheat foods are greatly in advance of all others in this country and Australia, and they are the main basis of the national nourishment of England, France, Spain, southern Italy, and Hungary. In northern Italy, maize takes precedence of wheat.

Russia uses rye in preference to other cereals. In German-speaking central Europe, wheat has a large consumption, but not to the extent that it is used in the lands just named; the principal food is rye bread, not because of the poverty of the people, but because its taste is preferred by the masses. Germany is the land of potatoes and rye. In 1908 Germany raised 46,000,000 tons of potatoes, more than a third of the world's crop, and more than any other single country, even Russia, whose crop in

her European territory was 29,000,000 tons. Austria and France had each a 14,000,000-ton potato harvest. The inhabitants of northern France, of Ireland, and also of Belgium and Holland, are great potato-eaters. On the other hand, in England, Spain, Italy, and America, and in Asia and Australia, the potato is a comparatively subordinate article of diet.

Rice is overwhelmingly ahead of any other food in Asia. In Europe it is scarcely raised. In 1907 Germany used not quite 300,000 tons. Millet was once the daily food of the masses in Europe, but it has gradually been dropped, and is eaten now mostly by the Slavs beyond the eastern frontiers of Europe, and by the Negroes in Africa.

The noticeable point about the foregoing figures is that they show an increase of nearly sixty per cent per capita during the past half-century in the use of the plant foods named. On the other hand, the decrease in meat consumption in these European countries within the same period, is estimated at from twenty-three to twenty-eight per cent.

But it is our country that furnishes the most striking proofs of the growing popularity of nutrients that spring from the earth, as opposed to those that have walked on feet.

Seventy years ago the average annual consumption of meat in the United States was 364 pounds to each human being — small children and even babies included. The meat eaten amounted to a pound a day for each person. If the baby had not arrived at the meat-eating stage, its pound was eaten by the father or the mother.

That was in 1840. Ever since then the per-capita consumption of meat has been decreasing. Last year, exclusive of old bones and other uneatable things, the consumption of meat amounted to 182 pounds to each person. We speak by official figures, remember. In other words, the average person ate considerably more than his weight of meat annually. He ate, approximately, half a pound a day, where his grandfather ate one pound a day. Fruits, vegetables, and cereals filled in the gap.

Seventy years ago meat constituted more than half of all the food consumed. Now it constitutes less than a third. People are turning to other things, chiefly because of the persistent teaching of the modern dietists that an excess of meat in the daily diet is harmful, physically and morally, and because, too, of social conditions that will be spoken of later.

364 POUNDS A YEAR

Within these seventy years there has also been a tremendous increase in the per-capita consumption of wheat. Even so recently as twenty-five years ago, the average annual consumption of wheat in this country amounted to only 4 2/3 bushels a year to each inhabitant. This figure rose last year to 5½. It does not seem likely that people eat any more bread than they used to; but they eat wheat in forms that were unknown a quarter of a century ago. In those days, there were no breakfast food com-

panies, and wheat consumption was confined to bread and biscuits. Now the poorest citizen can have, if he wishes, a different kind of wheat breakfast food for every day of the month. There is scarcely room for doubt that the modern method of presenting wheat in a variety of palatable forms has done more than anything else to increase its per-capita consumption. As the individual capacity for food is limited, the breakfast food companies, by backing up in a practical fashion the dietetic truths of vegetarianism, are doing much to decrease the demand for meat. When a man increases by fifty pounds his annual order for wheat, he is compelled to cut down some other portion of his food, and the decreased butchers' bills show what this portion is.

The American people are also consuming prodigious quantities of oats and barley. Perhaps the breakfast food companies know how much of these cereals we are eating, but nobody else knows. Common observation and experience show that the amount is enormous, and the more a person eats of them, the less meat he needs to eat, and the less meat he cares to eat. So far as protein is concerned, 100 pounds of oats is equal to 101.7 pounds of sirloin, 88 pounds of round steak, or 83 pounds of bacon. As a producer of muscular energy, the superiority of oats over beef, pound for pound, is even greater. Considered in terms of energy, 100 pounds of oats is equal to 188 pounds of sirloin, 248 pounds of round steak, or 69 pounds of bacon.

Looking over these figures, one ceases to wonder how it was that the legionaries with which ancient Rome conquered the then-unknown world were paid in, and fed on, barley; how the wonderful athletes of classic days kept up their condition and endurance on the same grain; or why it is that the Highlanders of Scotland are as famous for their size and brawn as they are for their "bannocks o' barley," their oat-cakes, and their brose.

The growing demand for vegetables of the green sort has led to the truck-farms of the United States increasing fifteenfold within forty years. Formerly, during the winter months, the residents of a given locality had to content themselves with such vegetables as could be stored, as potatoes, onions, etc. Nowadays, thanks to our transportation facilities and the variety of climates that are to be found within the boundaries of the United States, green truck is available during every month of the year, and at prices that put it in reach of nearly everybody. And everybody seems ready to take advantage of the condition. This may have a great deal to do with the decreasing use of meat. It also suggests that the desire for flesh food is an artificial appetite of a gross nature, first brought into being by a famine of green food, and continued by reason of a debased taste thus created. This is in line with one of the chief of the vegetarian's arguments. But be that as it may, the situation would seem to warrant the inference that if man is plentifully supplied with plant food, his desire for meat will be greatly reduced, if not extinguished altogether.

Another thing that has aided in bringing about this revolution in American dietetic tastes is the modern method of canning fruit. When every resident of this country was annually eating twice his weight in meat, there were many months during which his larder contained only bread and potatoes and meat. Farmers put a few barrels of apples in their cellars in the fall, but they were gone by February; while city people had little fruit at any season of the year except during the summer and fall. Now that the fruits are being canned by

the train-load, fruit is available, and fresh fruit at that, all the year round. It is as if every man had a peach orchard in his pantry, upon which peaches were ripening every day; or as if he were the owner of apple, pear, and quince trees, and of raspberry, blackberry, and currant bushes, and enjoyed their products without the labor of tending and gathering them. What makes canned fruit especially popular among housekeepers is the fact that, while almost everything else has gone up in price, the cost of canned fruit has come down.

The connection between the falling off in meat consumption and the increased use of sugar may not be evident at first glance, but it is actual, nevertheless. During the past seventy years the per-capita consumption of sugar increased even more rapidly than has that of wheat. In 1840 sugar was regarded as a luxury. The good old brown variety was the best that was to be had, and its price was so high that the annual consumption was only a fraction more than fourteen pounds to each person.

Then improvements began to be made in the processes of refining. Production increased, and prices decreased. As a result, by 1860 the annual per-capita consumption had increased to thirty pounds, and now it is a fraction more than seventy-five pounds. The average family now uses, each year, 140 pounds more sugar than it did in 1875.

Another interesting fact is the increasing importance of the peanut in the national dietary. There is a very good reason for this. Like all the legumes, the peanut is rich in protein, the nutrient that excuses the use of meat. So when we eat the peanut, we are really eating vegetable-meat, only the price of it is far less than meat proper, while it is free from the hygienic and sentimental objections that in many minds attach to the output of the slaughter-house.

And what is true of the peanut as far as its increasing use is concerned, is equally true of plant foods throughout, if the Washington statistics are to be accepted. So far as food qualities are concerned, peanuts are well adapted to take the place of meat.

If the vegetarians are right, this decreased desire for meat is likely, in another generation or two, to have a pronounced effect upon both the endurance and the health of the American people.

Everybody remembers how untiringly the Japanese, whose indulgence in flesh food is limited, and chiefly confined to a little fish, went about it to tire out the meat-eating Russians during the late war. To this day, there has never been any explanation of their wonderful feats of endurance that seems half so plausible as the statement that the vegetarians offered at the time, which was that it was the non-meat diet of the Japanese that did it. When they went out to besiege a fort, they didn't go out filled with potted ham or rich roast beef. So far as flesh was concerned, they were trimmed down like a yacht in a race.

Then again, as one changes from meat

to vegetables and fruits, he may expect to get rid of the headaches from which so many suffer a great deal of the time. Though it is not commonly known, headaches are frequently caused by ptomain-poisoning. A severe case of ptomain-poisoning is, of course, quickly recognized as such by either the attending physician or the coroner; but many a man is given a severe headache by a piece of slightly tainted or hastily masticated meat without suspecting the true cause. Vegetables and fruits, containing no ptomains, are always safe; this is a distinct factor in their favor.

If we ever cease to become great meat-eaters, we shall also get over the habit of gormandizing. It is exceedingly easy to overeat when a $2.50 steak, smothered with sixty cents' worth of onions, is set before a hungry man. The first part of the steak is eaten because he needs food; the rest is eaten because the steak tastes good. Meat seems to put such a fine edge on the appetite that the palate fails to give the order to quit, until long after the stomach has received all the food that is needed. On the other hand, no person ever crammed himself unduly with vegetables, cereals, or fruits. The temptation to eat two pounds of steak may be obvious; but who would think of eating its equivalent in oatmeal — say, three packages of the latter?

With the economic and humanitarian questions involved in a national adoption of vegetarianism,— if that ever comes about,— this article has nothing to do. Just what would become of the 100,000,000 meat-yielding animals of which the Department of Agriculture has records, or from what sources we would obtain our leather and a hundred other commodities that are now by-products of the abbatoir, in the event of our turning plant-eaters, it will hardly profit us to inquire too particularly at this stage. But the probability is that the situation would adjust itself, as situations of a large calibre have a knack of doing.

Meantime, if figures lie not, the people of the United States are on the road toward the farm, the truck-patch, and the orchard, instead of journeying toward the butcher's shop and the abbatoir.

The Rôle of Teacher in the Struggle Against Alcoholism

By Edmund C. Jaeger.

[Professor Jaeger is a lecturer on hygiene and scientific temperance in the Riverside (Cal.) city schools.— Ed.]

THE teacher has an important part to play in the fight against alcoholism. He has under his instruction children in the most impressionable period of life. The child's habits are rapidly forming, new ones being added each year as he proceeds from the first grade through the grammar school and the high school. For this reason progressive instruction should be given in the formation of right habits, especially during the primary and grammar grades and the first year of high school, in order to keep pace with and guide the child's development. Boys and girls who leave school at any point in the course with a knowledge of the laws of health, including those that warn them against the use of alcoholic drinks and other narcotics, have a valuable equipment for the battle of life.

But it must be kept in mind that the elementary school can not do everything; its rôle and its field are by certain conditions necessarily limited. On leaving school the young man, in his new environments, receives promptings exactly opposite those he received in school. The detestable customs and surroundings of many of the workshops have a demoralizing effect on young apprentices. Then, too, the schooling of the street plays its pernicious part, to say nothing of the baneful influence of vicious playmates and of the poor training received in many homes. Thus the struggle against alcohol in the domain of the school is most difficult and delicate, and demands special wisdom on the part of the teacher.

There exists much ignorance among the general public in regard to the injurious effects of alcohol; and many, especially the drinkers, are biased in favor of alcohol, particularly in the treatment of disease. As A. Sluys, director of the Belgium state normal (Brussels), says: "They attribute astonishing properties to it. 'It is warming,' say they; and they drink it when it is cold and damp. 'Alcohol is the water of life, the liquid fire which imparts energy;' and they drink before going to work, in order to increase their strength. They drink also after work, in order to get renewed energy, and relieve fatigue. They attribute to alcohol the property of curing all sorts of diseases and indispositions. 'It protects from cholera, from typhus fever, and from all epidemics; it drives away headaches and stomach-aches; it is the universal panacea.'"

To attack this ignorance and prepossession in favor of alcohol, is the teacher's easiest task. By making skilful use of the procedures of modern pedagogy, she may with uncommon efficacy make known the physiological effects of alcohol, and show the deplorable moral and economic results of alcoholism to the individual, the family, and the community.

The essential point of such teaching is to make the subject clear and simple, avoiding all pedantic and repelling phraseology, exaggeration, and puerile sentimentalism. Above all, it should be based on facts determined through scientific experiment and observation. Instruction given in this way can not be decried by those parents who use liquor, nor by those whose business interests might be indirectly affected by such instruction.

Recourse should be made to pictures and charts to impress the truths firmly. These should be simple, true to life, and artistically reproduced. Coarsely designed drawings should never be used, as they destroy the child's esthetic sense. The love of the beautiful is one of the most important tastes to cultivate. If the children live amid surroundings where nothing develops in them the esthetic sentiment, they will give themselves to coarse pleasures, and alcoholic potations will have an irresistible attraction for them.

Another essential point is to dwell more on the happiness, clear brain, success, and moral cleanness of the temperate man than on the defects of the drunkard. Says Prof. S. T. Dutton, of Columbia University: "Too often we try to lead the children into temperate lives by holding up only intemperance; we endeavor to exalt before them a life of self-control, by careful observation of those who are only samples of self-indulgence." Froebel's injunction is to the point: "Fill the mind with the beautiful, so that there is no room for the ugly."

Other great causes of alcoholism are the poorly cooked, stimulating, and highly seasoned foods served on many tables, and the unattractiveness of the homes of the ignorant. These causes the school can best combat by giving to the women of to-morrow a knowledge of healthful living, scientific cookery, sanitation, and the essentials of home-making.

Woman's economical education has been lamentably neglected; she has been taught the rules of syntax, historical dates, and the location of Siberian rivers; but she has been left in ignorance of hygiene, domestic economy, and the care of children. She has never been prepared for her essential mission,— the management of a home, and the government, training, and education of children.

SUN BATHS and SUN BURN

William J. Cromie

Instructor in Gymnastics, University of Pennsylvania

IN all kinds of nature-worship, the bearer of the light of heaven,— the sun,— exalted to a personality, takes the highest rank.

The sun's rays assist the plant to change materials taken from the air and soil, such as carbonic acid, water, ammonia, and nitrogen, into proteid, or albuminous substances. These proteids, or albuminous fats, carbohydrates, etc., are taken into our bodies and changed again, creating bodily warmth or energy. As a consequence this plant life becomes, as it were, a reservoir for preserving the otherwise fleeting rays of the sun.

It is essential for one to be exposed to the direct rays of the sun in order to keep that mysterious spark which is called life within one's body. Of course, one can exist in a dark, gloomy place for a time; but existing and living are not synonymous. Take, for instance, a potato growing in a dark cellar. It is uniformly pale, delicate, and f e e b l e, with slender, wabbly sprouts. A person living in such conditions is languid and sickly, with sallow, putty-like countenance.

ANOTHER WAY TO GET A BAD CASE OF SUNBURN

Many women object to a tanned skin because, when décolleté dress is worn, there is a line of demarcation where "gipsy" skin joins ivory shoulders or bust, and this is a hideous reminder of their careless bravado in exposing themselves to old Sol's rays while at the seashore. If these women consider disfigurement, which is but temporary, more important than health, then the objection is timely.

Another objection to a sun-kissed complexion is "the extreme discomfort experienced while going through the process." There should be no unpleasantness in acquiring a healthy, beautiful coat of tan if one uses a little common sense. Take this potato plant, of sedentary occupation, which is trying to perform its mission in the world in a dark cellar, where the air is vitiated and sunlight excluded, and expose it for a day to the strong rays of a July or August sun, and it will certainly wither up, and suffer. Can one who is working indoors most of the year expect to take an outing for a day or longer at the shore, and lie in the sand three or four hours at a time, and escape the penalty of a

burned or blistered skin? If a spoonful of medicine is efficacious in relieving pain, does it then become necessary to drink the entire bottle? You are answering both of these questions in your mind at the moment by saying, "How absurd!"

There are thousands who every summer suffer tortures from the effects of overindulgence in the sun's rays, who, had they used a little prudence, would get a tanned complexion with comfort, grace, and benefit.

Another way to get a bad case of sunburn is to go into the water, then lie in the sun, and repeat this program a number of times. When one burns, the skin will in all probability peel off, and this is certainly a slow way of becoming tanned.

During your vacation let the sun use you as a reservoir for storing up energy, but do not try to fill it in one day. Stay in the sunshine from half an hour to an hour at a time. Some persons tan more readily than others, and each one must exercise judgment concerning the condition of his own skin. Some learn by experience, and say, "Never again," and consequently are depriving themselves of one of the greatest curative agencies in the whole materia medica of nature.

The writer has found that bathing the skin with vinegar before exposure to the sun, has a tendency to produce tan instead of sunburn. Many of the so-called creams and greases seem to blister the skin.

After the sun-bath, wash the exposed surface with soft water, and when dry rub with buttermilk, apply talcum or rice powder, and no inconvenience will be felt; that is, if the exposure has not been too long. If you have overindulged, the preceding is again the best formula, together with time, as you must "pay the fiddler" for your folly.

Catchin' Cold

Catchin' cold and gettin' well—
That's 'bout all there is to tell
Of this life, it seems to me,
All the way from A to Z.
Some one asks you, "How d'ye do?"
An' you've only got jes' two
Answers, if the truth is told—
"Gettin' well" or "catchin' cold."

When your throat is feelin' sore
And your head begins to roar,
Then you know that if you wait
Patiently, you'll feel first-rate.
An' you know, when free from pain
You'll be catchin' cold again.
That's 'bout all there is to tell—
Catchin' cold and gettin' well.

—James Whitcomb Riley.

Some Suggestions Regarding The Treatment of Constipation

George Henry Heald, M.D.

WITH all the "sure cures," in the way of patent medicines, special treatments, dietaries, and appliances, there are yet many persons suffering from the results of more or less obstinate constipation,—some through sheer neglect, others because occupation or circumstances are unfavorable, others through ignorance of proper methods of cure. Some, as the result of the abuse of purgative drugs and continual neglect, have come to the place where they regard themselves incurable, and rely on occasional relief by means of some more or less powerful drug.

We desire in this article to encourage such sufferers in the hope that they can do much to relieve themselves of this condition, even when, through years of neglect, it has become very obstinate.

Causes

Dr. Boas, a well-known European specialist on disorders of digestion, in his work on "Diseases of the Intestines," in the chapter on Habitual Constipation, says, concerning the alimentary variety: "It owes its origin, no doubt, to a perverted or insufficient diet. It is especially observable among the higher classes, where there exists a very obstinate preference for what is called a 'nourishing diet' (meat and fish), or, in general, for very easily digested food."

But while concentrated foods are undoubtedly responsible for a large proportion of the cases of habitual constipation, there are other important causes, such as laxness of the abdominal muscles through sedentary occupation and lack of exercise, irregularity in time of meals, failure to answer nature's calls, and hereditary tendency.

One prolific cause of very obstinate constipation, due to the fact that the unnatural stimulation produces a deadening effect, is the use of laxatives or pills, whereby a temporary constipation or a tendency that way is rendered permanent and intractable.

No cure can be effectual unless all purgatives and laxatives are discarded, as these render complete and permanent cure all the more difficult.

For a similar reason the routine use of the enema must be dispensed with; though its occasional use in beginning treatment, to remove impacted or poison-producing matter, is quite often necessary.

Dietetic Treatment

Provided there is no severe stomach trouble and no diabetes present, the dietetic treatment of constipation is simple, and in most cases quite effective. The food should be plentiful and rich in woody fiber. Though fiber is indigestible by the human species, it is a most important aid to the digestion of other foods.

Rabbits deprived of the fiber in their food soon lose health and die, even though their food still contains all the nutritious elements. Other rabbits having similar food, with the addition of horn scrapings, maintain their health, the horn scrapings taking the place of the vegetable fiber, and keeping the intestinal canals of the animals in good order.

The following-named foods contain

an abundance of coarse fiber: cabbage, cauliflower, the root vegetables, string beans, in fact, nearly all the vegetables and fruits, also the whole grains, and bread made from the whole wheat or from Graham and coarse rye flours or from unbolted corn-meal.

The Japanese agar-agar, a vegetable gelatin prepared from seaweed, when used in foods as ordinary gelatin, is, because of its mechanical effect, a remarkable laxative for the bowel. It is in no sense a drug. It should be chopped up fine and boiled several hours before being added to other food.

The sugars, as a rule, are laxative; hence fruits, honey, sirups, dates, figs, bananas, and other fruits are important additions to an anticonstipation diet. Cake is more laxative than white bread. Milk, especially when cold, is laxative, partly because of the sugar it contains.

The organic acids have a marked laxative action. Here again we note the great efficiency of fruits, which have the triple advantage of being fibrous, and of containing sugar and organic acid.

A few fruits have more than sufficient tannin or other vegetable astringent to counterbalance the laxative effect of the fiber, acid, and sugar; such, for example, as quinces, pears, blackberries, and huckleberries. It is probable that the sugars are laxative partly because they are, to a certain extent, converted into organic acids by fermentation in the stomach and intestines.

Buttermilk, kumiss, and whey, on account of the lactic acid which they contain, are good laxatives.

Cold drinks are much more efficient than warm; hence, for the best effect, the above-named drinks should always be taken cold. Cold sweetened lemonade and cold fruit soup are excellent. The practise of drinking largely of cold water on arising and before retiring is excellent.

A pudding made by mixing clean bran and New Orleans molasses to the required consistency and baking in the oven, is very efficient when cut up into two-inch squares and served, one piece with each meal, or as may be necessary to secure effect. The efficiency depends on the coarseness of the bran and on the acid and sugar in the molasses. One should, however, as soon as possible, discard this more vigorous measure for milder laxative foods.

Foods which should be avoided as having a tendency to increase constipation are: white bread, tea, cheese, quinces, pears, blackberries, and huckleberries, also farina, rice, and barley, and flesh foods and fish.

Treatment by Exercise

Exercise, especially of the abdominal muscles, is an important aid in the cure of constipation. Rarely is there a case of habitual inactivity of the bowels where the abdominal muscles are not more or less flabby.

Walking is probably the most universal and most general exercise, increasing, when properly taken, the tone and vitality of the body more than any other exercise. In these days of street-cars and "autos" and elevators, and I might also say of bicycles, we walk altogether too little.

But a walk, to be effective, must be energetic. It must be taken with a purpose, with tense muscles, high chest, erect head, springing step, and deep breathing. Shambling along at a careless gait is no exercise at all.

Exercise in Bed

The following exercises, intended especially for the development of the abdominal muscles, may be taken evening and morning, either on the bed, on a couch, or on the floor. They should be repeated until one is moderately tired, the number of repetitions being in-

creased from day to day as the strength increases. If the hands are placed on the abdomen during the lift, the muscles will be observed to become very tense, showing that they are being called into vigorous action: —

1. Lie flat on the back, with hands on the hips, thumbs to the back. Raise trunk slowly to sitting posture, and slowly settle back to the horizontal position. Repeat the exercise till slightly tired.

2. Same position as in exercise 1. Raise the limbs slowly to a vertical position without bending the knees. Slowly lower to position. Repeat till slightly tired.

3. Walking on all fours (sometimes called the "Nebuchadnezzar exercise") is valuable. Rowing is an especially valuable exercise in the cure of constipation.

These exercises, to be of permanent benefit, must be kept up, not for a few days, but for weeks and months. In fact, the person of sedentary habit must change to a more active life. The greatest difficulty in the cure of constipation is the patient's tendency not to persist in rational methods until a cure is effected; it is so much easier to take a little purgative.

Massage

Massage of the abdomen is practised with excellent results by experienced masseurs; and with proper rollers or by means of a six-pound cannon-ball, one may do quite efficient work at self-massage. The massage acts more for immediate effect; the abdominal exercises, for permanent effect.

Electricity

For self-treatment, where it must be long continued because of a previous abuse of laxatives, Faradic electricity is a most efficient remedy, one electrode being applied to the abdominal wall, the other, preferably a hollow electrode by which water may be injected to distend the intestine slightly before applying the current, being inserted well up to the lower bowel. The outer electrode is a handle sponge, which may be carried gently but deeply down into the abdominal tissues, in a way to combine the electric treatment with massage. This treatment is best given by a skilled attendant; but where it must be continued for a considerable period, the patient whose means will not permit him to continue paying for treatment may, by observation and instruction, learn how to treat himself by means of a home-battery outfit.

The Unrecognized Value of Raisins

By C. Cristadoro.

[We are pleased to give space to this article; for we believe that the raisin could with advantage be used more freely than it is; but we fail to understand how a raisin containing five per cent protein, added to a flour containing from eight to ten or twelve per cent protein, can increase the percentage of protein in the bread. If our arithmetic is right, it will rather lower it. However, it is not probable that the amount of raisins added ordinarily to bread makes a very material change in the proportions of protein and carbohydrate.— Ed.]

INCORPORATED with bread, — raisin bread,— raisins constitute a valuable diet, and help out the meat problem. It is stated that the raisin contains nearly five per cent protein and over sixty-five per cent carbohydrates, and therefore is a very important energizing food. The raisin has long had its place in the household,— one day in cake, another day in pudding, and frequently or otherwise to end the meal, with nuts as a companion. The digestibility of the raisin has commended it in the eyes of the intelligent physician because of the peculiar solubility of the grape-sugar content.

Until the California farmer and fruit-grower experimented with the raisin grape in the early fruit-growing days, the Malaga raisin was the standby in the market. We knew no other. But the farmer on his California fruit ranch, with the irrigating ditch to rely upon, soon developed the raisin grape to perfection. Then followed the drying, or curing, of the grape under the sun's rays, and the invasion of the market.

The evolution of the raisin industry was marked and steady, the output increasing each year, until last year it was estimated at two hundred eighty million pounds.

The farmers in the valleys were growing more grapes and producing more raisins than the country needed, and the storehouses and grocers each fall had a good supply of the last year's crop unsold. The raisin producer was keeping so much ahead of the demand that when his new crop was ready to harvest and put upon the market, it was almost impossible to secure a living price for the new goods because of the hold-over of the previous crop. The only solution of the problem was either to raise fewer raisins or, by educating the public, to enlarge the market. Many methods were tried, and proved successful, the persuading of housewives to use raisins in their bread enlarging the demand perhaps more than any other.

Raisin bread, on first thought, may seem to be just a dietetic fad, but it is not so. The raisins add to the nutritive value of the bread. When you consider the fact that the soft wheat flours in many cases contain only seven per cent to eight per cent protein, the approximate five per cent present in the raisin certainly gives it great importance, comparatively. But when you select a hard, glutinous wheat flour, one rich in protein, the lean meat of the wheat, containing twelve per cent and upward of

gluten (as does the flour from the durum wheat introduced into this country some ten years ago by Secretary Wilson), you get a food that assumes a very important place in the dietary, now that the meatless diet is being more seriously considered.

For invalids and children, raisin bread is valuable. The simplicity of the loaf makes it an ideal substitute for the lard-, butter-, sugar-, egg-, cream-, and citron-laden cake. It is, therefore, an important addition to the domestic menu, and the woman who has her children's health at heart will see that at each baking, two or three loaves are well filled with raisins, kneading them in just before the loaves are put into the pans.

Those who have studied the raisin-bread question in a scientific way, advocate grinding up seeded raisins into a pulp, and working it into the dough. But raisin pulp is perhaps the stickiest of substances, being filled with grape-sugar; and to incorporate dough and pulped raisins thoroughly is a problem for only the most skilled and ingenious housewife.

But when raisins, ground and reduced to a pulp, are worked into the loaf, the raisin is completely lost in the crumb of the loaf. Such a loaf, instead of being white, is a rich-brown color, really raisin color throughout. Carefully scan the crumb, and although it is sweet and with a delicious cooked-raisin flavor, not a suspicion of the smallest part of even the skin of a raisin is in evidence, the fermenting process and the heat of the oven having perfectly done the work of incorporation.

How much flour and how many raisins should go into a loaf is more or less a matter of taste, some using one-fourth pound of raisins to each pound of flour, and others using more. Each one must judge for herself. When experimenting with the pulped (ground) raisins, a bread sponge might be set overnight, the raisins being added, and the results noted. The addition of the dry flour in the morning might solve the kneading problem. If the physicians who advise the use of raisin bread are correct, the incorporation of the ground raisin pulp with the dough is even superior to the whole, seeded raisin.

But the fact stands that a loaf of raisin bread, made from a good, strong, glutinous flour, takes its place on the table with the most nourishing of foods, exceeding meat in the matter of digestibility, and in fuel value.

If there are children in the home, by all means see that the bread-box is never without its loaf or two of the toothsome raisin bread.

Effects of Water Applications on the Circulation

George K. Abbott, M.D.

[Comparatively little is popularly known and appreciated of the value of hydrotherapy, or "water treatment," in the management of various bodily disorders. The writer, in reading Dr. Abbott's manuscript for his forthcoming book, thought he could render the readers of LIFE AND HEALTH no better service than to give brief quotations therefrom, showing the potency of water in changing various bodily conditions.[1] In these extracts no attempt is given to outline treatments, but to show the value of hydrotherapy. It is expected that selections will be given later, showing the influence of hydrotherapy on the nervous system, on the composition of the blood, and on the muscular efficiency.— ED.]

DURING health the blood-vessels of the body are not of a constant, unvarying size, but are in a state of continual change, dilating and contracting alternately, about once every minute. As contraction occurs, the blood is forced onward. When dilatation takes place, they again fill with blood, which is sent onward by the next contraction. This pumping action of the blood-vessels is so powerful, and is such an important factor in the circulation, that the smaller vessels, as a system, have been called the peripheral heart, or skin heart.

If the nervous control of the blood-vessels is interfered with,— that is, if the vasomotor nerves are paralyzed,— the blood-vessels dilate, and remain dilated. This causes them to be overdistended with blood that has only the force of the heart-beat to push it along. The slower circulation which results causes the part, say an arm or a leg, to become dusky in color, and cold. This is what occurs in paralysis, such as follows apoplexy. Somewhat the same condition, namely, a weakness or paresis of the blood-vessels, is found in neurasthenia, dyspepsia, infectious diseases, and fevers. The failure of the blood-vessels to perform their part of the work of the circulation throws an added burden on the heart. For this reason, the heart works under much stress and at a disadvantage, but may not itself be at fault. Many cases of so-called heart failure are in reality failure of the vasomotor mechanism, and not primarily of the heart.

There are many ways in which the work done by the peripheral heart may be increased in efficiency, or restored to normal when deranged. All sorts of applications to the skin excite contractions in the blood-vessels, so that the usual rhythmic changes in size occur more rapidly or are greater in extent. Each kind of application, however, is conducive to different degrees of contraction or dilatation, and so to different end results. It is these changes occurring in the blood-vessels which constitute circulatory reaction.

When cold water is applied to the skin for a brief space of time, and especially when accompanied by friction, the skin becomes reddened with an increase of bright-red blood. This is due to the vigorous pumping action of the blood-vessels. The circulation being hastened, the venous blood is rapidly replaced by fresh arterial blood. The cold and friction, through the vasomotor nerves, stimulates the blood-vessels to more rapid and extreme dilatation and

[1] Taken partly from the manuscript of a book on hydrotherapy for nurses, now in preparation by the Review and Herald Publishing Association, Takoma Park, D. C.

contraction. This condition of the blood-vessels is known as active dilatation, and the resultant change in the vascularity of the part is known as active or arterial hyperæmia, because arterial or freshly oxygenated blood predominates.

Hot applications produce results differing essentially from the conditions noted above. At first, the changes appear to be much the same, since the blood-vessels are excited to greater activity; but as the hot application is prolonged, the blood-vessels tend to remain dilated, and the pumping action is lessened. While with the cold, the blood-vessels are excited to dilate and contract vigorously, with heat the dilatations become greater and the contractions less and less as the application is prolonged. The blood accumulates in the dilated capillaries and veins. This results first in a redness of the skin, but later in a duskiness, because the circulation is slowed instead of hastened, venous blood predominating. The relaxed condition of the blood-vessels is known as atonic or passive dilatation, and the stasis of blood which results is known as passive hyperæmia.

When the cold application is intense, such as the prolonged use of an ice-bag, a condition results which is the opposite of that produced by prolonged heat. The blood-vessels are at first stimulated to alternate dilatation and contraction, but the dilatations become less and less, while the contractions increase in vigor until a state of constant vasoconstriction results, the blood-vessels becoming very small in size and the skin blanched from absence of blood. In this condition the reaction is suppressed by the prolonged and intense cold of the ice.

When the body is immersed in a bath of cool salt water, charged with carbon-dioxid gas, the blood-vessels are very powerfully stimulated. Such a bath as this is known as an artificial Nauheim or effervescent bath. A defective heart, beating rapidly and working under adverse circumstances, may be so effectively assisted that its rate will decrease from ten to twenty-five beats a minute, and it assume an easy, steady movement. The change for the better in such a heart, with this treatment, is often astonishing, and needs to be seen to be appreciated.

DON'T'S FOR WALKERS

Mary Alden Carver

If the most pleasure and profit is to result from attempts as a pedestrian, the following "don't's" should be remembered: —

Don't eat too much before starting upon an expedition.

Don't attempt to walk five miles until positive that two are not unduly fatiguing.

Don't try to walk when short of breath. Halt every time there is the slightest difficulty in respiration, especially when climbing slopes.

Don't start upon a walk while wearing untried shoes; be sure the shoes will not chafe nor otherwise hurt the feet.

Don't depend on instinct for directions, nor venture into the woods without a reliable compass.

Don't bring forth a kodak and begin to take snap shots at the very beginning of an expedition. Save the films or plates for views that are really worth while.

Don't gather up a worthless accumulation of souvenirs, nor become cumbered with perishable material.

Don't forget to observe closely any particular object or landscape that makes a particular appeal.

Don't venture into a field or meadow without positive assurance that no vicious animals are pastured there.

Don't handle plants unless reasonably certain that they are not poisonous.

Don't forget to be on the lookout for poison-ivy.

Don't forget to rub a little vaselin into the lips before starting upon a walk. It will prevent chapping, cracking, and cold-sores. It is also well to safeguard the complexion by carefully dusting talcum powder over the face from time to time.

Don't neglect to make careful notes of anything that particularly attracts your notice.

Don't step upon old logs or boughs unless certain that they will support the weight of the body.

Don't run down steep hills. One is apt to strain an ankle or be seriously injured by a fall.

Don't eat too many cherries or berries or any other dainties that may be found upon the route.

Don't forget to apply towels wrung from hot water to the face immediately upon the return home if the face has been burned by the sun, or if there is a feeling of fatigue. After walking in the hot sun or dust, the hot-towel process is a most desirable treatment for the improvement of the complexion. Follow the hot towels by the application of cold ones, after which, some good cold-cream should be well rubbed into the skin.

HEALTHFUL COOKERY

MELONS, BANANAS, AND PINEAPPLES

George E. Cornforth

MELONS are among "the most ancient and luscious fruits." The cantaloup derives its name from Cantalupo, a seat near Rome, belonging to the Pope, where it was first cultivated in Europe, having been brought from Armenia by the missionaries.

FOOD VALUE PER OUNCE IN CALORIES

PRO.	FAT	CAR.	TOTAL
.7	..	10.8	11.5

To Prepare Muskmelons for Serving

The rough rind should be scrubbed with a brush, rinsed, and wiped. Then the melon should be buried in crushed ice, or put in the refrigerator. To serve, divide the melon into halves or smaller sections, cutting lengthwise from end to end. Remove the seeds, and serve surrounded with ice. It is better not to put ice upon the flesh, as this injures its delicate flavor.

The Watermelon

FOOD VALUE PER OUNCE IN CALORIES

PRO.	FAT	CAR.	TOTAL
.5	.5	7.8	8.8

The watermelon, as its name indicates, consists mostly of water, and contains little nourishment; but when the melon is sound and ripe, this water makes an excellent drink. It is nature's pure, distilled water.

The watermelon is of very ancient culture. In 1574 Rauwolf found it in the gardens of Tripoli. It is cultivated in most dry, hot parts of the world on account of its abundant, refreshing juice.

To Serve

Watermelon should be served very cold. After being well washed, it should be put on ice till needed. Cut the melon in two in the middle, then cut each half into quarters or smaller pieces lengthwise. Or the central portion of the melon may be taken out with a spoon in cone-shaped pieces, and served on a plate with bits of crushed ice.

The Fig

FOOD VALUE PER OUNCE IN CALORIES

Dried figs —

PRO.	FAT	CAR.	TOTAL
5.0	.8	86.1	91.9

The fig-tree is honored by being mentioned earlier in history than any other tree. The Scriptures speak of the use of its leaves in the garden of Eden, and, like the olive and the grape, frequent reference to the fig is made all through the Sacred Record. It seems to have been one of the staple articles of diet, and to have been classed among the most desirable products of the earth; and to-day dried figs, with barley bread, are the ordinary food of the lower classes in Greece and the Archipelago. Fresh figs are neither so delicious nor so much nicer than the dried as one might suppose. They are not very sweet, and are generally a disappointment to those tasting them the first time. Figs are a wholesome and nutritious food, and are also a valuable laxative.

Steamed Figs

Carefully look over and wash the figs, then steam them for fifteen minutes.

Fig Marmalade

The steamed figs may be run through a food-chopper with the finest cutter, or may be put through a nut-butter mill, when the seeds as well as the pulp will be ground to

a marmalade. Nuts and figs ground together in this way make a palatable and nutritious food, and may be pressed into a cake and cut into squares.

Stewed Figs

Carefully look over and wash the figs, and cut off the stems. Put them to cook in cold water, and stew slowly for half an hour, or till tender.

The examination of raw, dried figs under a microscope would convince any one that it is hardly advisable to use them without sterilizing in some way.

The Banana

FOOD VALUE PER OUNCE IN CALORIES

PRO.	FAT	CAR.	TOTAL
1.5	1.6	25.7	28.6

The plantain and the banana are similar tropical fruits, and have been cultivated for centuries in the tropical and subtropical parts of Asia, Africa, America, and the islands of the Atlantic and Pacific oceans. Most varieties of the plantain are larger than the banana, and the pulp is coarser. It seems not so well suited to be eaten raw, and is usually cooked. It is exported to a very small extent only, and is seldom seen in northern climates. Its specific name, *Musa paradisiaca,* was given under the supposition that the fruit of the plantain was the forbidden fruit of Scripture.

Like the plantain, the banana is very productive, and requires little attention in cultivation. Each plant grows from ten to twenty feet in height, has great leaves three or four feet in length, and produces, in one bunch, from seventy-five to one hundred or more bananas. After bearing one bunch, the stalk dies, but other shoots spring from the same root, each of which bears one bunch, and dies. A field once set out to bananas will produce fruit for many years. The plants are not usually raised from seed, but the shoots are set out in rows.

According to Humboldt, a plot of one thousand square feet, which will yield thirty-eight pounds of wheat or four hundred sixty pounds of potatoes, will produce four thousand pounds of bananas, and in a much shorter period of time. The banana is more nutritious than most fruits, but its nutritive value is often exaggerated. It is sometimes said, for instance, that one pound of bananas equals in nutritive value one pound of meat. The nutritive value of lean meat is —

FOOD VALUE PER OUNCE IN CALORIES

PRO.	FAT	CAR.	TOTAL
26.2	7.4	.0	33.6

From this it is seen that the total nu-

BANANA SALAD

tritive value of the banana approaches that of meat, but its nutritive constituents are of a different character, being mostly carbohydrate. One could not substitute bananas for meat, as the statement referred to might suggest would be possible, for they contain but little of the proteid food element.

The banana contains more than one third as much nourishment as bread, but it contains only one half as large a proportion of the proteid element. The unripe banana contains considerable starch, and is unfit to eat raw; but in countries where it grows, the green banana is used, being cooked much as we cook potatoes. Unripe bananas are often dried, and eaten as bread. They are also made into a meal, or flour, which is used just as we use wheat flour in making yeast bread, biscuit, dumplings, etc., and in thickening soups, stews, and gravies; in fact, it is used for everything for which we use wheat flour. It is darker than wheat flour, and makes darker bread; but the taste of the bread does not differ from that of wheat bread.

Bananas are picked very green to send to this country, otherwise they would spoil before we get them. For use where they are grown, they are allowed to become nearly mature, but are picked when ready to ripen, except for home use, when they are sometimes allowed to ripen on the plant; however, as ripe bananas spoil so quickly, they can not be allowed to ripen on the plant if they are to be sent to market. They are, of course, sweeter and nicer when allowed to become mature on the plant than they are as we get them.

The part of the banana next the skin contains considerable fiber, or cellulose, and an acid. These cause the fruit to disagree with some people. For this reason it is well to scrape off this fibrous part next the skin before eating. Some persons are able to eat bananas when scraped in this way who can not eat them otherwise.

Bananas may be peeled, scraped, sliced, and served with cream, or they may be sprinkled lightly with sugar and then covered with orange juice. A dish of sliced bananas and sliced oranges mixed, with a little sugar sprinkled over each layer, is delicious.

To Serve

To serve bananas, cut off the ends, and pile the fruit in a dish with other fruits, such as oranges, apples, or grapes.

TO PREPARE PINEAPPLE

Baked Bananas, No. 1

Bake firm bananas with the skins on till the skins turn very dark. Serve hot.

Baked Bananas, No. 2

Peel the bananas, put them into a deep granite pie plate, sprinkle with lemon juice and sugar. Put a little water in the pan, and bake till tender. A little aniseed may be added if the flavor is liked. Instead of using lemon juice, currant, raspberry, or cranberry juice may be used.

Baked Bananas, No. 3

Peel the bananas, cut a slit in them lengthwise, and fill it with jelly. Dip the bananas into beaten egg, roll in crumbs, and put into a deep pie plate. Pour a little water into the plate, and bake the bananas till tender.

Banana Salad

Roll a strip of the peel from one end of the banana to the other, and with a toothpick hold the roll in place. Stick a row of blanched almonds or pecans into the peeled portion of the banana. Pull the peel away from the sides of the fruit, so as to make a small opening at each side. Fill these spaces with strawberry sauce made by slightly thickening strawberry juice with corn-starch. Place the prepared banana on heart of lettuce leaves.

Banana Whip

½ cup banana pulp (bananas put through colander)
3 tablespoonfuls sugar
2 teaspoonfuls lemon juice
Few drops vanilla
1 egg white

Mix ingredients and beat several minutes, or till stiff.

The Pineapple

FOOD VALUE PER OUNCE IN CALORIES

PRO.	FAT	CAR.	TOTAL
.5	.8	11.2	12.5

Pineapples receive their name from their resemblance to pine-cones. They do not grow from seed, but the top of the pineapple is set out. This grows, forming a bunch of long, narrow leaves, like those which form the "crown" of the pineapples as they come to us. In the center of this bunch of leaves one pineapple grows on a stalk, the whole plant becoming, perhaps, two feet high. After this pineapple has been produced, other shoots start out from the parent root around the bunch of leaves in which the first pineapple grew. These mature; then other shoots start out. Thus the plant spreads. In planting pineapples, these shoots may be set out, instead of using the tops of pineapples. Under cultivation, the plants are divided, and prevented from spreading. They are kept in rows, so that the ground between them can be cultivated. There are several different species, the Ripley pine being the best.

The pineapple grows wild in Mexico, Central America, Guiana, and Brazil. It is cultivated in the West Indies and in Florida, in Australia, the Hawaiian Islands, and other similar climates. To send to our climate, the fruit is picked green. When allowed to ripen before it is picked, it is sweeter, more juicy, and more tender than the pineapples we get in Northern markets, as mellow as a ripe peach, and the juice is more like sirup. The juice of the pineapple contains a digestive principle somewhat like pepsin; it is also an excellent gargle in diphtheria.

Where pineapples grow, they are so delicious that even the addition of sugar seems to detract from their flavor; but as found in our Northern markets, they are sometimes so hard and fibrous as to require cooking; and when they are mellow enough to eat raw, they usually require a little sugar.

To Serve

First slice the pineapple, then peel it, remove the eyes, and cut into small pieces. Sprinkle with sugar, and allow to stand in the refrigerator one hour or overnight.

THE MEDICAL MISSIONARY AT WORK

EXPERIENCES AT AN AFRICAN MISSION STATION

M. E. Emmerson

DURING the past year my time has been mostly taken up with work connected with the mission station. It has been necessary to do considerable repairing on the place. When we came to Kolo, the thousand yards of wall surrounding the mission grounds was much of it fallen down; and the first two years the sheep and goats, which run at large in Basutoland, ate most of our garden, besides doing damage to the vines and fruit trees. The dwelling-house was in such poor repair that when it rained, the water ran down the walls, and everything that it would damage had to be moved out from them. This made housekeeping difficult. Two other houses were weak, and showed signs of falling.

The dwelling-house has been substantially repaired inside and out, and the barn has been built in new on the weak side. About six hundred yards of good wall has been built, and seven hundred more is being erected. When this is finished, the place will be quite securely protected against the depradations of wandering stock.

The old church is so nearly gone that it is not worth repairing, so a new one is to be built, all of stone. Sufficient stone is cut to build a barn large enough to stall more than thirty cows and calves. We have been very fortunate in securing thirty head of good dairy cattle, to support a boarding-school; but last winter was one of the worst the country has experienced. The dry weather set in about midsummer, and kept up until it was too late for the grass to grow. In consequence, hundreds of cattle died, not only in Basutoland, but also in the Free State. The mission lost over twelve head of good dairy animals. This is a heavy loss, and we feel it keenly. Being new in the country, we did not know the uncertainty of crops; a lesson has been learned, and, though it was expensive, we shall try to make it worth the expense this year. It looks now as if this year would be just as dry as last; but we are prepared for it, as we have more than twenty-five tons of rough feed.

During the past year it has been necessary to enlarge the reservoir into which a spring from Kolo Mountain flows. The water-supply has not been strong enough to keep the garden fresh. The old reservoir held three hundred barrels of water; the new one holds approximately three thousand. This water-supply will enable us to raise enough green feed inside the mission wall to feed the cattle through the summer. It was a

IN THE SUBURBS OF AN AFRICAN VILLAGE

large task to undertake, as the reservoir had to be dug in solid stone. We believe these improvements will prove valuable in establishing the mission on a self-supporting basis.

Our cattle will support the school; and the school will raise up young men and women to carry the gospel of the soon-coming King to all Basutoland. It is not because we are engrossed in the affairs of the world that we are planning to place things on a self-supporting basis; our business is to preach the coming of Jesus; these other things we do to pay expenses. During the past year, the number of students has increased from thirty to fifty-five, and still others are coming.

The medical work has proved a valuable asset. During the past year, over two hundred persons came to the mission for treatment, and nearly all were successfully treated. To God's name be all the glory. This work has done more to convince the people that we are interested in their souls than all the rest that we have done. One old man, suffering from a bad cold, which had settled in his chest, said, when we offered to give assistance, "Will this white man help me with his hands?" We gave the treatment, which greatly relieved the suffering. The old man said, "You must surely be a Christian; I have never seen this kind of thing before."

Said another, after receiving help, "Well, we read in the Bible how Christ did this kind of work, but we never saw it before." This native was a member of the church.

Still another heathen said, "You are the kindest man that I have ever seen." I replied, "It is not I; for I am doing only what God has told me." Christian people, in doing acts of kindness, do them not on their own account, but obey orders from their great Leader. Not to be kind is not only ill-treating our fellow men, but also openly disobeying God's direct command. Pray that we may always follow the example of our great Leader in this respect.

MEDICAL MISSIONARY WORK IN NEW ZEALAND

Mr. and Mrs. H. R. Judge

OUR experience since leaving the training-school one year ago has been a very precious one, and has filled us with a deeper love for souls. On every hand the people languish on beds of pain, not knowing how to relieve their suffering, and the physicians, many of them, are at a loss to know what to do. We are continually meeting cases where the physician has failed, and given up hope, as the drugs administered have proved ineffective. It seems that the world is not only perplexed in regard to national life, but also in regard to physical life.

We have been in Napier nine months. The first day we arrived we secured a patient, and have been busy ever since. One woman who had been a sufferer for four years, after trying many things, took our treatments, and in one month was completely restored to health. She is continually trying to induce others to come to us. In a note written last evening she says: —

"DEAR MRS. JUDGE: Can you come to the house at 7:15 this evening? I have a patient to take you to at 7:30. Hope the time will suit. I have two other patients for you as well.

"Yours faithfully,

"M. B.——"

A number of our patients are working for us in this way. This shows their appreciation for help received. This woman, her family, and also a gentleman friend have adopted the health reform in their home.

We were called to Hastings, some fourteen miles away, to see a man who had been confined to his bed for three months, all this time under the care of several doctors. In a short time, with simple treatments, he was up and about and putting on flesh. This seemed to him almost a miracle. This man was the means of a chemist's consulting us concerning his twelve-year-old daughter, who had been under the doctor's care for five years. Now after four weeks' treatment the girl has improved so much that the parents think it wonderful, and are working to get us more patients.

One man who had us treat his little son for pneumonia, was so pleased with his rapid recovery that he was willing to listen to anything we had to say. From health talks we gradually passed to Bible topics, and both he and his wife have taken a great interest in the studies, and look forward to them. He holds the position of secretary of the court.

A young man next door to the case just mentioned, with whom I have been working for some months, is now gathering several families in his home for Bible studies. It is good to see the interest manifested by these people. They are also calling for cooking lessons, and we are planning to give them a series of studies on the subject of healthful cookery as soon as suitable arrangements can be made.

We are of good courage. How could we be otherwise when the Lord is working so wonderfully for us?

INDIAN QUEEN BELIEVES IN THE EFFICACY OF PRAYER

H. C. Menkel, M. D.

A MOHAMMEDAN lady ruler, whose son spent three months at the Mussoorie Sanitarium (India), made the following statement: —

"I am told that the workers of the sanitarium pray for the patients every morning, and that you especially pray for my son's recovery. I believe God hears your prayers, and I want to know the hour you pray, that I may pray at the same time."

This was quite a remarkable concession for a Mohammedan ruler to make to a Christian, and is a testimony to the value of Christian medical institutions where the intelligent class of Indians may be brought in contact with a strong Christian influence, under favorable conditions. This was further demonstarted a few weeks later, when her highness made the following proposition to the writer: —

"I wish you to come to my state, and conduct just such an institution as you have conducted in Mussoorie. I will erect a building, equip it with the necessary appliances, and pay all running expenses. Bring such workers as will be required, and settle among us, so that I and my people may have the benefit of your help."

The importance of this offer will be better understood when it is stated that this ruler had hitherto been unfavorable to Christian missions.

The Mussoorie Sanitarium exerts a favorable influence over many of the higher class Indians. It needs help to extend the scope of its work.

BUILDING A MISSION STATION ON THE ABYSSINIAN BORDER

SEED AND SOIL

AN old question which has always found advocates on both sides, and which is yet a bone of contention, concerns the relative importance of heredity and environment in the causation of disease. At one time heredity was thought to play an important, if not the most important, part in the transmission of tuberculosis. Later, with the discovery of the specific organism, opinion swung the other way, and it was quite positively asserted that heredity had practically nothing to do with the transmission of this disease. It was a case of infection pure and simple.

More recent study indicates that the solution to the question is not so simple. For illustration, let us consider the propagation of some plant, say wheat. One person, saying that in order to get the best results it is necessary to plant good seed, selects the best seed he can obtain, but pays little attention to the cultivation of his soil, fertilization, etc. Another person, seeing that this plan results in failure, says: "You have failed because you did not give proper attention to the soil. It is the soil, not the seed, that determines what kind of crop you will obtain." He prepares his soil with great care, fertilizes it, drains it, has it in the best condition, but plants a poor grade of wheat, and to his surprise obtains only an indifferent crop. What is the difficulty? — Both men were partly right and partly wrong, wrong enough to spoil the crop in both cases. They failed to recognize that both the seed and the soil are important in order to have a first-class crop.

This is a parable. The seed represents heredity, the soil represents environment, and in practically all diseases, both factors have an influence. Analogy would indicate this to be so. Observation confirms it. We know that the colored race and the native races are more susceptible to tuberculosis than are the whites; and, while the Jew easily contracts tuberculosis, he seldom dies of it, even under the most unsanitary conditions. On the other hand, yellow fever and malaria are much more severe on the whites than on the blacks. Careful family studies indicate that a tendency to insanity, or tuberculosis, or colds, or kidney disease, or rheumatism, is transmitted in families; that is, the history of a certain family will show that some particular disease is much more prevalent in that family than in some other family, and can be traced for generations where infection would not account for the fact.

As we study heredity in plants and animals, these facts regarding the transmission of disease tendencies are found to occur in accordance with the general laws of heredity. Characteristics are transmitted. Two red-haired parents will have red-haired children. If one parent has red hair and the other black, part of the children will have red hair and part will have black. The same with the eyes or with other characteristics. This is a matter of such common observation as to need scarcely any mention. Hereditary transmission is manifested all through the animal kingdom. Among the characteristics transmitted are defective or weak organs, susceptible to disease.

Of two families living very much alike,

one family will have almost constant colds and the other will never have colds. This is a difference in heredity, transmitted from one or both parents. Where both parents have a certain weakness, say of the lungs, this weakness shows itself in a much larger measure in the descendants than where only one parent has it.

In a recent bulletin of the American Academy of Medicine appears an article by Davenport on "Fit and Unfit Matings," from which I make the following pertinent quotation:—

"The controversy between heredity and environment has no good basis, and it is fallacious to emphasize the distinction. As well might one ask whether poor seed or poor climate is the more important in determining poor crops; both are important. Nevertheless, emphasis must be laid on the fact that, while poor climate brings heavy losses, there are strains that you can hardly kill by frost, or by drought, or by poor soil, or by the wilt parasite — there is such a thing as resistance in the blood, as well as, on the other hand, *susceptibility* of particular organisms to poor environment or to infection. Unfavorable environment collects its toll first from those who are, by heredity, least resistant."

What are we to learn from these facts? — First, we can not change our heredity. If we have hereditary weaknesses, it is especially important that we avoid the mode of life that will increase a tendency to these particular diseases. If dyspepsia is a family trait, one must be particularly careful regarding diet. If the mucous membranes are susceptible, it is necessary to be more than ordinarily careful in regard to taking cold, and the like.

Second, those who contemplate marriage should avoid partners having the same weaknesses as themselves. Two dyspeptics, two consumptives, two persons having a tendency to nervous trouble or mental disorder, should by no means marry, as the difficulties will be redoubled and perpetuated in their descendants.

What a Change!

DOWN at the Congressional Library, the writer chanced the other day on a treasure, an antique of the most approved type, yet only fifteen years old. It is one of the Smithsonian miscellaneous collections, entitled "The Atmosphere in Relation to Human Life and Health," by Francis Albert Rollo Russell. Some of the information given in this bulletin (note the date, 1896) is remarkable.

For instance: "Prolonged breathing of sick-room air is a most effectual means of infection by plague."— *Page 58.* "Cholera is to a great extent a disease of air-poisoning."— *Page 59.* "A large amount of evidence is accumulated which goes to prove that summer or infantile diarrhea is caused by the infection of air and food by emanations from a damp or generally contaminated soil raised above a certain temperature." — *Page 60.* "The mode of entrance of typhoid is through the air and water contaminated with the products of intestinal discharges. Although bad water accounts for a large number of cases, bad air and emanations of drains through defective traps and waste-pipes, infect in very many instances."— *Page 61.*

"Malaria depends on the emission of living organisms, probably amebiform, from warm, damp soil, rich mold, sand, or other suitable ground containing a little organic matter. . . . Sometimes, though rarely, rocky surfaces emit malaria, but probably the habitat of the organisms in these cases is in clefts or disintegrated rocky detritus. . . . The efficiency of the attack on the human body depends in great measure on the concentration of the organisms within a few feet of the surface of the earth in the evening hours."— *Pages 62, 63.* It seems strange, now we know it, that they could not see that the conditions

favoring malaria were those which favor the growth of certain mosquitoes.

"Yellow fever . . . thrives on damp, organic, contaminated soil and walls of houses, and on wood of ships in foul holds. It haunts the vicinity of drains, banks of rivers occasionally dry, and crowded rooms or houses. . . . The living cause of the disease clings with great tenacity to ships, walls, etc., for a long time, and is conveyed in very many instances by the air to persons who approach the infected object."—*Page 63.* This would read fairly well if he meant by "the living cause of the disease" the stegomyia mosquito.

And so the list might be continued. We ask, Is it possible that fifteen years ago scientific men did not know better than this? When such matter as this was put out as scientific, is it a wonder that we knew practically nothing about preventable diseases, and that we supposed the first law of health was ventilation?

We know that it does no good to oxygenate the air if we leave the rats and fleas alive in a plague epidemic, or if we neglect the mosquitoes in a yellow fever or malaria epidemic, or if we disregard the water-supply in a cholera epidemic.

In a few diseases we have established a definite cause and a definite means of transmission. We still talk about moldy corn as the cause of pellagra, as we talked about the miasma causing malaria. In a generation or two we may accept as scientific the insect cause of pellagra, and place this among preventable diseases.

The writer above quoted has a special antipathy against low, marshy places. It in his bête noire. Regarding colds he says: "It would appear as if the organism, or one species of organisms, which sets up a sore throat or severe cold inhabits the upper layer of the earth, and especially in damp, musty places where decaying vegetable matter abounds, and passes into the air, especially in summer and autumn evenings, when the earth and water are still warm and the air is rapidly cooling." And much more to the same effect.

Thanks to our laboratory workers (I hope I shall not offend our antivivisection friends), we are ceasing to guess in this offhand style, and are learning, carefully and slowly, but *learning*, the exact cause of many of these diseases which fifteen years ago were the subject of vague guesses put out in a Smithsonian Institution bulletin as authoritative.

Bless and Be Blessed

THERE are one hundred twenty thousand babies in institutions in the United States. Of these, fifty per cent die. The mortality rate is always high in institutions, which at best can not furnish home conditions for the babies.

On the other hand, there are thousands of childless couples, who perhaps know not how much they lose of life. No home can be a true home if there are no children. Childless couples are not always so from choice.

What a blessing it would be for each childless couple to adopt some motherless waif. The child would be blessed with a home, and it would make a home of what had formerly been only living quarters.

As Portia says, Mercy is twice blessed. It blesses the receiver, and it blesses the giver. If every childless couple would adopt a homeless waif, there would be far fewer institutional children to die in infancy, or to grow up with no knowledge of home life.

AS WE SEE IT

A Marine Sanitarium

THE overworked or unstrung man or woman may find in an ocean voyage the means not only of recreation in the ordinary sense, but also of re-creation in the primary sense of the word. Provided one is not susceptible to seasickness, such a trip may be made a season of complete rest, if need be, or there may be interspersed sufficient diversion to break the monotony.

There is, of course, the temptation to engage in certain activities neither restful nor beneficial. But one who knows how to avoid harmful indulgences may find in the ocean voyage the practical equivalent of a course of sanitarium treatment.

The one thing lacking is careful medical advice by a physician who has studied the case carefully, who understands the idiosyncrasies and the susceptibilities of the patient as well as his likes and dislikes, and who, from a careful study of all the circumstances, knows how to prescribe what will be agreeable and yet for his best good.

It would seem to the writer that a floating sanitarium, cruising in comparatively smooth waters in a scenic region, not too close to the attractions of the great cities, and not supplied with wireless apparatus, or tickers, or other paraphernalia for wrecking brain-cells, and having on board no bar nor gaming-tables nor other appurtenances of the public house,— that such a sanitarium, fitted for giving the various sanitarium treatments, under the charge of a competent physician, ought to furnish to nervous patients able to pay for it an ideal cure. Cruises could be made to the north or south according to the time of year. The Alaskan coast would, on account of its extensive inland passages of smooth water, varied scenery, and tonic air, afford one excellent cruising-place, and it would be well out of the way of the temptations of civilization.

The motive power of such a sanitarium and its coal bills might be comparatively small. In fact, the vessel might be built without machinery, and be moved entirely by means of a tug-boat; for speed would be a matter of minor importance. This would prevent the jar and noise of the engine. Such a vessel could be built wider in proportion to length and depth than the ordinary steamer,— on the principle of the flat-boat, in fact,— though careful attention should be given to the shape; for an unshapely vessel would not be a success.

A vessel built with special reference to the convenience of patients, and with all the appurtenances of a modern sanitarium, under the medical guidance of the proper personality, would meet, it seems to the writer, with certain success.

It would furnish the fresh air, the change of scene, and the rest of the ordinary steamer voyage, and, in addition, it would furnish the medical care and the specialized treatment and diet of the modern sanitarium. The absence of barroom and smoking-room would be a help to the patient desiring to get away from old associations.

Legal Maxims A LEGAL gentleman at the British Temperance League gave the following among other legal maxims which have a direct bearing on the temperance cause. The first three are from Justinian: "A man should live a reputable life;" "He should do injury to no man;" "He should render to every man his due." How could the drinker comply with these: "The safety of the people is the supreme law;" "Where there is a wrong, there is a remedy;" "He who takes the benefit should bear the burden;" and "He who comes to equity should come with clean hands"?

Legal Control of Liquor THIS lawyer made an argument which is a defense of prohibition. Laws, said he, in substance, should go ahead of public opinion. Cock-fighting and other old practises, which all now recognize as evil, were abolished in this way.

There is now in democratic England more of a tendency to enact no laws that are not recognized as needed by the great majority of the people; but when they are enacted, they are enforced. The law and the men who administer the law are here held in greater respect than in the United States.

The tendency of the reformer to lobby a bill through Congress, whether on temperance or on Sunday observance, when the law does not have the approval of the vast majority of the people, weakens respect for the law, and makes our government more comparable to the South American republics than to the more stable government on this side. Ostensibly, ours is a government of the people, for the people, and by the people; but in fact, some of the laws clamored for by reformers are decidedly *not* by the people. There is no short cut to reform. We can reform people only as we teach them the better way.

Temperance Clubs THOMAS WHITTAKER, M. P., is a stanch temperance worker, who has little use for the pleas customarily made for moderate drinking. "There never has been a country," says Mr. Whittaker in an address before the British Temperance League, "where the use of liquor was general, in which there was not also the abuse of liquor." "The friends of liquor are themselves weakening. A few years ago it was thought that liquor was necessary for health. Now no man who is at all intelligent will assert that liquor is essential. The most claimed for it is that in moderate quantities it is a harmless indulgence."

Mr. Whittaker finds that the reduction in the number of public houses has caused an increase in the number of clubs which maintain their expenses by the liquor sold. The clubs, according to Mr. Whittaker, have many excellent features. They furnish companionship, and a place where the workman may go to get away from the poor accommodations of his meager home. But to attend the clubs, one must drink. Mr. Whittaker proposes the establishment of free clubs, convenient to the homes of the poor, furnishing diversion, companionship, etc., for the poor man, but without the liquor. Such a club was established during the winter in Birmingham. The public baths were secured, and a temporary floor was laid. In this improvised place, comfortably lighted and heated, there were various games, with music and other attractions. The club proved very popular with the class of men who ordinarily would attend the public houses or the drinking clubs, and undoubtedly lessened the consumption of liquor. It is not the liquor that attracts men to the clubs. They often take it only to secure the privileges of the club. In reply to a query as to whether he would dispense tea and coffee at the

club, Mr. Whittaker said: "Tea and coffee are a delusion. As soon as a man becomes a teetotaler, *he does not want them.* You may begin your clubs with tea- and coffee-rooms, but your keepers will soon ask to have them discontinued, on the ground that they do not pay." It was refreshing to hear such a straight testimony for true temperance from a member of Parliament.

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The Control of Liquor in England

PROHIBITION is not an issue here. The respect of the English for "vested rights" is too strong to permit of such a method of dealing with the liquor question. Liquor is being controlled to some extent; there is less drunkenness than formerly, but the work has only begun.

When the temperance movement began, it could count among its advocates very few men of prominence. Now it has some of the most prominent physicians and public men as enthusiastic workers.

Since scientific men have so clearly proved that alcohol, even in what has been supposed to be moderate use, is always injurious, the effort is being made all over the kingdom by the friends of abstinence to have instruction regarding the effects of alcohol introduced into the school curriculum. If the enthusiasm of the teachers can be enlisted; if they can be made to see the importance of teaching this subject, not as a matter of dry bones, but as a live issue, there is no question that the pupils will grow up, in the large majority, favorable to abstinence.

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Temperance in the British Army

SURGEON-GENERAL EVERT is a stanch friend of the temperance cause in Great Britain; and largely through his efforts, the army is composed principally of abstainers. Fortunately, the medical staff is not hindered in its work by needless red tape. Carrying a commission from the king, the surgeon is expected to do whatever will be for the health of the soldiers. There are two divisions of medical men, those engaged in preventive measures and those engaged in curative measures. The medical men in the army, who are preventive men, have always taken the temperance side; but it is only in recent years that the officers have heartily seconded the work of the medical men.

The work of prevention has been carried on along different lines. First, temptation has been removed as far as possible. Second, diversions and amusements of various kinds have been provided, so that the men would not be under the necessity of seeking these in the public houses. Third, an educational campaign has been conducted, in which the men are carefully instructed as to the effects of alcohol.

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Teach the Young

THERE are some very stanch temperance men in England in the highest circles; and so far as I have heard them express themselves, these men have had temperance, or rather total abstinence, taught them in early youth.

It is sometimes possible to reform the drunkard. The fact is so patent to him that he is ruining himself that he is willing to make any sacrifice in order to be free; but the man who is a "moderate drinker" or an occasional drinker, and who with his drinking can still keep up his respectability and do his work,—whether he be laborer or engineer, doctor or clergyman, it is almost impossible, with the most convincing scientific proofs or with the greatest wealth of statistics, to convince him that alcohol in moderation is hurtful.

As one clergyman, a temperance worker in London, said in a talk at the Imperial Temperance Congress: "It is

not a matter of convincing the intellect only; there is a moral element involved that prevents a man who might readily assent to a new truth in engineering or mathematics from accepting a truth which would mean self-denial to him."

The hope of the temperance cause lies in the educational propaganda; but this must, to accomplish any real good, be directed to the children. The most intelligent or the most unintellectual, the most refined or the most degraded, if they have grown up using a moderate amount of alcohol, can scarcely by any means be taught the value of abstinence.

Amusements for the Young

MRS. CHARLES HENRY ISRAELS, of the committee on amusements and vacation resources, New York City, asserts that the problem before us is not to keep young people from amusement. They are looking for amusement, and there are commercial interests which see that they have it. The problem of the social worker is to provide for the young in all our cities, large and small, amusements that will prove as attractive as the amusements provided by the commercial enterprises. It is a question of furnishing the best of everything, and of eliminating the evil.

Working not for the comparatively small number who through Christian home influences are kept from questionable amusements, but for the much larger number who have no such restraining influence, Mrs. Israels is an earnest advocate of dancing for the young. The great majority of the girls and boys of the city, as one finds them, *will* dance. It is only a question as to whether or not they shall have a decent place to dance in, and whether in the matter of music, lights, etc., everything shall be the very best.

To some of us who have not rubbed up against the snares and pitfalls of a great city, and even of the smaller cities, such a proposition as a dance-hall to save boys and girls may appear radically wrong. But before we criticize, let us examine existing conditions a little more closely.

In many cities there are dance-halls where boys and girls go night after night, where drinking is encouraged, in fact, is obligatory, and where worse things are winked at by the proprietors. New York City has five hundred such halls, Philadelphia and Chicago each two hundred, and your own city, if it has a population of ten thousand, most certainly has one or more of these pitfalls for youth.

Mrs. Israels believes that there are just two ways to meet the issue,— to provide counter-amusements under the best conditions, and to secure legal control by the city of the commercial enterprises. Her experience is that every effort to substitute the dance-halls with glee-clubs, lectures, and the like, eventually meets failure. These substitutes do not hold the young folks.

Socializing the Farm

AT the Playground and Recreation Association meeting, Prof. L. H. Bailey urged that there be more community life in the country. Representative Kent said that in the West, in order to have such community life, it would be necessary, on account of the large farms, to have the farming communities live in villages, after the manner of Europe, and radiate out from this center to their work.

This reminds us of the words of Booker Washington in a recent number of the *Outlook*, in which he compares the rural life in northern Europe with that of southeastern Europe. Mr. Washington found the Scotch, living separately, had more independence and initiative. In the southern or southeastern

countries he found the rural population gathered in little villages — in the center of their land; and as a result there was more sociability, more docility, more ability to get along together, but less initiative, and more of a disposition to bear with wrongs than to attempt their mitigation.

It is true the farmer has lost much of art, much of the social side of life, by his isolation; but is it not just this which has made him the sturdy independent, who, though not schooled in diplomacy and politics and finance, has become a power in the West that the exploiters find they must reckon with?

After all, will a more socialized rural population be a more docile population, a people more ready to merit the infringement of the privileged class than to right wrongs? And if so, will socializing the country be an unmixed good?

Or must we realize that there is a vast difference between the socializing of a race of serfs, with little or no education, and the socializing of a race of men who have red blood in their veins, and whose socializing will be only one more means of uniting in a common cause against the encroachment of the money power?

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Playgrounds and Intelligence

IN establishing playgrounds in Washington it was thought best to place them in the most congested localities, as being most needed there; but recently a playground has been established in a better section of the city, and the attendance at that ground equals the attendance at all the other grounds put together, showing that the more intelligent the parents, the more they appreciate the value of the playgrounds. Often among the poorer neighborhoods the parents object to the children attending the playgrounds. Sometimes this is from motives of economy, the parents keeping the child doing something to help increase the family income. This policy is detrimental to the physical welfare and the future prospects of the child.

It is only among the intelligent that there is any definite realization of the obligation of parent to child. Among the poorer classes the child is too often merely a drudge to help earn the family living.

In some of the poorer districts in some cities, parents have been induced to allow the children to attend the playgrounds by instituting a course of sewing lessons for a time. These appealed to the financial interest of the parent.

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The Dresden Exposition

THIS notable international exposition was opened May 1 under most favorable auspices. Back of it are some of the keenest scientific men of Germany. Financially, it has the backing of the state of Saxony and the municipality of Dresden. The plans for this immense enterprise have been perfecting for some eight years. Regarding the exposition, the Boston *Medical and Surgical Journal* comments: —

"Hardly a European city could have been better selected for such an exposition than Dresden. As the capital of Saxony, it is a seat of wealth, power, and dignity; and it is, besides, a community of notable cultivation and enlargement. Superbly situated, architectually imposing, with rich treasures of art and science, Dresden is a center of German civilization. The spacious grounds of the Bruhl, the Zwinger, and the Volksgarten, and the buildings of the Zwinger, the Albertinum, and the Johanneum afford admirable location for the various exhibits. The demonstrations of progress and methods in hygiene should be notable, and there could not be a more appropriate scene than Dresden for this exposition of what is perhaps the most characteristic of the advances of twentieth century science."

When this issue of LIFE AND HEALTH reaches its readers, the editor will probably be in Dresden, making an extended study of the exposition.

CURRENT COMMENT

LIFE-SAVING ABROAD AND LIFE-WASTING AT HOME

IT is significant and not at all gratifying to our national pride that President Taft, when desiring to demonstrate the value of modern sanitary methods, was forced to draw all his illustrations from our island and provincial possessions. Modern sanitary science has abolished yellow fever in Cuba, discovered the cause and largely controlled the ravages of hookworm anemia in Porto Rico, barred yellow fever and Chagres fever from the Canal Zone, isolated leprosy in Hawaii and the Philippines, and aided in the investigation of beriberi.

This work has practically revolutionized conditions in our tropical possessions, and has enabled the President to say that "in the short twelve years that we have been responsible for the health of our people in the tropical climates, we have made more progress in the study of methods of prevention and cure of tropical diseases than all other countries have made in the past two centuries."

Modern sanitary methods, backed up by intelligent and authoritative administration, have indeed worked wonders in the tropics; but what of our own country? Tuberculosis, typhoid, pneumonia, and the appalling black plague of venereal infection still lay waste the land. They are tolerated chiefly because we are accustomed to their presence. If tuberculosis were a newly discovered tropical disease, if typhoid were limited to the tropics, how horrified would we be at their ravages, and how warmly would we applaud any efforts of the national government to control them!

But through long association we have become tolerant of their presence and reconciled to their destructiveness. Yet modern sanitation, if permitted, can effect as marvelous changes here as in the Canal Zone or in Havana.—*Journal of the American Medical Association, May 13, 1911.*

Standard Bread

WE have often enough appealed in our columns for a nutritious loaf of bread, which is also appetizing, to replace the dazzling white, tasteless rolls and slices which modern machine methods give us. We have written long since against reducing bread to a mass of bleached starch. Nature endows wheat flour with other things than starch, and these things form essential elements in wheat, which are of the utmost value to the human animal.

We are tired of hearing that "the thing can't be done" when it was done for centuries and centuries before our time; and we are always in some doubt, when modern and improved methods are mentioned, as to whether the improved method is to be to the advantage of the consumer.

The making of bread has been brought to a remarkable standard in recent years; but unfortunately the standard is a poor one, and pays but little compliment to nature's product. It is based merely on color, texture, lightness, or any other quality which has no reference at all to dietetic value.

Real bread has been taken out of our

mouths by modern methods of impoverishment, and it is time to fasten the standard on an altogether different standard. . . .

The standard bread, it seems to us, should not contain the husk of the wheat, but should contain the germ, as is the case with stone-ground flour. But the practical baker says of this method of manufacture that the presence of the germ discolors the flour, and gives it a decided tendency to become rancid. The germ also contains active diastase, which interferes with the production of a satisfactory sponge and dough.

If that is the case, it is difficult to understand why very excellent bread with attractive flavor and texture was ever successfully produced in the pre-roller-milling days.— *Lancet, Feb. 4, 1911.*

Work and Pain

WORKMEN who are employed at benches in various trades are likely to suffer from painful conditions of the arms as a consequence of faulty use of the arm muscles. Filers, for instance, who work long hours at filing, are almost sure to have severe aches and pains in their forearms, unless their benches are so low that they can apply from the shoulders whatever pressure is necessary.

Men who use the hammer often suffer in the same way unless care is taken that there is no lost movement or waste of energy in their work. Women who sweep suffer much more on the right side from painful fatigue (worse on rainy days, and therefore regarded as "rheumatism") than would be the case if they alternated hands in the use of the broom, or changed from the broom to the brush occasionally, in order to vary muscular movements. There is scarcely a trade or an occupation in which some of the supposedly inevitable occupation aches and pains could not be greatly modified for the better by proper direction in the use of the muscles, and by variation in the methods of work. This would save much pain and discomfort, and avoid the objectionable use of anodyne drugs.— *Journal of the American Medical Association, March 25, 1911.*

Eliminate the Rat

RATS are dangerous. They have no legitimate business, nor can they serve any good purpose in any community. Sanitarians are all agreed that rats are a serious menace to health. It is well understood that they play an important part in the spread of disease, especially the black plague. In short, rats and mice are a pest and a menace all over the world, and, aside from being carriers of disease, the damage directly and indirectly caused by them to agriculture and other commercial interests amounts to a great many millions of dollars each year in this country alone.

In view of the fact that nothing good can be said of rats, that they work only harm and damage to both life and property, the whole country should join in a war of extermination against them. In a city like Chicago, with its miles of wooden docks and thousands of wooden barns, sheds, and dwellings, the extermination of its rodent pests would seem to be an almost impossible task. But with the rapidly growing use of steel, iron, and concrete in so many kinds of building construction, it is certain that the vast hordes of rats that now infest the entire city will be greatly reduced in numbers, and in time be wiped out altogether. The use of concrete for floors and foundations, the building of concrete docks and grain elevators, and the compulsory use of concrete for floors and foundations in factories, warehouses, barns, and stables, will be important fac-

tors in waging a war of rat extermination. Huge as the undertaking seems to be, and costly as it may prove to be, it is certain that both the time and the money spent will yield rich returns on the investment.— *Bulletin of the Chicago School of Sanitary Instruction.*

The Schoolboy and the Cigarette

EVERY mother — at least every normal mother — as she stands in the door and watches her boy go away on his first morning to school, has a vision of what she would like him to be, and makes a prayer in her heart that in the coming years he may have health and character and success.

And the teacher — if she be an earnest teacher — as she looks that first morning into the searching, wondering eyes of that boy, must utter a prayer in her heart that he grow up wise and good and useful.

And the lawmaker in the legislative chamber as he votes half the entire revenue of his State for the free education of the youth, or champions some law to guard and protect them from evil, must have a profound desire in his heart that those boys grow into self-supporting, law-abiding, patriotic citizens.

All these wishes are one. The business man, the lawmaker, the doctor, the teacher, the preacher, the father, and above all, the mother are wishing for the boy the selfsame thing,— that he be strong and clean and successful.

It is this wish in the hearts of all the world who care for the boyhood of to-day and the manhood of to-morrow that is making them bitter enemies of the cigarette.

The war on the cigarette habit is not the mere clamor of professional agitators,— a sentimental outbreak of reform impulse,— but a cool, dispassionate, vital struggle for the very body and brain and soul of the boy.

In 1903 the State of Missouri enacted a law making it a hundred-dollar fine to sell or give cigarettes or cigarette material to any boy under eighteen. In 1909 that law was strengthened by another making it a ten-dollar fine for any boy to smoke cigarettes in any public place, on any road or street, in any business house or place of amusement.

Kansas has a law prohibiting the sale of cigarettes in any form to anybody. Almost every State in the Union has some form of anticigarette law designed to protect the boy from this evil.

What means all this legislation? Is it merely that cigarette-smoking is an expensive and offensive habit? Eating candy costs money, carrying fishworms in the pocket is a disagreeable habit; but there are no laws prohibiting the boy from these.

No, it is not a mere matter of taste. We can pass over a dozen unpleasant traits and disagreeable habits in the boy, — we have to,— if only they do not seriously injure him. But the fight is on against the cigarette because it is a deadly enemy to that supreme wish for the boy — that he be strong and clean and successful.

He can not be strong and use it. No habitual cigarette-smoker ever won any athletic contest.— *American Motherhood.*

What Is the Origin of Cancer?

AT all events it is the germ of plant cancer. So much is absolutely certain, and the discovery is of great scientific and practical value. But the chief importance of the find lies in the hope that it will point the way to a solution of the dreadful problem of cancer in human beings.

Plant cancer is the disease commonly known as "root tumor," "black knot," or "crown gall"— the last of these names referring to the fact that the mor-

bid growths concerned often appear at the top, or crown, of the root. But they frequently occur on the stems, above ground, or even on the leaves.

The malady attacks many kinds of plants. It does a great deal of damage to fruits and vegetables, and has long been known to be highly infectious. Hence it was to be inferred that a specific germ must be accountable for the mischief. But, if so, what kind of germ? That was the puzzle. For a long time all efforts to discover the organism were unsuccessful, and the experts almost made up their minds that none existed.

The plant tumor is in structure so like a cancer that there is really not very much difference between the two. In both cases there is the same enormous proliferation of cellular tissue, often forming nest-like masses. Under normal conditions, in plant or animal, cells of each class have their own particular work to do,— the making of secretions, or what not,— but in a cancer, or a plant tumor, they are no longer attending to their business, and seem actually to have gone crazy. Even when viewed under the microscope, the structure of a plant tumor is found to differ in no important respect from cancer in a human being.

Less than ten years ago the vegetable pathologists imagined that there was no germ of plant cancer, because they could not find it. To-day most of the animal pathologists assert that there is no microbe of animal cancer, for exactly the same reason. Yet, it is now known, at last, that there is a specific germ of plant cancer, and the responsible bacterium itself is at this moment imprisoned in bottles at the Department of Agriculture. Does it not, then, seem likely that sooner or later an organism responsible for human cancer will be successfully isolated and identified? — *From "Tracing the Cancer Germ," in May Technical World Magazine.*

Diarrhea in Children

IN our large cities the death-rate from diarrhea is enormous, and in many cities it is rapidly increasing. There are ways of diminishing our infant death-rate. I will mention the most important: —

1. A young woman who has not had instruction in the care of infants should not be allowed to marry.

2. Women should be taught to nurse their infants, and should not attempt to wean them without consulting an intelligent physiciain.

3. Mothers should follow carefully the doctor's advice regarding feeding, etc.

4. The child must be kept clean, and the house must be clean and well ventilated.

Mothers should be given printed instruction regarding food, cleanliness, etc. They should be made to understand that nearly all babies that die of diarrhea are hand-fed.

The primary cause of summer diarrhea is artificial feeding. The secondary causes are many, including dirty bottles and nipples, but especially the time-honored comforter, with its germs from the floor, dirty hands, handkerchiefs, and the like. Another cause is dirty surroundings with foul atmosphere. Food plays an important part in summer diarrhea, especially contaminated milk.— *A. E. Vipond, M. D., Children's Memorial Hospital, Montreal, in Archives of Pediatrics, April, 1911.*

Gluten Flours and Diabetic Foods

TWO common misconceptions exist regarding gluten flour and the various proprietary gluten foods on the market. One is that gluten flour is practically a starch-free flour; the other, the corollary of the first, is that any gluten

flour or gluten food is a safe food for the diabetic patient. As regards the first proposition, nothing can be farther from the truth — at least so far as the great majority of gluten products are concerned; and this fact makes plain the fallacy of the second. It is probable that, proprietary medicines excepted, in the exploitation of no other products prescribed by physicians has there been so much misrepresentation and downright humbug as that indulged in by the manufacturers of gluten flours and foods.

The federal standard for gluten flour prescribes that it shall contain at least thirty-five per cent protein (56 N + 6.25). Nothing is said about the starch contained, and yet from the standpoint of public health the per cent of starch — or more broadly of carbohydrates (starch, dextrin, sugar) — is more important than the proportion of protein.

As the food and drug act is now interpreted, an anomalous state of affairs exists. A firm that puts on the market a so-called gluten food containing twenty per cent of protein is permitted to label — or at least does label — this product "gluten 4-7 standard" because, forsooth, 20 is 4-7 of 35, and thirty-five per cent protein is the standard for gluten flour. The absurdity of this proposition appears when it is remembered that ordinary flour contains ten to eleven per cent of protein, and that on the same grounds it should be legally labeled "gluten 1-3 standard." The fallacy of giving such an interpretation to a law the primary intent of whose enactment was the protection of the public health, is evident.

The fact is that in ninety-nine cases out of a hundred a gluten flour is prescribed for the diabetic patient to whom the ingestion of carbohydrates is fraught with danger. Gluten products are prescribed by physicians, not because they are richer in nitrogen (protein) than other foods, but because they are believed to be poor in, if not actually free from, carbohydrates (starch).

Most of the manufacturers of gluten flours and foods in this country carefully avoid stating in their advertising matter or on the labels what percentage of starch their products contain. The reason for the omission is that the products contain a dangerously high percentage of carbohydrates. Yet the physician is misled by the statement "gluten" into prescribing these worse than worthless preparations for his diabetic patient.— *Editorial, Journal of the American Medical Association, Nov. 8, 1910.*

National Laundry Work

PEOPLE of the United States, I have to offer you — along with my felicitations — my apologies. So often do you wash your political dirty linen in public, so loudly do you deplore your inability to cope with the task, that one takes you at your word — in great questions one doubts your skill. Now, if you will pardon the continued use of the simile, I have seen your National Sanitary Steam Laundry turning out the very finest work without a stain or a smear, and doing it with a speed and an intelligent energy which has not yet been equaled since the beginning of things. The prejudices which your own pens bred in my soul I forthwith tear out as effectively as in Culebra Cut a hundred steam-navvies tear out their thousands of cubic yards of "dirt" day after day. Here on this jungle-spread isthmus, across a belt of country forty miles long by ten wide, you have gathered to the shepherding of twoscore thousand laborers, five thousand keen and healthy men, whose keenness and healthiness probably can not be matched in any other continent on the habitable globe. And this on the site of the "white man's grave"! — *Frank Saville, in Sunset Magazine for June.*

RURAL RECREATION

THERE are two movements, the "country life" movement and the "back to the land" movement, which are antagonistic to each other. The first aims to make country life worth while to those who live in the country, and to improve the efficiency of the farmer. The other is a call to the city dweller, the ne'er-do-well, the laborer, to get out into the country. The latter movement is often forwarded by, and in the interest of, the real estate dealer. It is the former I propose to discuss.

In trying to improve the condition and the efficiency of the farming community, we find we can not afford to leave out the play element. Variety is indeed the spice of life. We need the worker at play, and the player at work. While all work and no play makes Jack a dull boy, all play and no work makes him a parasite. There is a psychological need for recreation, especially for those engaged in much physical labor. And I use the word in its original sense, re-creation. I wish we might hyphenate the word. I have no plea for recreation in the sense of cheap amusement.

It is our aim to make rural life worth while to men who are capable of becoming good farmers; for, remember, it is not every one who is adapted to farming. Those not so adapted, in taking up farm life can expect nothing but disappointment.

In other occupations, there is naturally a diversion from the occupation. The professional man, the mechanic, the laborer, at the close of his day's work engages in some occupation or diversion which is a change. The farmer, at the end of his day's work, is still on the farm. The farm forms the background of all his activities. It is here, emphatically, that change is necessary, in order that the farmer may live the rounded life that is worth while.

But in providing recreation for the farmer, we must be careful that it is not exotic; he needs something that is the product of the local community. He must get his satisfaction, his recreation, his social pabulum, out of his environment, if he is to be a good farmer. All social enterprises must grow out of his situation.

There must be, in the first place, more technical farming, more "scientific management," giving him more leisure. The time will come when every farmer will have one day in each week, aside from Sunday, for leisure.

We must give him something worth while for that extra day. This recreation must be for all, both old and young, both men and women. The playground in the rural community will not solve the entire question. The recreation must be adapted to the state of development of the community, and must be broadly educational by its relation to the things of life.

The social center of the farming community must not be dominated by the town, and must not be supported by the contributions of merchants and dealers. It must be for and by the farming folk, if it is to be effective.

It is our aim to make these recreation

centers a means of real development to the farmer. They should be, as far as possible, an adaptation of existing organizations and institutions, such as the grange, picnics, field days, harvest homes, old-home week, thanksgiving celebration, church festivals, and the like.

Every community should have a recreation center, perhaps a community hall, which should be a social center for the development of native talent, rather than a place for the importation of outside talent. I would not deny to the farmer the best that the city produces, in music and the drama, but for their community center, I urge that the activities be largely confined to the talent of the community.

There must be more or less play connected with the center; some form of play in the true sense is absolutely essential to the well-being of old and young. But the games should be such that all can take part. I do not favor the games in which a few take part, and the others sit and yell.

Above all things, our games should be simple. We are losing in simplicity. It is surprising how satisfying to a child is even so simple a game as "wind blows."

Good play, in order to be educative, must be supervised by a specialist; perhaps at first this might be the schoolteacher or the pastor.

I would see the music spirit developed. We should have more free, simple singing. We must get over the idea that all singing must be after the style of the operatic stars. Some of the finest singing I ever heard was out among the country folk.

We must develop the dramatic interest in these community centers, but it must center around farm activities, such as plowing and harvesting. While I would not do away with the traveling show, I would suggest that it takes everything, and it leaves nothing. The best effect will come from the cultivation and utilization of native talent.

Finally, there are two important things to be done for country life: —

1. Establish social interests.

2. Make these interests thoroughly active, so that they will make the country life attractive, and do away with the ambition and the necessity of seeking the city for something better.

As an illustration of the general attitude of farmers toward farm life, I give one instance which occurred in a prosperous part of the corn belt, where the farmers, in response to the query, "What is the matter with farm life?" replied that nothing was the matter in that section, every one was prosperous, and a farmer could usually, by the time he was fifty, have enough to move into the city!

What we need is such a community interest as will take away all desire and temptation to move into the city.— *Prof. L. H. Bailey, Cornell University, Chairman Committee on Rural Recreation, address before Playground and Recreation Association of America, Washington, D. C., May, 1911.*

The Value of Doing Nothing

WHEN the man of affairs, who has always had rugged health and has never had to take care of himself, is obliged, through sickness or advancing years, to "go slow," he may after some remonstrance gradually learn to cooperate; but too often his activities have been confined to such a narrow circle that he can not adjust himself to new circumstances. He has never learned to play, he does not enjoy reading, and idleness drives him frantic. He must continue to grind.

The remedy, obviously, should have been applied years before. If the necessities of advancing age were carefully considered in the training of youth, if it

were kept constantly in mind that provision must be made for the declining years, there would be no such sudden breaks as that outlined above, and the bodily powers would last longer, and the enjoyment of life would be greater.

One reason why men and women are unwilling to withdraw from their occupations, either gradually or suddenly, is the feeling that without their guidance, the business would be demoralized. The man of business can not trust his affairs to any one else, and the professional man feels that no one can properly represent him. The woman in the home longs to get away from its drudgery, but feels that no one else can manage just as she would like. Such persons have bound themselves with bonds firmer than brass. They have made the mistake of assuming responsibility for everything, and not allowing any one to share it. They do not know how to let any one else do their work, nor have they given any one an opportunity to learn.

In schools and in many households there is a working time and a resting time for the children; but in few households is there such a division of time for the adults. Formerly this was considered a necessary evil. Now we are learning that for any and all occupations, rest and diversion are essential, and are actually time-saving and labor-saving devices.

It is a noteworthy and surprising fact that while there is no subject whose importance is more generally recognized than that of the habit of rest, the actual practise is inversely proportionate to its need. Those who habitually rest and care for their health are the healthy ones, who need it the least; while the tired, nervous, overworked class can not find the time, or perhaps even the inclination, to stop.

The desire to be doing something all the time is the bane of modern life. People are not content with what they have done, but fret because they have not done more. The woman laments because some details of housekeeping must be omitted. The business man is not satisfied because, though he may have a good business, he is not doing better. Vacations bring no rest to such troubled souls. The trip to Europe, instead of affording rest, becomes an exhausting round of sightseeing, and leaves the traveler worse than when he started. Even recreation is turned into exhausting work.

If these people would cultivate the gift of optimism, and make the best instead of the worst of everything, see the good they have accomplished, and not fret over their failures, it would be comparatively easy for them to be satisfied with their daily life. And if they were satisfied, the inclination for rest and recreation would be felt, and the opportunity would be found to accomplish what had seemed impossible.

We should know our limitations, and be content to work up to and not beyond them; and we should know that one of the best rewards for honest work is rest. With these two ideas in mind, the tired worker will find plenty of opportunity for "doing nothing"— for forgetting cares and worries, and for the time giving himself up to the happy existence of being an onlooker at the game of life.— *Richard P. Francis, M. D., Montclair, N. J., in Medical Record.*

Care of the Teeth

FOLLOW the milk of bottle-fed babies with water.

Moisten a soft cloth with an alkaline wash, and apply frequently over first teeth.

Give little or no candy to young children. When teeth have appeared, give the coarser cereals and less soft foods.

Have the teeth cleaned by a dentist at least once in six months.

Have all cavities filled even in milk-teeth, to preserve them in position and thus help develop the jaws.

Brush the teeth at least twice a day, using powder in the morning and an alkaline wash at night.

Remove tartar at least once in three months. Examine for cavities once in six months.— *Journal American Medical Association, Nov. 26, 1910.*

Play as an Antidote to Civilization

WE had a boy in one of our playgrounds who was always attempting some dangerous feat. Later he obtained a position as janitor of a church, stole two hundred dollars' worth of the fixtures, and sold them for ten dollars. His act was not prompted by need, but by love of danger and adventure, such as he manifested on the playground. His moral sense was not developed.

What we must realize is that boys — the live boys who grow up to be live men — need danger and difficulty as much as they need food, and it is as much our duty to supply it to them.

How fully does our civilization satisfy this longing on the part of the boy? Often the boy's body atrophies, and worse, his soul atrophies, because he has no activities that legitimately call forth his budding powers. In order that we may have more play, more real recreation, we must arrange our work so that it can be done in shorter hours.

Every individual is wound up for some certain career in life in which he would be successful. If he does not have opportunity to give expression to his bent, he is to a certain extent a failure; he does not live in the highest sense of the word. All mankind also are headed toward certain general ends, and depend for life and growth upon serving them.

The boy is a safety-match. You can not strike him on any old surface. If he is to serve his purpose, he must come in touch with the surface adapted to him. It is conscience and not cussedness that makes the boy fight. He has his ideals, which to him are instructive. In defending himself, in attempting to work out his ideals, which to us seem crude and semibarbarous, he manifests a high degree of courage.

It lies with us to say what form this boyish courage shall take. We may think this courage ought to be sublimated into a form of moral courage. But in this we forget that habits and instincts develop naturally at certain stages of life. The hen-following habit of the young chick comes at a certain age. If the chick is of the incubator type, and the hen is not present at the critical age, the habit is never formed; for it will not form later.

The boy period of life is the time for the expression of physical courage; if this quality does not express itself then, the boy will lack something in his nature later in life. Exercising his physical courage at the heroic age, he will be in a better condition to develop true moral courage later. We sometimes think it would be much better if boys were more docile and fitted better into the scheme of civilization; but if it were possible to have one generation of boys fitting nicely into the ways of the previous generation, we should be fearfully disappointed in them.

One thing we need to develop in our boys is more of the play spirit, giving them games in which all will take a part, and not a mere picked few, with the rest sitting on the benches yelling for their favorites.

The disease of civilization is that we have sacrificed the end — life — for the means. We need to enjoy life instead of always getting ready to live.

What is the remedy for the disease of civilization? It is certainly not to return to barbarism, nor is it war, nor hunting and fishing.

We need to introduce the trade school, teaching the boy what will be useful to him; we need to observe the element of competition and team-play in all his work; we need to realize the value of play as a means of self-expression and self-development.—*Joseph Lee, President of Playground and Recreation Association of America, before fifth annual meeting, Washington, D. C., May, 1911.*

A Plea for Women

WE are coming to realize the importance of woman. For nine months the child is a tenant of the female form. The condition of women as regards drink is improving (in King James's court, women were often beastly drunk); but their condition is not yet what it should be.

Our soldiers are protected. Take away the protection, and they would soon be drunkards. In schools the slum children are away from wretched home influences. The men in the factories have some protection. But woman, the most sacred of all, is left unprotected in the slum. If she gets any change from her miserable surroundings, it is to get down to the neighboring grog-shop for beer.

The time will come when we shall realize the sacredness of woman,—even the woman of the slums,—and throw around her the proper protection.—*Surgeon-General Evert, before the Imperial Temperance Congress, London, June, 1911.*

Suggestions on the Teaching of Temperance

I SOMETIMES wonder if any of us have the right to call ourselves educated people. Did any wise system take us in hand when we were in a formative stage? Were we provided with ideas of the greatest importance? I answer, No. We have had to spend a number of years unlearning part of what we have learned, and in getting rid of prejudices, and perhaps in getting rid of the habits into which our slipshod education has allowed us to fall. It is a dream to look forward to different educational conditions, but it is a dream which we should attempt to make a reality.

Our educational systems are all incomplete. Within the last ten years there have been calls from distinct organizations to have temperance, woman's suffrage, evils of smoking, kindness to animals, patriotism, and the evils of gambling incorporated in the school curriculum. Our present system of education is undoubtedly one of wasted opportunities.

The age from twelve to twenty is more important than the earlier age for the formation of character. It is then that religious conversions occur, and that the great decisions that affect the after-life are made.

We must try to eradicate the idea unfortunately inculcated by such able writers as Chesterton and Stevenson, that there is something fine and manly in alcoholic indulgence.—*F. H. Hayward, D. Lit., B. Sc., address before the Imperial Temperance Conference, London, June, 1911.*

Hydrotherapy for Students and Practitioners of Medicine, Embodying a Consideration of the Scientific Basis, Principles, and Practise of Hydrotherapy, and Some Allied Branches of Physiologic Therapy, by George Knapp Abbott, M. D. The College Press, Loma Linda, Cal. Cloth, 308 pages; price, $3.

The author, who at first had in contemplation a work on hydrotherapy for the use of physicians, medical students, and nurses, finally decided to prepare a simpler book for nurses (which will soon be issued by the Review and Herald Publishing Company, Takoma Park, D. C.), and to address this present work particularly to the comprehension of physicians and medical students.

With some knowledge of the older texts on hydrotherapy, both as a practitioner and as a teacher, the writer of this review has long felt convinced that there was need of a book which would not make the study of hydrotherapy a bugbear to the physician who has had none of the advantages of sanitarium training; and he believes, to use a trite expression, that Dr. Abbott's book has met a long-felt want.

The work is divided into three parts. First, there are twelve chapters devoted to the physical and physiological principles underlying the practise of hydrotherapy; and while the author has laid a careful foundation, he has evidently attempted to avoid the useless detail that has cumbered some other books. In Part Two, devoted to therapeutics, is made the application of the principles elucidated in Part One. The author endeavors to preserve a close connection between experimental physiology and its application in practise. Part Three of the book is devoted to the technique of hydrotherapy. Dr. Abbott states it as his conviction, as the result of long experience in teaching both nurses and medical students, that the student or practitioner should first acquire a knowledge of the technique of hydrotherapy by actual drill under an experienced instructor.

We give in this and succeeding issues of LIFE AND HEALTH brief selections from Dr. Abbott's forthcoming book on hydrotherapy for nurses, which has been so simplified as to be adaptable to those having only an elementary knowledge of physiology. Mothers may not find it amiss to have a copy of the book for study and reference; but the physician and the medical student will desire the more comprehensive work.

The Social Direction of Human Evolution: an Outline of the Science of Eugenics, by William E. Kellicott, professor of biology, Goucher College. D. Appleton & Company, publishers, New York. Cloth, 249 pages, $1.50 net.

This is an attempt to state in simple language the present status of the science of eugenics, which may be defined as the study of the agencies which may improve or impair the racial qualities of future generations.

The reader is made acquainted with Mendel's law of heredity and what is known of its application to human heredity, also the extent to which statistical work has given us a knowledge of human heredity. It is shown why under present conditions the race is degenerating, and is bound to degenerate in civilized countries. Finally, it is shown what eugenics contributes to the problem of an advancing rather than a receding posterity. Though the work will require close attention from the "non-professional" reader, the result will be well worth the effort.

A number of genealogical tables are given showing the hereditary descent of certain physical defects and also of certain mental traits. For instance, there is the genealogy (omitting names, of course) of a family manifesting feeble-mindedness in many of the members for several generations; of another family in which Huntington's chorea was a permanent symptom; of another having many members with marked ability; another in which there were many with a decided criminal tendency, etc. These tables are interesting as showing the truthfulness of Dr. Oliver Wendell Holmes's statement that we are omnibuses, in which all our ancestors ride. The present generation of man has not had the privilege of choosing its ancestors. The program of eugenics is that this generation shall make intelligent choice of the ancestors of the next generation.

IN THE MAGAZINES

Discussion of Articles on Hygiene and Kindred Topics Which Appear in the August Issues of the Magazines

Good Housekeeping Magazine

If you are interested in the fasting cure, you should read "An Experiment in Fasting," * by Maria Middlebury, which chronicles a woman's experience in living a week without food. After completing the week's fast undertaken, the writer had reduced her weight from 170 pounds to 154, and had rid herself of all pain and discomfort, not only of arthritis in her hand, but also of rheumatic twinges in other joints. The value of electricity as a therapeutic agent in disorders beyond the reach of drugs or surgery, is discussed at length in "The New Electric Healing," with many examples of benefits received.

The Designer

"Fresh air will cure more restless nerves than all the remedies from the pharmacy," is the thought that led a perplexed wife to carry out a plan to save her overworked husband's nerves from breakdown during the months of a Chicago summer. "Summer Living on a City Back Porch," * by Ruth Curran, tells how this was accomplished.

"Property and the Law" * throws an interesting light on many State laws in our land of the free regarding the rights of a married woman to her own estate, to her earnings, and to her children. Some space is given to the question of divorce, and many legal oddities in the way of divorce laws are cited. "Tennessee, for instance, has a law which solemnly provides for a divorce in favor of a husband whose wife refuses to move into that State. Pennsylvania has a specific law which provides for the divorce of a wife 'who by cruel and barbarous treatment renders husband's life intolerable'!"

Woman's Home Companion

"Sanitary Methods in the Home," by Jean Williams, M. D., gives seasonable suggestions on drains, the disposal of garbage, the ice-box, and sanitary sweeping. "Water Sports for Girls" gives directions for acquiring graceful accomplishments in the water, and "Outdoor Games for Boys and Girls" answers the child's oft-repeated question, "What shall we play?"

New Idea Woman's Magazine

"Keeping House in the Arid West," by Honoré Willsie, tells how a home can be made under canvas, and also how health and strength will come back even to a tired-out city worker where a shack is called home. "The Shack on the Seashore," by Beatrice C. Wilcox, shows the possibility of a life-saver's cabin. Another sea-water health restorer is treated of in an article by George E. Walsh, in "Grace for Girls Who Swim." As usual, the magazine is full of timely ideas that can be carried out without much money or great effort, and that are within the reach of the majority of people.

Country Life in America

Good health will be the subject of the August 15th number of *Country Life in America.* This means a common-sense view of the question of how to gain and keep bodily good health through natural, right ways of living. How intimately this subject is connected with country life a moment's thought will show. The authors are, in almost every case, men of authority in the medical profession. The consulting editor is Dr. H. W. Wiley, chief chemist in the United States Department of Agriculture. He contributes the leading article on "Plow and Pitchfork Versus Pills and Powders," which is an out-and-out plea for country life as a sound basis for good health.

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* The articles designated by the asterisk have been read by the editor of LIFE AND HEALTH.

Other illustrated articles are "A Rational Scheme of Living for the Commuter," by Dr. Julian W. Brandeis; "Teaching a Nation What to Eat," by C. H. Claudy; "The Menacing Mosquito," by Dr. L. O. Howard; "How Doth the Busy Little Fly," by Dr. Woods Hutchinson; "Plumbing Without a Sewer," by Charles E. White, Jr., etc., etc.

Pearson's Magazine

Look out for the health of your children. Now comes the season when children's diseases are most prevalent. It is estimated that from one fourth to one third of all children born in this country die under five years of age. The great majority die unnecessarily. Watch out for your own children. An article in *Pearson's Magazine* for this month shows how. Particular attention is given to infantile paralysis: its symptoms, its prevention, its possibilities of cure. Suggestions of great value in regard to other diseases are also given. If you have children, you should read this article.

The desire to get something for nothing is the foundation upon which the gigantic trading-stamp business has been built up. In "The Fallacy of the Trading Stamp," * by Arno Dosch, this number performs a real service to its readers by showing them on whom the burden of this business falls, and by whom all the profits are received.

Cause of Malignant Growths.— Recently malignant tumors have been transmitted by injecting some of the juice of a growth, which had been centrifugalized, and then passed through a "germ-proof" filter. This leads to the belief that the agency of transmission may be an ultramicroscopic organism, or else some chemical product of the growth. Experimentation in this line will be continued.

Saving Baby Life.—In 1910 fourteen thousand babies died in New York City. In 1891, with a much smaller population, there were eighteen thousand baby deaths. Had the infant death-rate of 1891 been operative in 1910, there would have been thirty thousand baby deaths as against fourteen thousand. This saving of sixteen thousand baby lives is due largely to the efforts to give the babies clean, healthful milk.

Nathan Strauss and the Babies.— In cities where Mr. Strauss has had full control of the milk-supply to the babies, the infant mortality has diminished fifty per cent. His method is to secure milk from healthy herds, Pasteurize it, and modify it to suit the age and condition of the child. In connection with each milk depot there is a nurse who can instruct mothers in the feeding and care of their babies.

Digest of Health Laws.— The Public Health Reports issued weekly by the United States Public Health and Marine Hospital Service contain, beginning with the issue of March 31, copies of the local health ordinances of cities and towns all over the United States. For instance, there are given the ordinances of certain Massachusetts and Connecticut towns relative to infantile paralysis, temperature and bacterial count of milk, school inspection, protection of foodstuffs, spitting, etc.

Is Leprosy Transmitted by Insects?— The query has been raised whether mosquitoes and flies have to do with the transmission of leprosy. Dr. Currie, as the result of extensive investigation, expresses the opinion that the mosquito is incapable of transmitting leprosy. But the fly can not be acquitted so easily. While it is not proved that the fly does transmit leprosy, yet the fact that the fly, after feeding on a leprous fluid, may harbor live lepra bacilli for several days renders this insect open to grave suspicion.

Shell-Fish and Typhoid.— There has recently been some stir among physicians in England because of the comparative frequency with which those who have eaten oysters, cockles, and other shell-fish, are soon afterward attacked with typhoid fever. For twenty years the evidence has been accumulating that this class of food is often unsafe. In one city one fourth of all the typhoid patients were shown to have eaten shell-fish a short time before their attack. If human beings *must* consume raw shell-fish, they should at least be sure that the shell-fish have not been subjected to sewage contamination.

Medical Use of Cane-Sugar.— Sawyer, in the *British Medical Journal*, reports, as a result of ten years' experience, that in wasting disorders, in various forms of anemia, in some forms of rheumatism, and especially in the neurasthenic manifestations of neurotic persons, he has found the continued administration of cane-sugar beneficial, increasing weight and strength, and seeming to act as a tonic as well as a nutrient. For an adult he prescribes from one fourth to one half of a pound of lump sugar daily, to be eaten slowly from time to time during the day and night, but not just before a meal.

Purposive Fiction.— It is said that Tolstoi's works have caused a distinct reduction in the use of alcohol and tobacco.

Philadelphia Milk Exhibit.—In May there was opened in Philadelphia an extensive milk exhibit for the purpose of demonstrating the best methods of production, transportation, and distribution of milk.

Anti-Tuberculosis in Holland.— In Holland the wise policy has been adopted of appropriating a liberal amount of money yearly to defray the expenses of the Society for the Prevention of Tuberculosis.

Death From Ice-Cream.— A two-year-old child in Yonkers, N. Y., died suddenly after having eaten an ice-cream sandwich purchased from a street vender. Two companions, aged five and six, were taken to the hospital to be treated for ptomain-poisoning.

Prohibition Sentiment in England.— This is like the famous chapter on The Snakes of Ireland. There is none. To mention prohibition is to fly in the face of the British regard for "vested rights." All control of liquor is attempted in other directions than through prohibition.

Boy Scouts.— The playground workers in Buffalo, Chicago, Philadelphia, and other cities, arrange for tramps or for summer camps to take boys and girls away from the city during the summer. The Boy Scout movement has done much to stimulate this country-outing work.

A County Superintendent of Health.— A North Carolina county is to have a county superintendent of health at a salary of $2,500 a year. He is to give his entire time to the supervision of the health of inmates of the different county institutions and to the instruction of schoolchildren in hygiene.

Cities Maintaining Playgrounds.— Reports from 184 cities to the Playground and Recreation Association of America indicate that these cities maintain 1,244 playgrounds, and employ 3,345 men and women, in addition to caretakers, and that 219 grounds were kept open during the entire year.

Playgrounds Donated.— A number of wealthy individuals and corporations have, during the year, donated playgrounds to their communities.

The Hookworm Campaign in South Carolina.— This State now employs four traveling physicians, whose sole duty it is to treat hookworm patients, and to give instruction as to prevention of the disease. The State has, in addition, six microscopists to examine specimens sent in for the detection of hookworm eggs.

Tenement Landlords May Have Souls.— It is related of the owner of a Chicago tenement-house that he bought a vacant lot to be used as a playground by the children of his tenants. The owner of a New York apartment house who once ran his house on the principle, "No children allowed," has gone so far as to make arrangements for a roof playground for the children of his tenants.

Investment in Playgrounds.— The past year Chicago voted, by a very large majority, a million-dollar-bond issue for recreation, as proposed by the West Chicago Park Association. Grand Rapids, Mich., has declared in favor of a two-million-dollar-bond issue for parks and playgrounds. Many other cities are considering the question of large bond issues for recreation. In 184 cities from which there have been returns, there was spent last year in playground work more than $3,000,000.

Chicago Child-Welfare Exhibit.— During two weeks in May, the Child-Welfare Exhibit was held in Chicago. It embodied the good things from the New York exhibit, and much local material in addition. It is said that no exhibition since the World's Columbian, held in Chicago in 1893, has caused such general interest as this. This exhibit outdid the one in New York, both in extent and in attendance. The attendance in New York averaged 8,000 a day; the Chicago exhibit averaged 26,000 a day, with a total of over a quarter of a million. It is hoped that these two exhibits will effect a marked saving in baby lives this summer.

Social Conditions Changing.— At one time one could not drink to the health of the king or queen with anything but liquor; now one can take water. Thus one social temptation after another yields to the onward temperance movement.

Postponement of International Sanitary Conference.— The International Sanitary Conference, which was to meet in Paris, May 26, has been postponed until October 11. The purpose of the conference is to arrange for the international control of the spread of plague, cholera, and yellow fever.

Birth-Rate in France.— In 1859 there were 1,018,000 births in France; in 1862, 984,000; in 1887, 899,000; in 1910, less than 775,000. The excess of births over deaths in 1910 was only 70,581. In Germany the excess was 884,061, or more than the total births in France. This falling off in the birth-rate is making French statesmen wince.

Playground Association.— This association at the annual meeting very appropriately changed its name to "Playground and Recreation Association of America." The following officers were chosen: President, Joseph Lee; Treasurer, Gustavus T. Kirby; Secretary, H. S. Braucher. The headquarters is Metropolitan Building, 1 Madison Ave., New York City.

Great Britain's Drink Bill for 1910.— The estimated expenditure for alcoholic drinks in the United Kingdom in 1910 was £157,604,658, over seven hundred fifty million dollars, an increase of £2,422,173, or more than ten million dollars, over the previous year. There was an actual decrease in the number of gallons of spirits used, but an increase in the number of gallons of wine and of the number of barrels of beer.

Victory for Headache-Powders.— Recently the District (of Columbia) Court of Appeals rendered a decision which does much to nullify the pure food law. The government had a case against the Antikamnia Company, the ground being that the company failed to state the presence of acetanilid on the label, and this, according to the government, was misbranding. The Antikamnia people evidently do not care to publish the fact that their product consists largely of acetanilid, a dangerous drug worth about thirty cents a pound. For some unknown reason the court decided that it is not necessary in case of a derivative to give the name of the drugs from which it is derived. If this decision holds, what would prevent the use of morphin and other very harmful drugs in the same way?

Finishing Schools for Girls.— A school has recently been established in Paris for the purpose of finishing off the children of the "newly rich" for their entrance into society. They are taught how to enter a room, how to bow, how to shake hands, how to partake of refreshments without removing the gloves, how to alight gracefully from a carriage. Demonstrations are given by experts in correct table manners.

The Best Kind of Monument.— Tom L. Johnson, of Cleveland, is quoted as saying: "When I die, I hope people will make a playground over my body. I would rather have the children romping over my grave than a hundred monuments." He is two or three stone's throws away from the ancestor-worship and ghost-worship of the Chinese,— farther away, perhaps, than some of the rest of us.

British Fresh-Air Fund.— The Fresh-Air Fund sends poor children from London and all the large towns of Great Britain into the country for a day at a cost of eighteen cents each, and for two weeks at a cost of $2.50 each. Since its inauguration in 1892, at least 2,500,000 children have had a day's outing, and 12,000 children have had a two weeks' outing. It is estimated that $60,000 will be required for this year's work.

Recreation Program.— In progressive cities there is a coordinated movement for the establishment of better playgrounds, public baths, evening recreation centers, for the regulation of street play, motion-picture shows, and dance-halls, for the sane celebration of the fourth of July, and for the development of civic pageants. There are actively engaged in working toward this end a number of associations, such as the American Civic Association, the Municipal League, and the Playground and Recreation Association of America.

Humane Society and Health.— Through its agents the American Humane Society has been actively engaged during the past year in ferreting out criminal evasions of the laws for the control of the slaughter of animals, and has thus done something to mitigate the conditions outlined in the article, "Where Do We Get Our Meat?" in the July issue of LIFE AND HEALTH. Two booklets, "What Some People Eat" and "The Testimony of the Camera," have been widely circulated by the society. In taking up this work, the society has acted in a humane manner not only to the dumb brutes, but to the consumers of the dumb brutes as well. It is a kindness to show to consumers of diseased carcasses what they are getting for their money, and to point out a more rational method of living.

Result of Free Antitoxin.— State Health Commission Dixon, of Pennsylvania, reports that as the result of the free distribution of antitoxin for children of the poor suffering from diphtheria, the percentage of deaths from that disease has been very materially lessened.

Local Option in New Zealand.— Every election district is a local option district, and every election day (once in three years) the voters decide whether they want liquor within their district. There are now twelve no-license districts, six being gained at the last election.

For Conservation of Vision.— The American Association for the Conservation of Vision has been incorporated in New York State for the purpose of investigating all conditions and causes which result in impaired vision, the relation of impaired vision to general health, and the means of prevention of blindness.

The Children Want Playgrounds.— The children of Mount Vernon, Ohio, had an autoparade — every car swarming with children — to show how many children want a playground. Children in other cities and towns have organized in various ways, in order to start the playground ball rolling their way.

Temperance in Canada.—Prince Edward's Island is under prohibitory law. In Nova Scotia no liquor is sold except in Halifax. New Brunswick is under local option, and going dry. In the province of Quebec, more than half the parishes are under local prohibitory laws, and other parishes are falling into line. In Ontario one eighth of the barrooms went out of business on April 30. In Saskatchewan, four out of seven important towns voted "no license" last December. The work is progressing in other provinces.

Open-Air School.— Philadelphia now has an open-air school on the roof of the college settlement building. The Phipps Institute manages the school, and supplies nurse and food. The board of education furnishes teacher, text-books, desks, and twenty pupils, selected from the public schools, and the settlement gives the use of roof, shelter, playground, bathing and cooking facilities. The children are given tooth-brushes and other toilet articles, and instructed in their use. The schedule is as follows: 8 A. M., bath; 8: 30, breakfast; 9 to 10: 30, lessons in the open air; 10: 30 to 11, games, followed by a wash and rest; 12, hot dinner; 1 to 3 P. M., complete relaxation, lying down; 3 to 4: 30, lessons and rest; 5: 30, children wash, and are sent home.

Moral Influence.— One delegate to the Imperial Temperance Conference, a worker in London, testified of seventy homes changed from wretchedness to comfort, not by scientific teaching but by moral teaching — that which in his childhood days brought the man to his knees.

Missionary Work With Prisoners.— In New South Wales, a missionary visits the police stations, and labors to reform the men arrested for drunkenness. Every one who promises to sign the pledge is allowed by the judge to go on probation. Sixty per cent of these men are reclaimed.

Recreation Cities. — Thirty-two cities, seven of them in California, employ recreation leaders throughout the year. Of the 643 permanent workers employed, 356 are in New York, 71 in Chicago, 35 in Washington, 32 in Rochester, 28 in Pittsburg, 20 in Newark, and 18 in Los Angeles.

Opium Cures in China.— Dr. Heywood Smith, who has recently visited his son, a medical missionary in China, reports that the native Chinese doctors have adopted the despicable custom of selling pills containing morphin as a supposed opium cure. Of course, this soon creates an appetite for the pills, worse, if anything, than the former appetite; and while it makes for the doctor a permanent customer, it proves the utter ruin of the patient.

Effect of No-License.— The city of Marsten, New Zealand, has a significant comparison between the last year in which licenses were issued (first column), and the first year in which there were no licenses (second column): —

Arrests (the latter partly from those who had obtained liquors in other cities)	287	41
Theft	44	8
Malicious injury	5	1
Indecent exposure	3	0
Resistance of police	12	2

Indifference to Reform Education.— Surgeon-General Evert of England, who was one of 14,000 physicians to ask for hygienic teaching in the schools, and one of the deputation to the educational department in behalf of such teaching, says that Sir Victor Horsley put the subject before the minister of education in the most eloquent and convincing manner, giving a careful résumé of the latest scientific findings regarding the action of alcohol, but it seemed to be received with little enlightenment. A topic the reception of which would affect a man's personal habits must appeal to the heart as well as to the head.

Anglican Temperance Education.— In the Church of England, lecturers on temperance are provided to teach the children. Competitive examinations are held, and the school doing the best work receives a banner. In this way the Church-of-England children all over the island are interested in scientific temperance.

Plague in the East.— The International Plague Conference at Manchuria has completed its work. It was decided, among other things, that when proper authority is given to the health officers, there is no need to stop railway traffic because of the existence of plague. In February there were 43,500 deaths from plague in India; in March 95,884 deaths, more than 3,000 a day, or two a minute.

It Is the Alcohol.— At the annual conference of the British Temperance League in June, Dr. George Taylor gave an instance of a man who was committed to an asylum as the result of drinking cider. Prof. Sims Woodhead said, in comment: "It is the alcohol that does the mischief. It makes little difference whether it is in the form of spirits or wine or cider. It makes no difference how pure it is, alcohol has the same effect, depending on the quantity taken."

Hookworm Clinics.— Free clinics for those infected with hookworm have been established in Mississippi and Alabama, and other Southern States are taking the matter up. The treatment is proving very popular. The cooperation of some of the newspapers has been secured, to distribute circular matter regarding the importance of sanitary privies.

A Short Lecture on Tobacco.— The following appeared in a recent issue of the Bulletin Chicago School of Sanitary Instruction: "Tobacco is not a food, nor a substitute for food. It in no way serves the body's needs. It is neither a safe stimulant nor a desirable sedative. It is not fit for use as a medicine. It is therefore plain that people would be much better off without it."

Why Worry About the Chinese? — Dr. Hamilton Wright was commissioned to gather information regarding the use of opium and other habit-forming drugs, to be used in the coming International Opium Congress. This congress is planned, it will be remembered, to help China rid herself of the necessity of accepting opium from England. Through Dr. Wright's investigations, it has been learned that the United States actually consumes more habit-forming drugs per capita than China!

Hospital Physicians.— There is a movement at Johns Hopkins to prevent medical school instructors from engaging in private practise, the object being to oblige them to devote all their time to teaching and research work.

Rabies, or Hydrophobia, Bulletin.— The Department of Agriculture has recently issued a bulletin descriptive of rabies, or hydrophobia, in which many LIFE AND HEALTH readers may be interested. It may be obtained by sending a postal to the Secretary of Agriculture, Washington, D. C., requesting a copy of Farmers' Bulletin 449.

Compulsory Opening of Windows.— A revolutionary move is proposed for conservative London. It is no less than a law, suggested by the health committee of the Paddington Borough Council, that all windows of sleeping apartments be opened wide for at least two hours a day, and for floors to be swept once a week. Inspectors are to be appointed to detect evasions of the law.

Pure Milk.— The New York Demonstration Company, recently incorporated, has undertaken to furnish sixty stations for the committee on reduction of infant mortality with absolutely pure milk of high grade, such as the high-class dealers charge fifteen cents a quart for, at eight cents a quart. The dairy, which is under charge of a competent bacteriologist, has a capacity of eight thousand quarts a day.

The "Fly" Committee.— The fly-fighting committee of the American Civic Association, described in the May issue of LIFE AND HEALTH, is to begin its work of giving cash prizes for the best essays on the fly in the New York schools of the Children's Aid Society. Bulletins regarding the fly are furnished the teachers, and from these they instruct the children regarding the habits of the fly. Interest in the prize, of course, stimulates to intense interest in the subject.

Certification of Butter.— Recent investigation has demonstrated the presence of tuberculosis germs and other pathogenic organisms in butter purchased in the California markets several weeks after churning. For this reason a bill was passed providing for the certification of butter by milk commissions organized under the laws of the State. In order that the butter may be certified, the commission must be satisfied as to the quality of the cream, the carefulness of the Pasteurization, and general cleanliness in handling and packing. Other States might do well to consider similar legislation.

A Plea for Girls.— A speaker at the recent meeting of the Playground Association urged that girls be dressed in simple clothing not "too pretty to spoil," preferably a loose gymnasium or bloomer costume matching the dress. Another speaker made a plea for the tomboy. It is the tomboy, a little reckless of her clothing, who, later in life, is more likely to be endowed with health and efficiency.

International Opium Conference.— Negotiations between England and China, for the eventual extinction of the opium traffic, have been concluded, and India is to reduce annually her exportation of opium at such a rate that it will cease entirely in 1917. The International Opium Conference has been postponed to 1912, owing to the fact that Germany, Japan, and Portugal are not ready to present data regarding their opium trade.

Human and Bovine Tuberculosis.— Professor Eber, of Leipzig, Germany, as a result of painstaking experiment, announces his opinion that human and bovine tubercle bacilli are one and the same. He experimented on fifteen cases of human tuberculosis and two cases of pure bovine tuberculosis. From these he was able to produce sixty-seven pure cultures, which he injected into 54 cows, 235 rabbits, and 360 guinea-pigs.

Further Regarding Salvarsan.— "My position at present in reference to the use of Salvarsan in organic nervous diseases is that probably this drug will be as ineffective as mercury. In view of its tendency to induce degeneration, and especially in certain nerve-fibers, it is too dangerous a drug, until we get further reliable information, to use in these diseases." So says Dr. Edward Fisher, of New York, before the State Medical Society, as quoted in the *Journal of the American Medical Association*, May 13, 1911.

Outdoor Recreation in Summer.— As has been demonstrated by the experience of many cities, young men and women who work in the factories during the day will, on summer evenings, use the playgrounds, if they are well lighted and provided with a good leader. The older people attend to witness the play of the younger people. On some grounds, motion pictures are exhibited free of charge. Families come and stand for hours watching the pictures, and enjoying the association with the neighbors. This does away with one evil of the moving-picture show,— the bad ventilation. If the pictures are of an educational and elevating nature, they may be a power for good as well as a means of entertainment.

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Main Building

LOMA LINDA

The ("Hill Beautiful")

A Charming Health Resort in Southern California

The clear blue skies of Southern California, the beauty and fragrance of the trees and flowers, and the splendid panorama of the famous San Bernardino valley which spreads out before the visitor's gaze, combine to make Loma Linda one of the most beautiful places in the world. At the crest of a commanding elevation, the Loma Linda Sanitarium overlooks this whole delightful scene, the fertile, fruitful valley at its feet, the tops of sun-kissed, snow-capped mountains shimmering in the distance.

The Loma Linda Sanitarium offers its guests every comfort and convenience. The equipment is complete and the medical attention all that could be desired. Sixty-two miles from Los Angeles on the main line of the Southern Pacific.

FREE: A book of views in natural colors. Send letter or card to-day, with your name and address for this souvenir book

LOMA LINDA SANITARIUM, Loma Linda, Cal.

San Bernardino Valley from the Sanitarium

Three Daisies

Fresh—crisp—delicious
Won its Favor through its Flavor
Made from Selected White Corn

NONE GENUINE WITHOUT THIS SIGNATURE

W. K. Kellogg