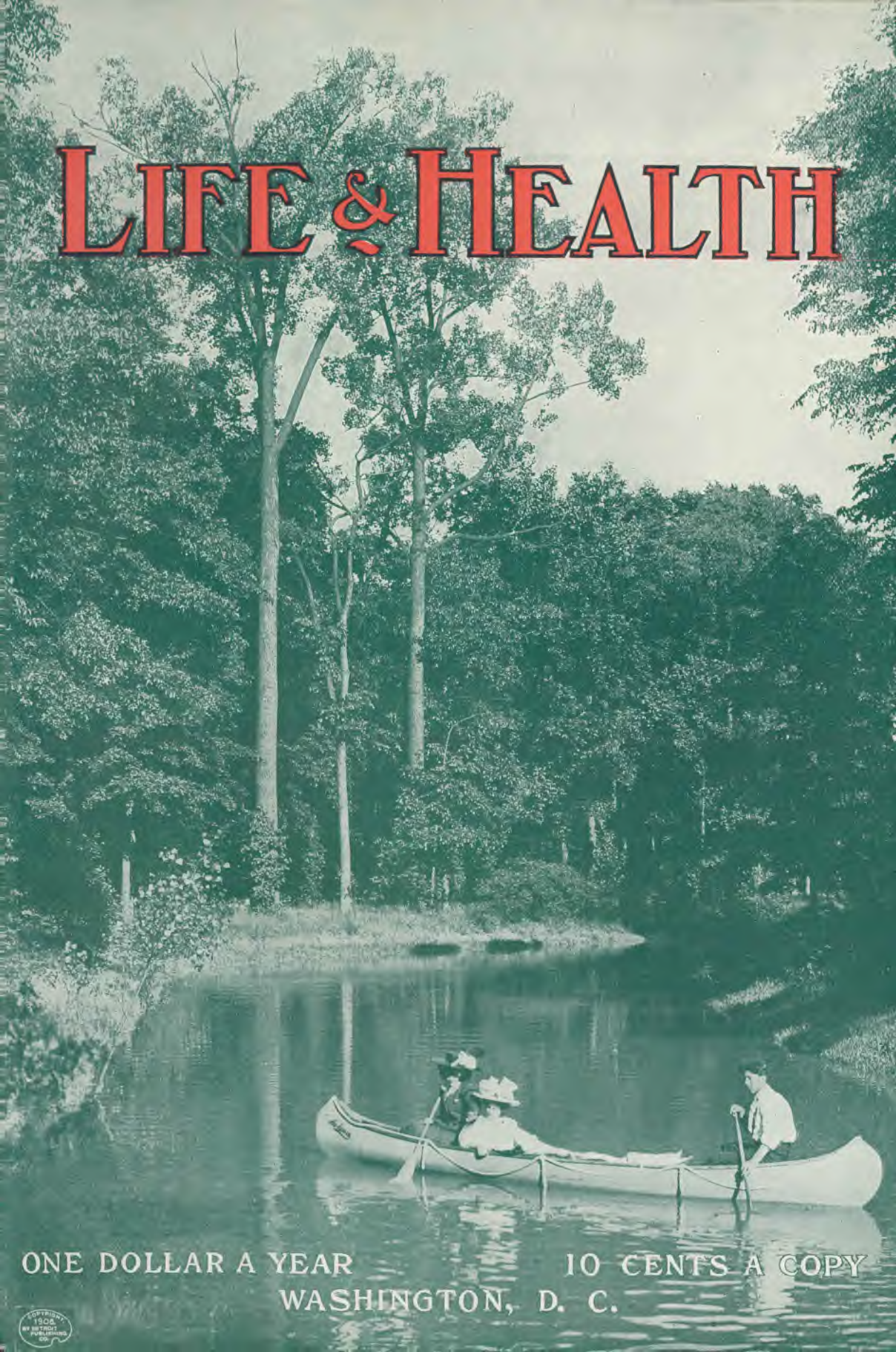
LIFE & HEALTH



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Among other important articles on temperance, which will shortly appear, are the following:—

"The Relation of Parental Alcoholism to Tuberculosis in the Children," by Dr. Achard; "The Moderate Drinker," by Dr. Mason; "Prohibition From a Medical View-point," by Dr. Crothers.

Mrs. Eva K. Cogshall will furnish another instructive article on Healthful Dress.

Geo. E. Cornforth, in charge of the culinary department at the Melrose Sanitarium, has an article, "Some Facts About Foods."

Dr. A. B. Olsen of the Caterham Sanitarium, England, has a most forceful and timely article on "Food and Flies."

Every effort is made to have each number replete with timely practical matter.

CONTENTS

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ROCKS

LIFE and HEALTH

"Something better is the law of all true living"

Vol. XXIV *Takoma Park Station, Washington, D. C., July, 1909* *No. 7*

Errors in Diet as Related to Inebriety and Crime[1]

D. H. Kress, M. D., Superintendent Washington (D. C.) Sanitarium

DIETETIC errors I believe to be largely responsible for the craving which exists for alcohol, and indirectly for the *results* of alcoholism. If this is so, reforms must begin in the home.

A person who possesses this craving may pass through life without ascertaining what he craves; the first glass, however, may be sufficient to make him a slave to drink, after once discovering that alcohol satisfies the craving.

A woman in Liverpool, who was an inebriate, said to me: "My doctor recommended me to take some ale after giving birth to my second child; from the time I took the first drink, although I did not like the taste of it, there has been present a craving for it which I can not resist. I often," she said, "go past a saloon as rapidly as I can, only to return and enter, and when one drink has been taken, all self-control is gone." She was desirous of doing right, but was evidently one in whom there existed a peculiar mental weakness. She would have been safe from drink, even though this mental disease existed, did she not in addition possess a *craving* for drink, a craving which she was probably unconsciously cultivating in her home by the food she ate.

Alcoholics, in addition to an unstable nervous condition, have an overmastering craving satisfied only by alcohol.

Some persons with this craving are well balanced and able to subdue it. Others may not know for years what it is they crave.

Certain foods notoriously produce this craving for drink, and mothers may at the table be educating their children for inebriety.

Even healthful foods, if improperly eaten, or in too large quantity, predispose to drunkenness.

Simple foods — the fruits, grains, and vegetables — simply prepared, take away a craving for drink and allied excesses.

I remember hearing one of England's leading temperance lecturers say, at a public gathering, "I have great sympathy for the woman who is a slave to beer; because, although it is fifteen years since I touched it, I still possess the same desire for it I did then."

Recently I heard a noted American temperance lecturer say, "No man or woman in this audience is fonder of the taste of cocktails and wine than I am. The taste has been handed down to me,

[1] From a paper read before the American Society for the Study of Alcohol and Other Drug Narcotics, Hotel Raleigh, Washington, D. C., 1909.

but I hate the stuff." In what respect do these temperance advocates differ from their more unfortunate sister? In common with her they possess a *craving* for drink, but while they are mentally well balanced, their more unfortunate sister is not.

Could we enter the homes of these lecturers on temperance and note what they eat and drink at their meals, we should probably find an explanation of their craving.

The saloon-keepers, by experience and observation, have learned that certain foods create an unnatural irritation or thirst that calls for alcohol. They keep a lunch-counter for their patrons, not because they have compassion on the unfortunate poor. If it were pure benevolence on their part, we would expect them to feed not merely the drunkard, but the drunkard's wife and children. With them it is a matter of business. The secret of the free lunch table we may discover by taking an inventory of the food that is found upon it. It is not laden with juicy peaches, pears, oranges, etc. They know such foods would ruin their business. We find upon this table sausages, pickled pigs' feet, smoked ham, mustard, pepper, and other irritating products. Experience has taught the saloon-keeper that these things create a thirst which alcohol satisfies.

Many a good wife and mother is supplying her husband and sons with the same kind of food that is found on the table in the saloons, and is thus unconsciously cultivating in the members of her family a craving which leads to the open saloon door. I believe, with Dr. Lauder Brunton, that schools of scientific cookery conducted for the benefit of the wives and mothers of the laboring classes would do more to abolish strong drink and close our saloons than any number of teetotal societies.

There can be no doubt that flesh foods, served so abundantly at our modern tables, are responsible for much of the craving which causes drunkenness. In countries where flesh foods are freely used, alcohol is also freely resorted to. The meat eater finds it necessary to keep in a mild state of alcoholic intoxication all the time.

Had man always continued to eat freely of fruits, and to live on the simple foods to which his attention was directed, strong drink would probably be unknown; for it is impossible for any one to cultivate a taste for fruits and a craving for strong drink at the same time; and furthermore, it is impossible for an inebriate, unless he is an utter degenerate, to live on these simple foods *exclusively* for six months without losing his craving for strong drink. On this point, the editor of the London *Clarion* some time ago related his experience, in an editorial. He said: —

"I have just turned vegetarian. My friends are surprised; so am I. But whereas they are surprised that I have adopted this diet, I am surprised that I did not do it years ago. In one way the effects of the diet have surprised me. I have been a heavy smoker for more than twenty years. If there was anything which I feared my will was too weak to conquer, it was the habit of smoking. Well, I have been a vegetarian for eight weeks, and I find my passion for tobacco weakening.

"Again: I have found *I can not drink wine*. Why do I write these confessions? — Because these things have come upon me as a revelation; because I begin to see that the great cure for the evil of national intemperance is not a teetotal propaganda, but vegetarianism."

That which his *will* was too weak to conquer while subsisting on a mixed diet, he had no difficulty in giving up after he had left flesh out of his dietary.

For years we have successfully em-

ployed this diet in connection with other measures in treating alcoholics in our sixty or more sanitariums, scattered throughout the world. Our experience is that upon a non-irritating, non-stimulating diet the craving for drink weakens, and after a time disappears, but reappears as soon as meat and irritating foods are again eaten.

The Salvation Army, in some of its homes for inebriates, has also adopted this diet, with good results. At a public gathering in England, Staff Captain Hudson, matron of the South Newington Inebriates' Home, in relating her experience in the treatment of cases, said: "Speaking generally, the benefits of this diet are incurable. Lazy, vicious, bloated, gluttonous, bad-tempered women, who had hitherto needed weeks, and even months of nursing and watching, to my astonishment and delight, under this new treatment made rapid recovery."

The majority of the Japanese live chiefly on rice and fruits, and they undoubtedly possess the best dispositions to be found among any people in the world. On the streets of Japan fighting and quarreling are seldom seen, and drunkenness is said to be unknown. Courtesy and ceremonious manners are as prevalent in rice-eating Japan as grumbling and beer drinking are in beef-eating England.

Overeating is another cause of drunkenness. It is generally conceded that two thirds of the food consumed by the average civilized man would sustain him well; the remaining one third is therefore superfluous, and furnishes nourishment for bacteria. The poisons formed serve to irritate and disarrange the organs of digestion. The local and general irritation produced creates a thirst that can not be quenched with water, and nothing will afford relief so quickly or effectively as will alcohol. This the glutton soon discovers. Naturally, therefore, overeating leads to drunkenness.

A great variety of even wholesome foods may cause similar symptoms. Both nature and science teach that the digestive organs are capable of digesting one or two simple foods, but when, as is ofter the case, potatoes, cabbage, milk, butter, puddings, fruit, pastry, etc., are taken at the same meal, indigestion, fermentation, and autointoxication are apt to result. By the putrefaction of protein in the colon, toxins are formed, which tend to increase the blood pressure and produce neurasthenia.

The inebriate must be taught not merely what to eat, but how to eat. The free use of soft starchy foods, and improper mastication, are causes of drunkenness, since they favor fermentation and autointoxication; and the free use of liquids with meals is responsible for digestive disorders and fermentation. Of all creatures, man alone drinks with his meals. Drinking with meals is wholly unnatural. Nature designs that the food should be moistened with saliva, not with drink.

Condiments create a desire for narcotics. Because food is not allowed sufficient time in contact with the nerves of taste located in the mouth to derive satisfaction from its delicate and natural flavor, pronounced artificial flavors are added, to produce an immediate effect upon the palate. This has led to the free use of salt and sugar, and to the use of pepper, mustard, and other substances which irritate the stomach, all of which create and help to keep up the thirst for narcotics.

Professor Metchnikoff says: "The human system is poisoned in no other way so frequently as by the innumerable microbes which swarm in the large intestine." Recognizing the evils resulting from the formation of these poisons, by the action of this innumerable host of

microbes in the colon, he finds fault with man's construction. He says: "This organ is not only useless in man's present state, but positively harmful," and predicts that in the future it may be successfully removed, with advantage to the individual. "Man," he says, "is very far from being perfectly constructed." The difficulty, however, lies in man's inventions, and not in his construction. So long as man feeds on unnatural foods, he will cultivate bacteria, and the poisons formed will create an unnatural thirst, which will lead the mentally defective to alcohol for relief.

Hufeland, the eminent German physiologist, said: "Animal food is more liable to undergo putrefactive changes in the alimentary tract, while substances of the vegetable kingdom contain acid principles that retard our mortal enemy, putrefaction."

Cheese is not a suitable food for man. While it contains desirable food elements, these have associated with them irritants and other undesirable substances. Cheese is not only difficult to digest, but it contains bacteria in large numbers, and aside from this, it is itself a product of putrefaction. Like meat, it creates irritation, or thirst, which alcohol will allay.

The aim in diet should be to make the intestinal culture media as unfavorable as possible for the existence and propagation of germs, or to secure as far as possible an aseptic, or sterile, condition of the alimentary tract. The foods which are best suited to bring this about are the grains, nuts, and fruits, taken in their most natural state.

From my study and observation, I am forced to the conclusion that the food question when given the attention by physicians, ministers of the gospel, and temperance advocates that it demands, will not only remove the existing desire for drink, but will result in the removal of much of the crime and domestic unhappiness that at present exists.

Takoma Park, D. C.

The Inland Printer

A STORY IN FIVE PARTS

The green apple — enjoyment — misery — remedy — recovery.

The Prevention of Autointoxication

J. R. Leadsworth, B. S., M. D., Physician, Loma Linda Sanitarium

THE use of curdled milk and other lactic-acid products, either as an article of diet or as a therapeutic agent, seems not to be a modern remedy. Its use in some of the countries of the Old World dates back to the most ancient times. According to the true rendering of Gen. 18: 8, referring to the entertainment furnished by Abraham to the angels, it seems evident that the butter spoken of was simply curdled milk. In a work by Dr. Combe, of Lausanne, Switzerland, historical evidence is presented to show that the properties of curdled milk were understood hundreds of years ago.

Curdled milk has been favorably known since ancient times.
The attention has been directed of late to the virtues of curdled milk, especially certain European varieties, in intestinal disorders.
Interested companies have attempted to show that proprietary lactic-acid ferments have a superior value.
Recent investigation seems to demonstrate that this supposed superiority is very doubtful.
Perhaps there is nothing in the line of lactic-acid preparations superior to good buttermilk.
But it is better to avoid infection, by means of right foods, than to counteract infection by means of lactic-acid cultures.
The foods that are most unfavorable to intestinal putrefaction and intoxication are the fruits, grains, and vegetables.

For instance, in Egypt its use under the name of *leben* goes back to the greatest antiquity. In ancient Greece and in Rome curdled milk formed an important part of the peasant's food. Pliny mentions that at feasts of the patricians the offering of curdled milk at the end of the banquet was never omitted. Also at this ancient time veritable cures of curdled goat milk were made.

The same author states that the reputation of curdled milk had spread to France during the reign of Francis the First. This monarch was very much debilitated and reduced to a languid state, which became worse each day. The most efficient remedies then known were used in vain. Francis learned of a Jew living in Constantinople who had the reputation of being able to cure such conditions by the prescription of a certain regimen. Francis thereupon commanded his ambassador at the Sublime Porte to send this Hebrew healer to Paris. The latter, after the lapse of considerable time arrived in Paris, surrounded by four ewes. The king lived upon curdled ewes' milk, and is reported to have rapidly regained his health and strength.

Curdled milk is used quite extensively throughout European and Asiatic Turkey, in Greece, Montenegro, Africa, Servia, and Bulgaria. The best known and most studied of all the Oriental curdled milks is the Bulgarian, which is said to be the most active lactic ferment known.

Frequent reference in the lay and medical press as to the evil effects of intestinal self-poisoning and its influence upon longevity has somewhat disturbed the mind of an intelligent, read-

ing public. The premature conclusions as to the efficiency of lactic-acid products in overcoming autointoxication and deferring the appearances that mark the approach of old Father Time, have induced a number of enterprising Americans to embark in the manufacture of this rejuvenating substance. The best known of these products are lactobacilline, fermenlactyl, kefilac, yoghourt, and lactine. Since these preparations are advertised as containing the original Bulgarian bacilli and as being so much more efficacious intestinal antiseptics than ordinary sour milk, it is quite natural that the public would be ready to procure them at any cost.

ON DRESS PARADE — NO AUTOINTOXICATION HERE

When told by Elisha the prophet to go and dip in the river Jordan to cure his leprosy, Naaman became indignant that such a simple thing could afford the coveted relief. He expected something mysterious, something more difficult to perform. The same is true of the public to-day. They are incredulous enough to believe that if plain, home-made buttermilk is good because of its lactic acid, these commercial preparations are much better, else why would they be on the market?

To settle this question to the satisfaction of the medical profession, the *American Medical Journal* encouraged careful laboratory examination and test of each of the artificial lactic-acid products named above. Most of the products did not show the bacillus Bulgarias at all. Commenting upon the results of these tests, the *Journal* says: "There is so far no convincing evidence that sour milk prepared with commercial cultures is preferable to naturally sour milk as far as the therapeutic effect is concerned. . . . In spite of Metchnikoff's statement that the presence of yeasts is detrimental, the commercial preparations investigated, excepting only lactine, contain yeast in large numbers."

It can readily be seen that as these commercial products are not better than ordinary buttermilk, it is useless to waste money for them simply to enrich the manufacturers. If any are so sit-

uated that they can not obtain fresh, clean buttermilk, they can make the artificial product. Good, fresh, sweet milk should be procured; and after sterilizing, it should be cooled to about the temperature of the blood. Lactic-acid tablets can be obtained in almost any drug-store. Six of these should be dissolved in a quart of milk, and then kept under just such conditions as would favor the rising of bread. In from fifteen to twenty-four hours the milk will have formed into a solid curd. It should then be placed in the refrigerator or cooling room, where the fermenting process is checked. When cooled, it is ready for use. As in making bread, a half cup of the curd may be kept for the next start. By this process the lactic-acid ferment may be provided inexpensively, and, according to the quotation given above, is equally efficient with the more expensive products.

But it should be borne in mind that the demand for substances to destroy these alimentary poisons exists because mankind has replaced the natural foods by that which was never designed to be eaten. The experiments of Combe of Lausanne have shown that the cereals are more effectual intestinal disinfectants than any of the milk products. He found that where a subject was fed several ounces of flesh and five times as much of the farinaceous foods, such as cereal flours, with rice and alimentary pastes, the putrefactive tendency of the meat was almost entirely overcome. In harmony with the findings, the following propositions were laid down: —

1. The starch foods, such as cereal flours, rice, and alimentary pastes, contain less nitrogen, and of a kind that resists putrefaction.

2. The farinaceous substances named above undergo changes in the alimentary canal which give rise to lactic and succinic acids. These changes take place slowly, hence the lactic acid is distributed all through the bowel, instead of being exhausted in the upper portion, as are the milk products.

3. The starch foods constitute a bad culture medium for putrefactive germs.

4. The starch foods greatly aid the gastric function of secretion and digestion.

5. The farinaceous foods are well borne in all affections of the large intestine, which is the pre-eminent site of intestinal nitrogenous putrefaction and the stronghold of inflammation.

It does not require any argument, in the light of these facts, to convince one that the simple and natural diet, as furnished by the Creator in the beginning, is the one that would insure the greatest longevity. The grains are seen not only to resist putrefaction, but actually to antagonize it. The fruits are also known to afford a mild antigermicidal action in their passage through the digestive canal. Then if nuts are thoroughly masticated, eaten in moderate quantities, and combined with a liberal portion of the fruits and grains, it can be seen that we need have no fear of autointoxication, and the large list of diseases that arise therefrom.

Loma Linda, Cal.

GARDEN REFLECTIONS

R. O. Eastman.

ILLUSTRATIONS BY CHAS W. ROSSER

THERE is one crop that I have never written about nor pointedly referred to in any of the several garden sketches that I have been guilty of during the past two years; yet that crop is surely as important as any, perhaps the most profitable of all. It is my annual crop of ideas. And what would be a better time to discuss them than here in July?

It is hot — that is to say, it will be when this instalment reaches you. I can see you on the grass plot in the shade, or perhaps down in the orchard where the shade of the trees makes the heat of summer less unbearable, listening to the droning hum of the bees and the distant tinkle of the cow-bells, and every now and then trying to read. Lucky you, if such is your privilege. But then I look at that other picture, and — no, I don't shudder, I sweat! I see the cavern-like orifice of the flat-dweller. Up there between four brick walls, he abides like a cliff-dweller. His curtains are down to shut out as much of the heat as possible. He likewise shuts out the air. More air, more heat. So he takes less of each. Miserable man! I have been a flat-dweller myself.

"MISERABLE MAN! I HAVE BEEN A FLAT-DWELLER MYSELF"

Let us get back to the orchard and the bees, and there build castles in the air. Somebody-or-other, of sufficient greatness to say things that are remembered when his name is not, remarked that it is all right to build castles in the air; that is the place to build them. And I know he is right. I don't want any of the real kind. A two-story cottage is plenty and enough. But building castles in the air is a different thing. We all engage in these architectural impossibilities, and it is good for us that we do. Was it Emerson who said, "Who aimeth at the sky shoots higher much than he that means a tree?" I ought to know. That was part of my graduating address when I left high school. But then, there is some excuse; for I didn't put that part in — the teacher did.

Still it is true, as some have averred, that when we build castles in the air, there are fragments that float down to earth and form the foundations of our highest and best achievements. Who would have it otherwise? I wouldn't give ten cents for a boy who had not at some time figured out just what he would do when he became president.

Every individual aspires to greatness, at some time in his career. Most of those, I believe, who keep on *aspiring*, actually *achieve*. Those who quit, do so either because they feel they are already great enough,— and the world holds not a few

such persons,— or because they have lost all hope and all ambition — and the world holds *more* of these. True greatness lies in capacity, not in fulness. Solon was the wisest man in Greece — we have his own word for it. He had a good reason for reckoning himself as the wisest. "I am the wisest man in Greece," he said; "for the others all think they know a great deal, while I am the only one who knows that he knows nothing." Jesus Christ was the greatest man ever in the world because "he emptied himself," and his capacity both for receiving and for dispensing became infinite.

"A MAN BEGINS TO REALIZE HOW SMALL A THING HE IS"

What has this to do with gardening? It is the choicest fruitage of my crop. My garden has taught me — more than anything else, I believe — the sublime mediocrity of man. A man begins to realize how small a thing he is when he stands in God's great laboratory and watches the Infinite mix in the crucible earth, sunlight, and air, and bring forth a harvest. David sang, "When I consider thy heavens, the work of thy fingers, the moon and the stars, which thou hast ordained; what is man, that thou art mindful of him?" But David would never have read God in the heavens if he had not first observed him in the fields where he fed his sheep. No human mind can ever master the wonders of the earth, let alone the mysteries of the heavens.

In my domestic abode there is a certain corner distinctively my own, which custom has designated as my "den," though it is inhabited by neither birds, beasts, nor creeping things. This is the final resting place of some dozens of periodicals which I receive. Most of these are thrown together as a common lot. But in one corner you will find, if you look carefully, a stack or two piled up in an orderly fashion as something worth keeping. These are my farm and garden papers. I have found out that they cover a wider range of thought and study than any other papers I receive. That is why I have to keep them all. For years these papers have been published, and there has never been an issue that did not contain something new; for the garden itself is a book, the pages of which are constantly turning, with never a repetition of either text or illustrations.

Last month when I finished the sketch which appeared under this heading, I asked myself, with some degree of anxiety, "What will it be next month?" The answer came like a whisper, "The Psychology of Gardening." Perhaps there is more or less psychology in this wandering "reverie." I rather think there is. Still I am glad I did not put the phrase at the top for a title; for if I had, I am sure nobody would have had the hardihood to read it. Psychology always suggests to me two expressions which are in somewhat common use today, "Christian Science" and "Psychotherapy." Without wishing to incite any debate, I will merely state that I am not a Christian Scientist nor a Psychotherapist.

Psychotherapy is simply a high-sounding word for mental healing. There is such a thing as mental healing. That is what we have asylums for. Properly, mental healing is not a cure *by* the mind, but *of* the mind. The humbug of the thing all comes simply in the exchange of prepositions.

Somebody has remarked that we are all crazy more or less, the only difference being that some are crazier than others.

However that may be when reduced to an actuality, the fact remains that sick minds, whether sick a little or a great deal, can best be repaired by the Maker, — and to my way of thinking there is no better workshop than the garden. And for want of space for further argument, I will simply say, Try it yourself.

I have just come in from planting twenty-one rows of peas. My specialty this year will be peas. I have now just about thirty rows, and they will average in length considerably over one hundred feet. I have just figured out that this means over half a mile of peas. Now every time I go through those peas with the wheel hoe,— on each side of the row,— I am pretty sure to get some exercise, don't you think so? Last fall I noticed two physical culturists who went by my place every once in a while, carrying between them a stick weighted down with a heavy piece of iron. Think of the intelligent manpower that was going to waste! How many rows of good, succulent vegetables that energy might have produced if harnessed up behind a seeder and wheel hoe through the season! The physical culturists will do that stunt and pay so much a week for the privilege of doing it —and others — according to the authorized version; but show them a hoe and an acre of ground, and their interest wanes. One is *play;* the other is *work.*

"LAST FALL I NOTICED TWO PHYSICAL CULTURISTS"

But did you ever stop to think what is the real distinction between work and play? Figure it out yourself, and you will find that as a general thing — in practically all cases — the work or play engaged in is a matter of the individual's choice; the distinction is entirely a matter of imagination. It has often been said, What's one man's work is another man's play. Your boy plays ball. He becomes proficient, and joins a club. Finally he is offered pay for playing ball. He makes a season's contract, and then he really *works* at baseball, instead of playing it. Play is not always even a recreation. I am tempted to say that it is seldom a recreation, properly considered, as most men take it. The busy office man whose labors all day have entailed great mental exertion, comes home or goes to the club to play chess. The man who has been working over books and papers, goes home to read, while the blacksmith will play ball on the back lot as long as the light of day lasts, even postponing his supper for the game. The carpenter or mechanic will come home to work in his yard or garden. Look around in your own neighborhood and among those who tend their own places, see which are best kept up, which lawns are cleanest cut, which gardens are most prosperous in appearance, and you will find that they belong to the men whose daily labors are physical rather than mental. Yet they are the ones who need it the least of all.

For my own part, I gave up playing a long time ago. Not that I do not like to play. On the contrary, I do. But I found that "just playing" consumed altogether more time than I felt I could afford to give. So I naturally fell into a system which gives me much more recreation than the ordinary individual receives, but in pursuance of which practically all my time becomes productive. My garden, my wood-pile, my lawn, and my fruit furnish me an intense physical action for a regular interval each day. My inside work calls for mental activity. One becomes recreation for the other.

Respiratory Gymnastics as a Means of Combating Abdominal Weakness

Charles Shattinger, M. D.

IN the course of the last twenty-five years, evidence has accumulated to show that some one or more of the abdominal organs are displaced downward in many persons. Such displacement occasionally comes about in a mechanical way, from an injury received, or from the pushing or pulling of an organ out of position by a growth, a deformity of the spine, a dropsical collection, or in consequence of certain inflammatory diseases. The corset or tight waistband may offend in this manner. In other instances, the displacement has been made possible because an exhausting illness, great loss of flesh, or child-bearing has thinned and weakened the abdominal walls. The inactivity to which many past middle age are disposed may lead to the same result.

In most cases, however, the downward displacement has not been acquired in any of these ways, but is the incidental expression of a constitutional state existing at birth. An individual possessing an organization of this kind is usually of slight build, pale, feeble, nervous, and easily fatigued. Muscular development is deficient. The chest is long, narrow, flat, and sunken. The ribs exhibit various anomalies, especially the lower ones, which slant downward too much, and do not spread apart enough at the pit of the stomach. This makes the circumference of the lower chest too small. That most important muscle of respiration, the diaphragm, which forms the partition between the thorax and abdomen, and to which the stomach, spleen, liver, and kidneys are firmly attached, does not arch well up into the chest as it should, but is flatter and placed at a lower level than normal. The lowered position of the diaphragm necessarily entails a descent of the organs which are bound to it. Furthermore, the contents of the upper abdomen, which ought to occupy about half of the chest, can not find sufficient room within its contracted lower portion. Hence, they are crowded downward, and in turn encroach upon the space belonging to the organs beneath them.

With the exception of a short piece of the small bowel and a segment of the pancreas, none of the abdominal organs is fixed in place. Their natural supports

are the muscular walls of the abdomen. They rest upon one another as layers of balls completely filling a box would do. As long as the walls of the box do not yield, every ball keeps its position. Almost every instance of downward displacement of abdominal organs is likewise one of thinned and stretched abdominal walls, and of weakened, and often wasted, abdominal muscles.

Although these muscles are used to bring about movements of the trunk, their actions in this regard are in a certain sense accidental and subsidiary. Primarily, they are muscles of respiration. Their function, moreover, is both expiratory and inspiratory. To take a full breath, we must elevate the ribs, and make the diaphragm draw its arch down toward the abdominal cavity. To breathe out deeply, we contract the abdominal muscles, thereby pulling the ribs down again, and at the same time pressing against the abdominal organs, which drives them up against the diaphragm, and helps to restore its arch. This constitutes the expiratory action of the abdominal muscles, and is generally understood.

Their inspiratory function is less well known, but is readily apprehended from a few simple considerations. As the diaphragm is attached by its circumference to the lower ribs, it would draw these inward when contracted vigorously. This would seriously interfere with its work, since every muscle must have a fixed point from which to act. Furthermore, were the diaphragm allowed to draw the lower ribs inward, the chest would here be made smaller, contrary to what is needed for deep inspiration. To obviate all this, the abdominal muscles are kept tense while breathing in. The organs in the upper abdomen are thereby prevented from being pushed down by the descending movement of the diaphragm. Instead, they are pressed laterally against the inside of the lower ribs, neutralizing, or even exceeding, the inward traction of the diaphragm. The lower circumference of the chest is thus not merely maintained, but actually increased. When the resistance of the abdominal muscles is sufficiently strong, the downward pressure of the diaphragm, assisted by the upward pull of certain muscles connected with the ribs, may literally lift the chest up, and, as it were, off from the abdominal contents, producing a pronounced type of thoracic breathing.

From the foregoing exposition, it is apparent that weakness of the supporting apparatus of the abdominal organs is weakness of a breathing apparatus. Taken in connection with the observations previously made concerning faulty development of the chest and diaphragm, this point of view becomes of the greatest practical significance. Rational efforts to prevent or correct a sagging of abdominal organs will have to be based upon the facts which have been ascertained, and accordingly must direct themselves toward: —

1. Development of the abdominal muscles in general, and of their strength as auxiliary agents of inspiration in particular.

2. Enlargement of the chest, especially of its lower half.

3. Development and elevation of the diaphragm.

This is no easy task. Perseverance is the first requisite. With it and time, even those past the plastic period of life may still achieve satisfactory results. But when age has stiffened the chest and joints, or when the muscles have undergone extensive degeneration, then of course little can be accomplished.

The most difficult part of our endeavor will be to raise the sunken arch of the diaphragm. There is at our dis-

posal for this purpose the negative air-pressure which exists naturally within the chest, and which of necessity results in an upward suction on the diaphragm. A forced inspiration will make this suction almost four times what it is with ordinary inspiration. The suction is utilized to the utmost when such an inspiration is entirely thoracic, the abdomen being drawn in when the lungs fill. Although greatly reduced, the suction will still remain appreciable at the end of the following expiration, provided this be kept shallow and the mouth open. Since the abdomen is a closed cavity, and the organs in its upper part are bound to the diaphragm, every ascent of this muscle is certain to draw up the abdominal contents. That the amount of this lifting is not to be despised is evident from the fact that in health a forced expiration moves the liver upward about two inches. Forced inspirations will assist likewise in enlarging the lower chest. According to the degree of inspiration, the circumference of the diaphragm increases from one to four inches. In a healthy man, a forced inspiration adds from one twelfth to one seventh to his girth at a point a little below the tip of the breast-bone. Certain special exercises will give further help in this direction.

The methodical practise of deep breathing, no matter how, is sure to result in some increase in chest capacity. A general enlargement and mobilization of the thorax is best secured, however, by exercises which couple action of the accessory muscles of inspiration with regular and full intake and outflow of breath. By accessory muscles of inspiration are meant those which are called upon for aid only in unusual efforts of breathing, their proper and ordinary function being to straighten the spine, bend the head, move the shoulders, and change position of the arms. Development of the diaphragm is attained by deep abdominal breathing, which also strengthens the muscles running crosswise of the abdomen. On the other hand, training the abdominal muscles for their inspiratory work necessitates the practise of a purely costal type of respiration. This object is promoted also by deeply inspiring while a movement of the lower limbs is executed in a manner which obliges the abdominal muscles to become tense (e. g., exercises 19 and 20).

Besides rendering the services referred to, the cultivation of respiratory activity as outlined, aids the circulation within the abdomen. Every inspiration acts like a suction-pump upon the great vessels which pass from the abdomen into the chest, while their contents are at the same time squeezed onward by the descent of the diaphragm. But in order that this may take place, it is necessary to keep the abdominal walls from bulging out, either by muscular contraction or by pressure applied outside.

In addition to breathing exercises proper, certain movements of the trunk and lower limbs will have to be practised when it is necessary to develop the abdominal muscles in their capacity of natural supports of the organs within the abdomen. Although these movements are indispensable for the purpose, none of them are here pictured, because they do not belong to the subject of this article. Neither will space allow the presentation of a full course of breathing exercises. Enough are shown, however, to illustrate the principles involved, and to guide those interested in the right direction.

The pupil must note accurately the starting position, *exp.*, and the ending position, *ins.*, from which two all intermediate positions are readily deduced. Breathing must be steady and timed in exact accord with the movement, so that

the end of inspiration and of expiration is reached the same moment as the position which the illustration designates to be the corresponding one. The movements should be made slowly, evenly, and with the mind centered upon their execution. Where no apparatus similar to that which appears on some of the illustrations is accessible, and for home practise, dumb-bells, weighing from one to three pounds, may be used. For exercise 5, a short iron bar of like weight may be employed instead of dumb-bells. Exercise 6 can be taken with a strong elastic cord or webbing having a loop at each end for the hands, and a total length, unstretched, of about two feet. The arched posture shown in Figs. 6 and 9 can be imitated, while lying on the floor or on a couch, by placing a hard pillow below the shoulders under the back and loins. Exercises 16, 19, and 20 are taken while lying flat on the floor or on a rug. In the case of 16, the abdomen is weighted with a bag containing from one half to three pounds of shot or sand. Exercises 1, 15, 16, 17, 19, and 20 are all "free" exercises, taken without any kind of apparatus.

St. Louis, Mo.

In the following illustrations "*exp.*" represents end of expiration; "*mdw.*," midway; and "*ins.*," end of inspiration.

1 *exp.*, Shoulder Blades Separated

2 *exp.*, Shoulders Dropped

3 *exp.*, Head Flexion

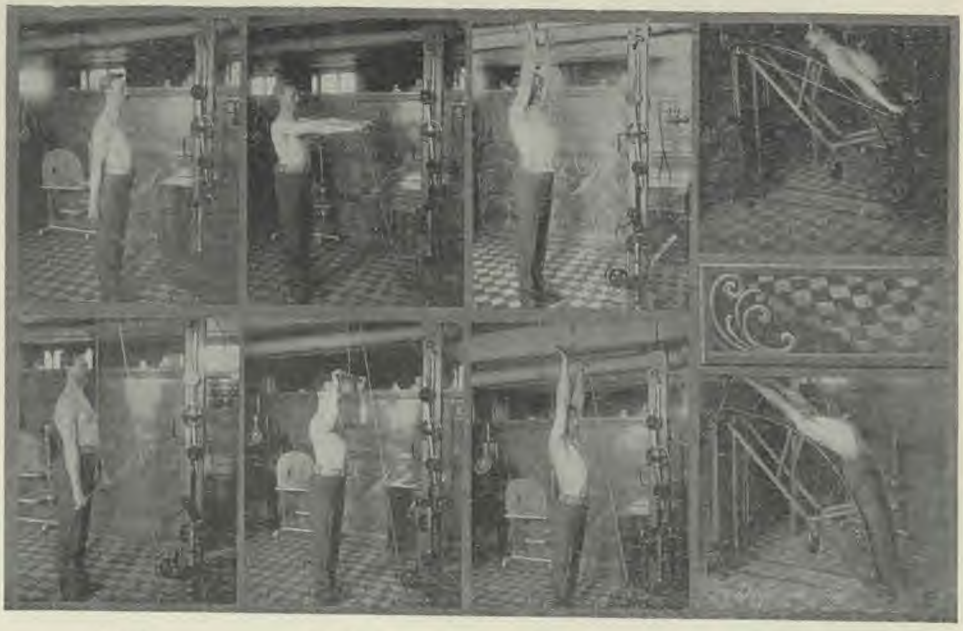
1 *ins.*, Shoulder Blades Approximated

2 *ins.*, Shoulders Raised

3 *ins.*, Head Extension

1, 2, 3 To Exercise Certain Accessory Muscles of Inspiration

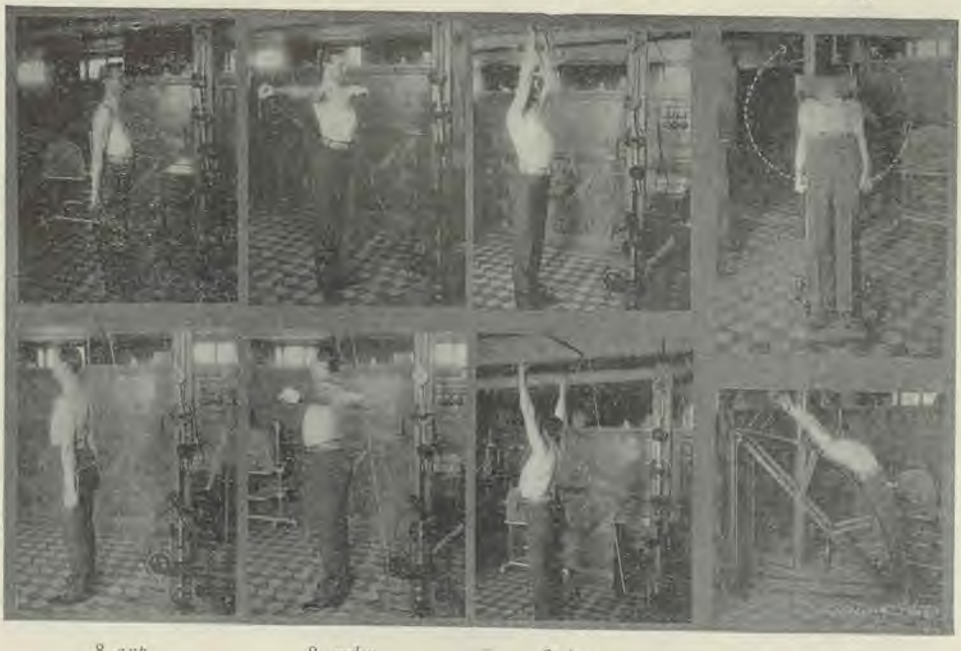
4 *exp.* 4 *mdw.* 4 *ins.* 6 *exp.*



5 *exp* 5 *mdw.* 5 *ins.* 6 *ins.*

4, 5, 6 To Enlarge and Mobilize the Thorax

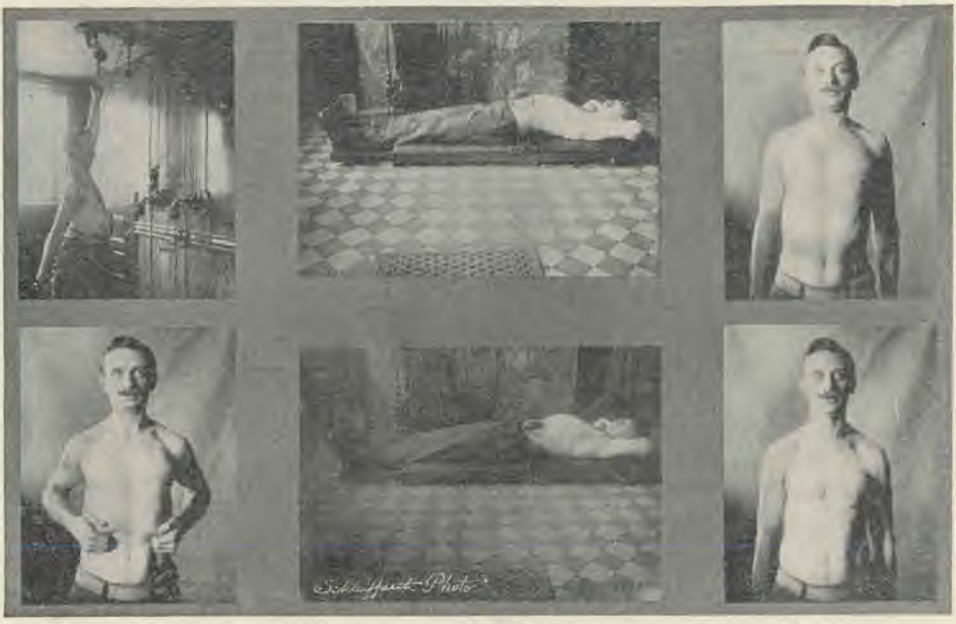
7 *exp.* 7 *mdw.* 7 *ins.* 9 *exp.*



8 *exp* 8 *mdw.* 8 *ins.* 9 *ins.*

7, 8, and 9 To Enlarge and Mobilize the Thorax

14 16 *ins.* 17 *ins.*



15 16 *exp.* 17 *exp.*

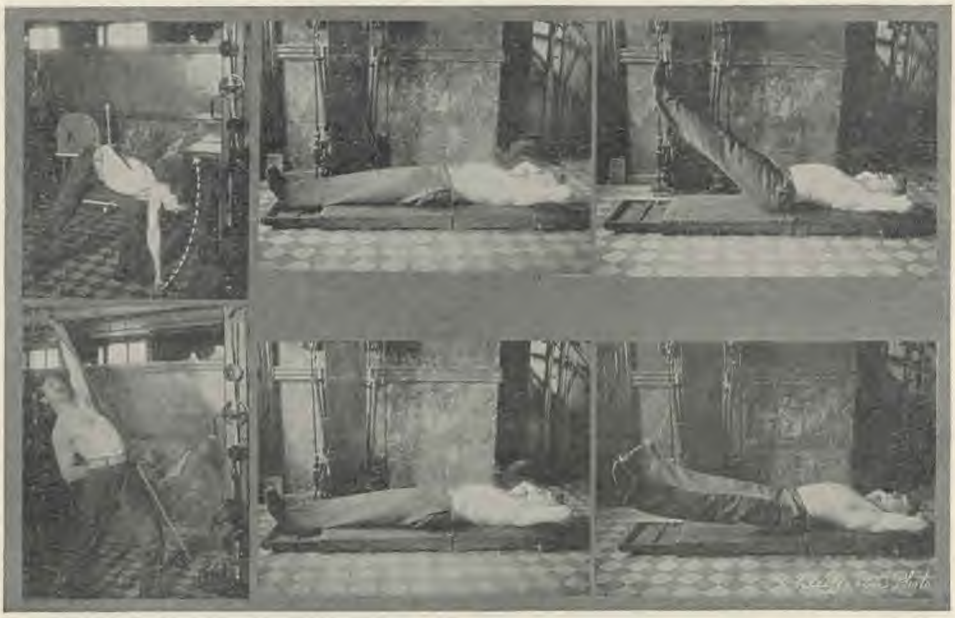
14 To Enlarge and Mobilize Thorax: Alternate Right and Left, with *ins.* and *exp.*

15 To Increase Capacity of Upper Abdomen: Lower Thoracic, *ins.* and *exp.* (manual aid optional).

16 To Develop Intra-Abdominal Pressure: *Ins.*, Protrusion of Abdomen Against Weight; *exp.*, Retraction Under Pressure

17 To Elevate Diaphragm: *Ins.*, Deepest Possible Thoracic Inspiration; *exp.*, Position at End of Shallow Expiration.

18 *exp.* 19 *exp.* 19 *ins.*



18 *ins.* 20 *exp.* 20 *ins.*

18 To Increase Capacity of Upper Abdomen.

19, 20 To Develop Inspiratory Tension of Abdominal Muscles.

Cottonseed Oil as a Food

O. C. Godsmark, D. D. S., M. D.

SINCE the art of extracting the pure cottonseed oil from the coarser fibers of the plant has reached such a state of perfection, the attention of the medical profession is being seriously turned to the investigation of this oil as a food commodity, and also as a therapeutic agency in combating tuberculosis and other wasting diseases. In the first place, the cleanliness and the absolute purity and freedom from disease contamination, which obtain in the production of this oil, naturally appeal to us in a strikingly favorable manner.

Cottonseed oil is more digestible than olive oil, corn oil, peanut oil, or beef suet, as shown by actual experiment.

Cottonseed oil on bread is enjoyed by some as a substitute for animal fats, and has the advantage that it contains no disease germs, and is not likely to ferment.

Cottonseed oil agrees with patients far more generally than cod-liver oil, and is highly recommended by some tuberculosis experts in that disease.

It is not the province of this article to discuss the carefulness and methods of its manufacture,— this may be done in a future number,— but to treat of its uses as both a food and a therapeutic agency. Being constantly in receipt of letters of inquiry regarding this phase of the use of cottonseed oil, we are glad to make the following statements, based on an experience in its use covering a period of about seven years.

As to its digestibility, it is more readily received and assimilated into the system than peanut butter, corn oil, or even the pure olive oil itself. To this end, we quote from the table prepared by Professor Moore, of the Arkansas State University. Of one hundred parts of pure conttonseed oil 93.37 parts are digested; of olive oil, 88.81 parts; of peanut oil, 85.87 parts; of corn oil, 86.47 parts; while of beef suet, but 73.66 parts in one hundred are digested. This places the cottonseed oil, when properly refined, at the head of the list, above the olive oil, which has so long been prized by the invalids of our country. Dr. Harvey W. Wiley, chief of the Bureau of Chemistry, United States Department of Agriculture, says: "No other oil known begins to hold the rank that cottonseed oil does, nor has it the future that cottonseed oil has."

When cod-liver oil is taken to the chemist for analysis, it is found to contain many valuable elements, which, could they be received into the system of the one who is wasting away with tuberculosis, ought to supply his very needs and help to start him on the road to rapid recovery; but after years of patient research, we are as yet unable to prepare this product in a manner so as to be readily received by even a small percentage of the patients that come under our care for treatment. Here, and right here, cottonseed oil seems to meet the necessities of the case. Dr. George Brown, president of the Anti-tuberculosis League of America, is reported, officially, as being heartily in

favor of the substitution of the pure cottonseed oil in emulsions, in place of cod-liver oil. In his treatment of tuberculosis, where the emulsion was used, Dr. Brown found that where twenty-five out of one hundred persons could use cod-liver oil emulsion, seventy-five out of one hundred could take the emulsion where cottonseed oil was used, it being that much more easily assimilated by the weakened digestive organs of the patient.

For many years cottonseed oil was supposed to be useful only as a basis for some of the finer grades of toilet soap, and no attempt was made at preparing it for our tables as a salad oil, or to take the place of butter and shortening, and much less was it supposed to be of use as a remedial agency in wasting and debilitating diseases. The same Dr. George Brown, above quoted, says, in another article, "Take this oil out of the soap kettle, and put it on your tables and in your drug-stores, and give it to your children to eat, and you will raise fleshy children, and children that will be absolutely free from tubercular and scrofulous diseases."

When used with salt on bread, it makes a very acceptable substitute for cream and butter, and certainly is free from the diseases we contract from the animal world. When used as a shortening, it gives a richness and body to the food that can be obtained in no other way. Not only is it more easily digested than corn oil, peanut butter, and even olive oil, as will be seen by reference to the above table; but it also does not ferment in the stomach and bring on that long train of evils that have come from the too abundant use of some of the articles already mentioned.

L. A. Ransom, ex-president of the Interstate Cottonseed Crusher's Association, says that "as the seasons go by, the merits of this oil become better known, and it must necessarily supply the shortage in the world's requirements of edible oils;" and that is the truth. The fact is, the intelligent world to-day is becoming alarmed at the spread of disease among the cattle and swine, and are looking for a vegetable fat that can take the place of the diseased foods they are compelled to eat. Even in Italy, France, and other olive-bearing countries of Europe, according to Council-General Frank H. Mason, of Paris, France, the use of cottonseed oil for cooking purposes is rapidly increasing.

Dr. Harvey W. Wiley, in speaking of it as a "wholesome, palatable, nutritious cooking, salad, and table oil," says: "One unit of cottonseed oil will furnish two and one-half times as much heat and energy as the same quantity of grain."

Not until very recently has the process of refining the oil from the cottonseed been so perfected as to produce an odorless and tasteless food fat that would not become rancid and gummy by a little exposure to the conditions usually found in the kitchen or the home. The purest grades of the cottonseed oil, before leaving the factory, are subjected not only to thorough filteration through what is known as fullers' earth,—a clay found in nature,—but is also subjected for some time to a heat of 300° F., and over, or to a point fully one hundred degrees above that of boiling-water. In this condition live steam is injected into it, so that no possible germ of decay or disease could ever survive the cleansing and purifying process this oil is subjected to before it is permitted to come upon our tables as food.

RATIONAL TREATMENT IN THE HOME

Home Treatments for Common Diseases—No. 5

W. A. George, M. D.,

Superintendent Nashville (Tenn.) Sanitarium

AMONG the conditions likely to give the most trouble are such chronic disorders as slow digestion, general weakness, loss of appetite, constipation, biliousness, torpid liver, nervousness, etc. These conditions are best treated by general tonic applications.

Of the tonic treatments, the application of cold in some form is the best. Many people suffering from general weakness and ill feeling improve very rapidly by the use of the morning cold bath. This may be taken in a bath-tub, if one has bath conveniences, or may be taken in the form of a cold sponge-bath. It requires not more than half a minute to take a plunge-bath. The patient steps into the tub quickly, and lies down with the front of the body in the water first; then turns over quickly, lying down on the back, thus covering the whole body with water. He then steps out of the tub and dries quickly with a Turkish towel. This has a remarkable tonic effect. One feels refreshed and ready for the day's work; whereas, without it, he may feel an unpleasant languor and weakness throughout the day.

Treatments for Tonic Effect:—
- Cold plunge-bath.
- Cold sponge-bath.
- Hot and cold applications to the spine.
- Alcohol rub.
- Cold-mitten friction.
- Sitz and pail-pour.
- Soap shampoo.
- Salt glow.

The morning cold sponge-bath may be taken anywhere, with a towel or sponge to apply the water, which is rubbed over the surface of the body and limbs very quickly; dry with a coarse Turkish towel. This takes a little longer than the cold plunge, but it is more convenient for most people. Cold water applied in this way in the early morning, when one first gets out of the warm bed, is a powerful tonic, and nearly all will do well to use this treatment as a matter of cleanliness, as well as for its stimulating effect. In case of feeble patients, some one else would have to give the cold sponge, and the water may be used at a little higher temperature than for those who are strong and able to apply the treatment themselves. Except in the early morning, cold treatments should usually follow some hot application.

There are a variety of treatments, with various combinations, which may be given in any home. Hot and cold to the

spine, followed by an alcohol rub, is a very pleasant and soothing treatment, which may be taken any time of day, and when taken in the evening will often help the nervous or weak patient to get a good night's rest. A fomentation is applied to the spine, followed by rubbing a piece of ice three or four times up and down the spine. The fomentation is applied again, followed by the ice, this being repeated three times. The attendant then gives an alcohol rub, as follows: An ounce of ordinary grain alcohol — ninety-five per cent — is diluted by adding an equal part of cold water. The attendant turns out a small amount of this solution into the hand and rubs it quickly over the patient's arm, from the hand to the shoulder. The arm is then gently rubbed several times with both hands until the alcohol is all evaporated, leaving the skin soft and warm. This is repeated on the other arm, the limbs, chest, abdomen, and back.

In case of slow digestion, with general weakness, the patient experiences great relief and comfort from the use of fomentations or hot and cold applications to the stomach and abdomen, combined with a hot foot-bath. This may be followed, either by the alcohol rub just described or by still more vigorous tonic application called the cold-mitten friction. The attendant exposes one arm of the patient, protecting the bed clothing by two or three Turkish towels. With a mitt, four inches wide and six inches long, on each hand, made by folding a piece of coarse mohair cloth and sewing up the side and one end, the attendant dips the hands into cold water and squeezes part of the water out of the mitts. The patient holds up the arm, and the attendant, beginning at the hand, with a rapid friction motion, applies the mitts the whole length of the arm. The mitts are again dipped into the cold water and applied as before. This is usually repeated three times, and the skin dried carefully with a Turkish towel. The same treatment is applied to the other parts of the body. The cold-mitten friction may be given with water at any temperature from 60° F. down to ice-water. It should be given very rapidly, and each part dried carefully before the next part is treated, so as to prevent chilling the patient. When properly given, this treatment has a powerful tonic effect, and given following the fomentations and hot foot-bath, is better than it would be if the hot were not first applied. The cold-mitten friction may be given alone in place of the morning sponge.

Another combination of treatments which may be given in any home, is the hot sitz bath, followed by a pail-pour. If desired, a large piece of oilcloth may be spread out on the floor to protect it. An ordinary wash-tub, filled about half full of water at 100° to 105°, is placed on the oilcloth. Near this a foot-tub, or some vessel in which a foot-bath may be given, is placed, containing water hotter than that in the tub, say 105° to 110°. The patient steps into the foot-tub and sits down in the large tub, and the attendant places a blanket around the patient, covering the tubs and fastening snugly at the neck. The patient remains in the hot sitz bath from ten to twenty minutes. The head should always be kept cool during this treatment, by applying a cold compress, formed by wringing from cold water a towel, folded about three inches wide, around the head and fastening it snugly so that it will stay on. This should be changed every three minutes. While the patient is in the sitz bath, the attendant prepares three pails of water at different temperatures, one at 100°, another at 90°, and the third at 80°. These are placed near the patient, where the attendant can pick them up quickly. When the sitz bath is over, the blanket is laid aside, the patient steps

into the large tub, and the attendant pours the contents of the first pail over the patient's shoulders and chest, spending perhaps ten seconds in emptying the pail. The contents of the second pail are then applied in the same way, followed by the third with the coldest water. This may be applied somewhat quicker than the first, especially if it seems unpleasant to the patient. The patient then steps out of the tub and is dried quickly with a towel or sheet. If the patient is strong, the temperature of the water in the pail-pour may be made somewhat lower, the first being the same, 100°, the second 85°, and the third 70°. The colder the water in the last pail, the more vigorous is the tonic effect of the treatment. If desired, one may give a soap shampoo to the patient after the sitz bath. The patient stands in the tub while the attendant applies the soap with a shampoo brush, after which the pail-pour may be given, washing off the soap.

The salt glow is an excellent treatment to give following the hot sitz. The patient stands in the tub while the attendant applies the salt with his hands. A pound or two of coarse salt is placed in a bowl, and an equal amount of hot water added. The attendant takes a handful of the wet salt and rubs it on the arm until the skin is red. This is repeated on the other parts of the body. It is better to dip up two or three double handfuls of hot water from the foot-tub and dash it over each part before applying the salt. When the salt has been used over the whole body, the pail-pour is given. The salt glow has a powerfully stimulating effect upon the skin, and thus affects the whole body.

Tonic treatments, applied as described, have been the means of giving relief to many sufferers from chronic disorders; and if applied daily, will often restore the patient to health when other means have failed. We should not forget, however, that in digestive disorders, the diet should be carefully regulated. The patient should also have an abundance of fresh air, and should exercise freely out-of-doors. While all processes of recovery from disease are in a sense mysterious, yet the use of nature's simple remedies will often work wonders in patients who by chronic disease have been driven almost to despair.

EVEN THE BABY HELPS

AND HOUSEHOLD SUGGESTIONS

Cooking Lessons—No. 6

George E. Cornforth

Drinks

DRINKS should be taken between meals. A large quantity of liquid taken at meals, dilutes the gastric juice and delays digestion. Food should not be "washed down," for it is then not well masticated and mixed with the saliva, which is the first digestive fluid. If liquid is taken at meal-time, it should be sipped between the mouthfuls of food, which should be chewed until it is reduced to a liquid.

Unwholesome Drinks

Iced drinks should not be taken at meals, for they cool the contents of the stomach to a temperature at which digestion is checked. In fact it is questionable whether iced drinks are ever entirely harmless. Tea and coffee are not the beneficial or even harmless beverages that they are commonly supposed to be. Tea is often called the "cup that cheers, but not inebriates." Perhaps it does cheer, but we very much doubt whether it is expedient that we should be cheered in that way; for there is plenty of proof that "this common beverage is exceedingly harmful, and that the evils of its excessive use are second only to those of tobacco and alcohol. Tea contains two harmful substances, thein and tannin,—from three to six per cent of the former, and more than one fourth its weight of the latter. Thein is a poisonous alkaloid, and when taken in large doses, it produces symptoms of intoxication. Tannin is an astringent, exercising a powerful effect in delaying salivary and stomach digestion, thus becoming one of the most common causes of digestive disorders." Sleeplessness, palpitation of the heart, and various nervous disorders are caused by tea drinking.

The fact that the habitual tea drinker is so dependent upon the beverage, and feels the loss of it so keenly when it is taken away, should be a sufficient warning of its harmful nature. Tea is not a food, but a stimulant. A stimulant is something which excites "vital action above the normal without supplying extra force to support the extra expenditure." Tea paralyzes the nerves and spurs one on, when what he needs is rest rather than to be excited to further activity.

Similar charges may be brought against coffee, for it contains caffein and a modified form of tannin, though it contains less of these substances than does tea.

The fact that people find themselves

so dependent upon these beverages shows that they are slaves to them. But many have been freed from this slavery, and can testify that they no longer have any desire for these beverages.

Wholesome Drinks

The most natural and the most healthful drinks, aside from pure water, are fruit juices. Every one knows the value of grape juice as a food and drink, and it need not cost the high price which must be paid when it is purchased. In the fall, when grapes are cheap, every family can put up, at small cost, enough grape juice to last a year, and it would be far better for the health if this were more commonly done.

To make grape juice without the addition of water, pick the grapes from the stems, wash them and mash them. Put them on the stove, and heat until they have boiled up well. Pour them into a cheese-cloth bag, and allow them to drain until no more juice will run out. This will make the clearest juice. The pulp in the bag may then be squeezed, and the juice thus secured may be used as second quality. The juice may be canned with or without sugar, and diluted to suit the taste when it is used. When the juice is put up clear, fewer cans will be required than when it is diluted before canning. After the juice is obtained from the grapes, it is canned just as any fruit is canned, by heating to boiling and putting it into sterilized cans, which are then sealed.

Even apple juice, if canned when freshly pressed from the apples, makes a delicious, refreshing, and healthful beverage; and if people would use more of such beverages, they would find their taste for harmful beverages disappearing. Fruit juices may be served either hot or cold.

Lemonade is a very common drink, which might well be more often substituted for harmful drinks.

Milk, though generally classed as a drink, is not a drink, but a food, and should be eaten, not drunk.

Though cereal coffee has been called a "poor substitute for a poor thing," it is far better to use it than the genuine article, if one must have something like coffee; and when properly made, it will quite satisfy many a coffee user. One of the objections to its use is the large amount of sugar that is often used with it. In making cereal coffee one should not fail to follow the directions on the package, to "steep at least twenty minutes." This is necessary to bring out the flavor.

Various "nectars" may be made by mixing different kinds of fruit juices. Following are two recipes: —

Strawberry Nectar

To lemonade add one fourth as much strawberry juice.

Raspberry Nectar

Juice and grated yellow rind of two lemons
¾ cup sugar
½ cup pineapple juice
1½ cups raspberry juice
½ cup cherry juice (if desired)
1 quart water

Allow it to stand one hour, then strain through cheese-cloth. Serve ice cold.

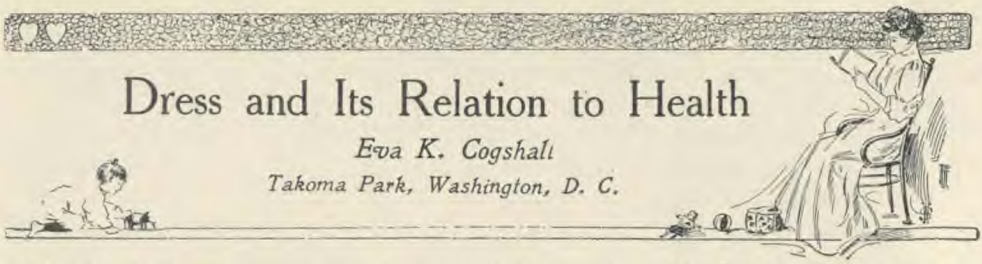
In concluding these lessons, I should like to leave these thoughts with the reader: —

"The health should be as sacredly guarded as the character."

"Whether therefore ye eat, or drink, or whatsoever ye do, do all to the glory of God."

"We do not all want to be Sandows, but we do all want to be workers."

And our efficiency as workers depends very much upon our eating and drinking.



Dress and Its Relation to Health

Eva K. Cogshall
Takoma Park, Washington, D. C.

Mrs. Cogshall will answer questions pertaining to the subject of healthful dress if accompanied by return postage

THREE different forms of partial culture have characterized three distinct eras in civilization. The Greeks sought physical perfection; and to-day, sculptured heroes, gods and goddesses of that age, are recognized as ideals of physical beauty, proportion, and expression.

During the second epoch, the Dark Ages, came the reaction from the body-worshiping Greek age; and religious asceticism prevailed: intellectual darkness abounded, and the physical frame was despised and neglected. With the Reformation came the rise of intellectual greatness, while the spiritual, in reality, held a secondary place, and the physical part of man was still disregarded; each of these ages dwarfed or overdeveloped man in either one or the other respect. But in the morning of the twentieth century we see omens of the application of a symmetrical culture that seeks the harmonious development of the whole being.

This was the original idea of our Creator. Man was made in the image, or likeness, of his Creator, and the great God never designed anything unlovely or inharmonious. We are God's workmanship, and *wondrously* made. The human body is the most marvelous structure ever produced, and its beauty lies in its symmetry and harmonious proportion of parts. Surely the Omnipotent One who gave us flowers, birds, music, and the unspeakable glories of the starry heavens, needs not the assistance of fashion's decree to mold a woman's form into what it is pleased to designate as "symmetry and beauty."

One who really knows God, understands that he not only delights in the beautiful, but has implanted in man — created in his own image — the same love for the beautiful, and inspires in him a delight in beautiful things. Expression is simply a means by which one soul touches another. The thought, the emotion, the purpose, is the substance of expression to which the body, or the voice, gives form. An expression, whether embodied in song, in speech, a painting, drawing, or sculpture, is simply a thought made visible to the eye or audible to the ear. The human body was intended to express in its symmetrical beauty of graceful lines, the highest thought of God; for in this body he intended to dwell, by his Spirit, actuating and directing the wonderful and intricately delicate mechanism he had created. There have been those who have recognized the wonder of this creation, this thought of God, and have given to the world marble imitations of "the human form divine,"—"works of art,"— and yet those who worship at fashion's shrine ignore their silent reproof. Come with me to the contemplation of the Venus de Milo; surely none can stand unmoved before the majestic womanliness of that perfect figure. And there, too, see hanging on

the wall the portrait of beautiful Queen Louise, Germany's idol: the exquisite contour of those lines, carved by the author of beauty, how they kindle the love of the beautiful as we gaze! But, "Look on this picture — then on that," as Hamlet said. Behold a modern "fashion plate"! with a poor, thin, wasplike waist and high shoulders, the vise of bone and steel, that grips the vital part of this poor, wretched woman, *forcing* the delicate flesh, muscles, nerves, and internal viscera to "move on," saying, Get out of the way — anywhere — so that only a "spindle" waist is shown!

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VENUS DE MILO

O, the shame of it! The heathen woman of China crushes her daughter's feet for fashion's sake; but, cruel and senseless as that is, there are no vital organs in the foot. Yet, lo! our civilized (?) women, everywhere, crush mercilessly the vital parts of the human body. They do not stop to consider the *source* of this accursed fashion, nor its baleful results. If modest Christian women were to realize the *origin* of the corset, and who were its devotees when first introduced, they would shrink with horror at such associations. The names of the wicked and frivolous queens and ladies of the licentious European courts of the sixteenth century are associated with the origin of the custom of tight lacing for the production of small waists. This was an era of social license and corruption. The shameless queen of France, Catharine de Medici, queen of Henry II, was one of the originators of this custom, and the *demi-monde* of Paris have ever since followed the fashion which she set. *These* are they who, to-day, rule the world of fashion! It is to the behests of such that we all have heretofore bowed down. Is it not enough to cause the blush of shame to kindle upon the cheek of every pure wife, mother, sister, or sweetheart, to feel that she has ever placed herself in such company by following a fashion made for such a purpose, by so unwomanly women?

What wonder the world is full of misery and sin! O, readers, shall we not, in the name of all that is good, true, pure, and lovely, unite to stamp out our common foe, and assist in bringing in an era of purity and goodness,— educate the people to a right standard of beauty and health, with all its attendant blessings, physical and moral? We need to be emancipated from both physical and mental bondage,— the bondage of wrong ideas and habits, the influence of heredity, popular custom, and a one-sided education. Woman's mission is the highest and noblest God ever bestowed. The privileges and dignity of wifehood and motherhood are not half appreciated. The queenly realm woman may be mistress of, if only in perfect health of mind and body, seems but a dim vision of a hopeless future to many who long for better things. But to one

thing more than all else, woman owes her inefficiency and unhappiness, and this one thing reveals itself in the fact that fashion has sought to improve upon God's plan, marring his handiwork, and preventing the mission of woman, until, as has been aptly said: "The American woman of to-day has relapsed into a threefold obscurity,— a sofa, a shawl, and the neuralgia." Surely no such creature can be queen of her domain, neither can the joy of conscious being fill her own soul or flow out to others.

QUEEN LOUISE OF GERMANY

It is true, in spite of the few exceptions, that the race is deteriorating physically. Dr. William Blaikie, an expert in physical culture, has clearly demonstrated that the physical stamina of the American people is declining. Others who see the danger ahead are crying aloud to warn the people and to arouse them to call a halt, and reform.

Sisters, give nature a chance to resume her sway; instead of trying to copy the distorted deformities depicted on the vulgar fashion-plate, allow the lines of beauty of the natural form to swell into grace and health-giving vitality. This will vivify the lifeless, weary woman into the active, joyous being her Creator intended her to be.

It is true and startling that abuse of the body has affected the destiny of the world, physically, mentally, and morally; and the world to-day owes its physical and moral deterioration largely to the iron grip of fashion, which has clutched at the heart-strings of the nations. That this is true, can be clearly demonstrated by an intelligent study of physiology. An intelligent knowledge of one's own body will reveal the causes of the misery and sin resulting from a blind obedience to the dictates of custom. Physicians who study the body, and understand its wonders, smilingly toast at their banquets: "Woman! God's best gift to man, and the chief support of the doctors." Why? How is it? Let us *investigate*. It is our privilege, our duty, because we are concerned in this accusation.

A prominent physician has stated that "*dress* affects injuriously the health of fifty or sixty millions of people, physically, mentally, and morally; and that the chief cause of woman's ill health is found in the displacement of the abdominal and pelvic organs, and that the mode of dress is almost wholly responsible. Ninety per cent of these diseases have their origin in *corsets* and heavy skirts dragging down from tight bands about the waist. This is admitted by intelligent physicians. The only bones between the ribs and the pelvis are those of the spine: externally are the muscles.

tissues, and ligaments, that hold the internal organs in place; these should never be compressed or "splinted" by tight clothing. A garment that is so rigid as to *support* the muscles, which should have strength and vigor to support themselves and to hold the body erect, must of necessity produce laxness and flabbiness of muscle; and when continued, the muscles which are compressed, become inert and useless. The same is true of the internal muscles and ligaments; and so it is no wonder that pain, disease, and a miserable existence come to be the portion of those who so abuse their bodies.

A tightly laced corset becomes a close-bound splint to the waist. When we break an arm, we carry it, splinted or bandaged, in a sling for weeks. When the arm is removed from the sling, it is limp and useless (although the bones have knit) until exercise and returning circulation give it new life. So with the waist; it becomes partially paralyzed by tight bandaging, until it is too weak to hold the torso erect, unaided; and the tissues waste away, and the muscles atrophy. As this process goes on, the contour of the figure suffers. The beautiful curves are lost, and masses of flesh protrude here and there; the abdomen sticks out and the stomach curves in, forming an unsightly figure indeed. Not only is the trunk disfigured, but the entire anatomy is thrown out of shape. Women are knock-kneed, bow-legged, too lean, too fat, and only partially developed. Why is it? Tight shoes affect the feet and legs, and prevent proper circulation of the blood. This produces corns, bunions, and serious swellings of the feet. High heels throw the weight of the body too much forward, and disturb the center of gravity, thus preventing a graceful carriage in standing and walking. Then the poor creature tries to cover her deformities by finery on the outside.

So much for the exterior and visible. Next month we shall consider the evil effect of improper clothing upon the interior and invisible organs of the body.

THE HOME ACRE

Build Now

Mrs. Stella Ridgway

THERE are houses, and houses; we may have them ready made, made to order, or home made. The ready-made houses are built to sell at a profit, and are not profitable to invest in for a home. The exterior may be attractive in appearance, the inside plan may be fairly good; but when the foundation and the material are examined, the joints looked at, the finish inspected, it will all be found to be second or third class, and every year many dollars will be needed for repairs. A contractor will always add five hundred dollars to the sum of building material and labor to safeguard himself. With a good foreman who understands the lumber market and is able to buy at an advantage, to superintend the work, it is usually more satisfactory to build one's own house, and know how and where the money goes.

In planning a house, there are certain things to be considered,— principles that hold good for all houses,— such as a dry cellar, a good system of ventilation, and sunshine in all the rooms during some part of the day. A dry cellar is a necessity not only from the standpoint of the health of the family, but for the superstructure. By means of the cellar the house is made warmer in winter and cooler in summer. It is better to have the excavation extend under the whole of the building; then, with plenty of windows, the sun and air may have free course. It is important to understand soil and drainage conditions as a cause of dampness in the cellar, and to seek remedies. Special drains may be laid about two feet below the cellar floor, inclining toward a still lower outlet. The top of the ground should slope away from the foundation, so that the surface water may be carried away from the house.

There is no system of ventilation so good as the old-fashioned fireplace. While we would not like to be dependent upon it for all our heat, as in the olden days, and consequently do not need such large-throated chimneys, yet every house should have at least one fireplace, and that in the family living-room — and

as many more as can be planned for. But in the living-room where the family gather for the long winter evenings, and a friend drops in for a social chat, there should be one of these cheery fireplaces — not a gas log, not a coal grate, but a "wood-fire's blaze," throwing out its beams of welcome. Who can resist it! What child does not love to watch the leaping flames, and picture all sorts of fantastic things in the dancing firelight!

Whittier has given us a beautiful pen-picture of homely contentment in his "Snow Bound." Can a hole in the floor inspire such thoughts as these? Can a steam radiator stir the muse to sing a song like this?

But to return to the practical. With a good hot-air furnace in the cellar, continually taking through its inlet a supply of pure fresh air from out-of-doors, which, when warmed, is sent through the pipes to the rooms above, together with a fireplace, makes a system of ventilation that can not be equaled. No complaint need be made of the dirt from the fireplace, as the modern idea is to drop the ashes through a tile duct to a fire-proof vault in the cellar, from which they may be removed at one's convenience.

While so much is being said and written on sunshine as a germicide, we do not need more than to mention the fact, and call attention to the matter of planning the rooms of the house so that those that are to be used for the living-rooms may be on the south and west sides of the building, in order to have the sunshine. Another matter to be considered is that of windows. Have them of good size, and plenty of them. They allow the warming rays of the sun in winter, and cooling drafts in summer.

In arranging for a home much individuality is allowed, and herein lies the pleasure of planning one's own house. The needs of the family as a whole and as individuals can be taken into account. Individuality need not be oddity, nor anything striking, and one should not aim for distinction in this line; but simplicity and dignity in the outside appearance, and comfort and convenience for the inside, should be studied.

Washington, D. C.

The Fly That Does Not Wipe His Feet

THE tubercle bacillus is unquestionably distributed by flies. No one will doubt this who has seen the Petri plate containing a nutrient medium upon which was deposited a fly that had previously been walking in the spittle of a consumptive. A glass jar confined the fly. The plate, at first perfectly clear, soon presented colonies, invisible to the naked eye, made up of uncountable bacilli, developed along this insect's tracks.

One can not doubt that flies help greatly to swell the infant death-rate, which is highest in fly time. . . . The fly will breed in an open closet, in putrefaction, in a dung heap, and then will come in through the open and inviting window and deposit its filth and its bacteria upon milk, butter, and meats. A more disgusting subject it were difficult indeed to consider. We are now agreed that most diarrheas and dysenteries are due to specific germs. And it is a very pertinent observation that breast-fed infants seldom suffer from these diseases.

Besides tuberculosis and the dysenteries, it is very likely indeed that flies disseminate cholera, trachoma, tetanus, and typhoid. The latter disease is disseminated whenever the typhoid bacilli in the excreta of typhoid patients are not properly destroyed by disinfection or burning; they may be carried from open or box privies by means of underground drainage into wells, streams, small lakes, and reservoirs; the flies carry the germs from such excreta to food and drink, by which means the disease is propagated. Typhoid carriers may for months or years harbor the germs, for the most part in the gall-bladder, and by means of their evacuations may spread the disease. . . .

It has been well pointed out that to prevent their breeding is better than to destroy the flies themselves. The summer descendants of a single fly may exceed a million individuals; so that the prevention of breeding is a far more effective method of extermination than would be the destruction of a few hundred among those myriads. To prevent breeding we must first have an understanding of the fly's breeding habits. Ninety-eight per cent of the eggs are laid in stable manure, and two per cent in garbage and other filth. Ten days is the incubative period, when the fly emerges full grown. If the manure is placed in a pit which is rendered inaccessible to flies by means of solid doors or traps, the eggs will be deposited in some less suitable place, where only a small proportion can develop. Moreover, if the manure is removed every ten days and spaded into the ground, eggs that have been deposited will be destroyed before maturity.

Of course the best prophylaxis against flies is adequate cleanliness in and about houses; then there will be nothing to invite these scavengers.— *The New York Medical Times.*

Sandals

THERE are two ways of protecting from wear and jar. A fort can be protected with granite or with dirt. A wheel can be tired with iron or with rubber. Progress has been generally toward the yielding rather than the resisting material.

The Japanese and Chinese seem to have gone a step beyond us in this matter. We really need little or no foot covering in our houses, and for outdoor use the shoe best adapted to the double purpose of leaving the foot in its natural condition and protecting it against the heat, cold, or dampness of the pavement, the jolt of the step, and the feet of others, would be an elastic felt shoe about half an inch thick, with waterproof coating. The Chinese shoe is the nearest approach to this, as it is light, soft, and thick. But it makes the foot look big, and this objection, being an esthetic one, is invulnerable, so there is no use discussing it.

It is curious how long a piece of wearing apparel remains in use after it has lost its reason for existence. Some of us can remember when boots reaching nearly to the knees were still worn in cities, although there were no mud holes or brier patches to wade through. At the present time there is no reason for wearing heavy and high shoes in summer, yet only part of the urban population has adopted the lighter and lower styles. But the movement — though slowly — is continuously in this direction. Shoes get more *decolleté* every summer. This process of dematerialization will go on till there is nothing left of the shoe but its sole. Then we shall have the sandal, which is already coming into use, chiefly, it is true, for children, but the age limit is rising. Many women have adopted them, and even an occasional member of the more conservative sex. The sandal is in some circumstances the most satisfactory compromise between hard shoes and bare footedness; for it gives stiffness and protection where most needed, yet leaves the foot undeformed and aerated. —*The Independent.*

Sterility of Old Ice From Infected Water

THE sterility of old ice from infected waters is a matter of such great importance, as far as public health is concerned, that it is somewhat strange it does not receive more comment. It is twenty years since Prudden made his classical experiment in freezing water infested with pathogenic organisms, recovering them some weeks later. Since then the medical profession — particularly the health authorities — have been of the opinion that freezing is more or less harmless to sewage-borne disease germs, and that ice is always dangerous. Within only a few years has it been discovered that freezing is so injurious to protoplasm that in the course of time all organisms die. Prudden did not carry his tests far enough.

Experiments made by Dr. Wm. H. Park, of New York, and others show that in three days half the frozen bacilli are dead, in seven days seven eighths, and in four weeks the water is as pure

as if filtered; after four months the danger is negligible, and after six months there is no danger. It is understood that other tests have been made, but the results have not been given that wide publicity demanded by public safety. It takes time for cold to kill the organisms, and there is some danger after all.

The crusade for pure ice should be kept up, notwithstanding the fact that remarkably few epidemics are recorded in which the blame has been definitely fixed upon old ice. There was just one such outbreak of typhoid in an American institution some years ago, and the live organisms were recovered from the ice cut from a river a short distance below a sewer outlet. Other epidemics or isolated cases have been similarly traced both here and in Europe. Even if we had no such evidence, no one wants to drink frozen sewage, though its germs be as dead as a door nail. The high cost may compel us to permit companies to harvest a crop from contaminated waters unfit for drinking, providing it is stored under public seal, and is not sold until tests show it to be harmless. It has been customary for some companies to cut river ice immediately below sewer outlets. This disgusting and dangerous trade should be ended once and for all, and its promoters driven out of business, even if their goods are sterile after six or eight months. For the present, and until all dealers can arrange to harvest uncontaminated ice, the crops from slightly contaminated sources might be passed under the above restrictions as to storage. The problem is to determine how much concentration of sterile sewage the public palate will tolerate, how long to keep the ice, and what degree of contamination is prohibitive.

Infected artificial ice is a very serious matter, because it is sold immediately after manufacture, and the organisms present are virulent. It was found in the District of Columbia that some of the factories were horribly filthy, and colon bacilli were recovered from the ice. Occasionally the methods are so filthy that the ice contains more bacteria than the water from which it is made. Our confidence in artificial ice has been sadly misplaced. If this ice were stored for some months, it, too, would become sterile, but it is impracticable to lock up capital in this way. This newly discovered disgusting practise may fully account for the distribution of typhoid; and it is high time that ice factories be placed under restraint, and be compelled to be decent enough to respect public health. Every day something is discovered which shows that the health of the consumer is not sufficiently considered by tradesmen and producers. The consumer must rise in his just wrath and put the criminals in prison, if they refuse to be guided by sanitary laws. Prison is now threatened for certain trust magnates who are really criminals, but who hide behind a corporation charter which makes the corporation the inanimate offender. Now let the pure food laws send to prison those who jeopardize the health of the consumers.— *American Medicine.*

In this department, articles written for the profession, which contain matter of interest to Life and Health readers, are given in abbreviated form. Where practicable, the words of the author are given, but often the passage is abbreviated, or else paraphrased in popular language. Technical matters and portions of articles having no popular interest are omitted.

Remarks on the Feeding of the Healthy Infant

A HEALTHY infant has a broad tolerance for widely different food mixtures, and for varying amounts and strengths of the different food elements,— fats, proteids, and carbohydrates. On the other hand, the sick baby requires careful dosage of food both as to quantity and composition. The moment a healthy baby is upset, it is no longer a healthy baby, but a sick one, and must be treated as such. A food of a certain quantity and composition that yesterday was adapted to a healthy infant, to-day may act as so much poison to the same baby that in the meantime has had an acute digestive, nutritional, or constitutional disturbance.

The most serious question that confronts the physician in the feeding of healthy infants is what to feed a new-born baby that is unable to get mother's milk.

Practically it will be found that the great majority of new-born babies will bear well after the second day of life — and no baby should be fed artificially before that time — a dilution of one part of milk to two parts of water, with the addition of a small amount of milk-sugar, say one-quarter to one-half an ounce in the twenty-four hours' food. This dilution can be strengthened gradually till the baby takes equal parts of milk and water, with one half to one ounce of milk-sugar daily during the second and third months. The proportion of milk is gradually increased, that of water and sugar diminished, till toward the end of the first year the child is on whole milk. The total twenty-four hours' food should rarely exceed one quart. After the fifth or sixth month the diluent of water is replaced by one of the gruels.

At no time during infancy is it desirable to feed the baby more often than five or six times in the twenty-four hours, and toward the end of the first year the number should not exceed four. Babies fed every four hours cry less than those that are fed every two or three hours, for the simple reason that babies cry far more from digestive and nutritional disturbances than from hunger.

When a healthy infant gets more milk than it ought to have, it commonly gains for a time at an abnormal rate, say from eight to twelve ounces a week. This gain in weight is quite regularly followed by a stationary weight unless the amount of food is reduced or changed in a certain way. If the amount of the same food is still further increased, there may be another gain, but the child will finally begin to lose. If unchecked, the final outcome of this overfeeding is marasmus [wasting]. This paradoxical loss in weight with an increase in food is accom-

panied by other signs of a fundamental nutritional disturbance. The child becomes restless, its sleep is broken, and it cries a great deal. It becomes pale, flabby, and inactive, often rachitic. It has a marked tendency to itching eruptions. It commonly becomes indifferent to its bottle, requiring much coaxing to take it, or in severe cases finally taking only an ounce or two at a time.

This condition of milk overfeeding is always accompanied by a characteristic appearance of the bowel movements, which in itself shows that the child has had too much milk. The stools lose their normal yellow, or in severe cases have the color and consistency of putty. They are no longer normally moist and soft, but become hard and brittle, so that they will roll from the diaper without leaving it soiled. This condition naturally produces very marked constipation.

Whenever such bowel movements appear, it means that the child has had too much milk, or, more properly, too much milk fat. These cases improve most rapidly on malt soup, or skim milk, or buttermilk mixtures, in which the fat is lowest, while the proteid and sugar are the highest ever used in infant feeding.

At any time in this chronic process of milk overfeeding, the whole picture may suddenly change to one of an acute catastrophe. This upsetting that is so frequent an occurrence in artificial feeding, is manifested by vomiting, indigestion, diarrhea, loss in weight, fever, inability to stand food, especially milk, stupor or restlessness. This condition may vary from a mild indigestion to an intoxication that is rapidly fatal. The more serious cases occur more commonly during the hot weather, because the child is already debilitated by the heat, but more especially because it is relatively overfed because it needs so much less food to maintain its heat and energy.—*Joseph Brennermann, M. D., Assistant Professor Clinical Pediatrics, Northwestern Medical School, in Jour. of the Amer. Med. Assn. Abbreviated.*

Insects and Disease

ONE form of life can be maintained only by subsisting on some other form of life. Mammals kill and prey upon one another and on lower forms of life. Micro-organisms thrive by parasitism upon, and the destruction of, higher forms of life, and they are themselves the prey of smaller forms.

Other creatures bring these parasites into congenial contact with their hosts. For instance, animalculæ burrow in the intestinal wall and make an entrance for bacteria. The whipworm was once supposed to cause typhoid because of its frequent presence in epidemics of this disease. But it was by enabling the typhoid germ to gain an entrance to the tissues that it aided in the production of the disease.

Insects may aid in the distribution of germs in various ways. The tubercle bacillus is distributed by flies. No one can doubt this who has seen the photograph of a Petri plate containing a nutrient medium upon which was deposited a fly that had previously walked in consumptive sputum. A glass cover confined the fly. The plate, at first clear, soon began to develop, on the track of the fly, colonies of countless germs.

Flies greatly swell the infant death-rate. Milk is an excellent culture media for bacteria, and is easily contaminated by flies. In this way tuberculosis may

be transmitted to the child through the milk.

Typhoid fever is disseminated by flies polluting the food and drink with contamination carried from piles of animal and human filth, open closets, and the like.

Many city people can trace their fall typhoid infection to a recent trip to the country, where an insanitary well, and more probably, unprotected filth piles, myriads of flies, and inadequate screens give abundant opportunity for typhoid contamination. The hot weather, by reducing the vitality, may be a contributing factor, but not the essential cause.

Diarrheas and dysenteries are unquestionably due to germ transmission in food and drink, aided materially by flies. Several epidemics of dysentery radiating from a single point have disappeared completely with the proper disinfection of the closets. Flies travel but a few rods from their breeding-places, except in sultry weather, when they travel by day and go indoors at night. Food and filth are equally attractive to the fly.

Mosquito fever is the new and more appropriate name for malaria. The anopheles, or malaria-transmitting mosquito, breeds in still water, in moist sand, on moss in pools, in stagnant water with green scum, old horse-troughs, and the like. It conveys from the blood of a malaria patient the malaria organism, which, inoculated into another person, causes an attack of malaria. To prevent the disease, destroy all breeding-places within a mile, or cover the water with kerosene, or plant goldfish or sunfish, screen the houses, and destroy all mosquitoes which may be inside by use of pyrethrum powder burned in a tin dish. Especially should malaria patients be protected from mosquito bites, as it is this contact which renders the mosquito dangerous to others.

Body-lice give evidence of being able to transmit disease, especially typhoid and relapsing fevers.

Bedbugs may transmit smallpox and other diseases.

Fleas transmit plague from the rat to man.

Spotted, or Rocky Mountain, fever is transmitted from cattle to man by ticks.

Other diseases transmitted by the aid of insects are: Sleeping-sickness by the tsetse fly; elephantiasis and filariasis by the mosquito; plague by lice; typhus, leprosy, and other diseases by fleas; yellow fever by the stegomyia mosquito.—*John B. Huber, A. M., M. D., in N. Y. State Journal of Medicine.*

THE MEDICAL FORVM

Insurance Organizations and Tuberculosis

THE Associated Fraternities of America has a standing committee on infections, contagions, and hereditary diseases. This committee recently made a report showing that the members appreciate the value to the community and to the fraternities of a united and continued effort to eradicate the preventable diseases, and expressing disappointment "at the lack of interest manifested and the failure of co-operation on the part of managers of the societies constituting this association."

"As a commercial proposition alone, it would seem that all fraternal beneficiary societies would be a unit in employing the best and most impressive methods of disseminating knowledge pertaining to sanitation, hygiene, and preventive medicine."

These beneficiary societies are said to publish more than a hundred papers, which circulate among a membership of seven millions. It is suggested by the committee that there is no class of papers published which could reach so large a proportion of the community with information regarding the prevention of disease.

The committee expresses itself as "anxious to aid in the greatest work ever undertaken by the civilized world" — the active combat against preventable diseases, with the firm belief that the average of life can be increased twenty-five to fifty per cent.

In conclusion, they appeal to the editors of the fraternal journals to publish health articles to be furnished by men well qualified to speak on these subjects.

Few of the societies have taken an active part in the cure of incipient tuberculosis among its members. It is believed by some that a society makes an excellent investment when it establishes a tuberculosis sanatorium for the care of members in the incipient stage of the disease.

Insurance men look at the problem from a somewhat different view-point. They believe, in the first place, that to use the money of the policy-holders to treat those affected with one disease, and not those having other diseases, is an unwarranted discrimination, and that, in any case, it would not be a paying investment for the companies. Dr. Frederick L. Hoffman, statistician of the Prudential Insurance Company of America, in the *Medical Examiner and Practitioner* (March issue), says that his investigations had proved conclusively that —

"the possible financial gain resulting from sanatoria treatment in the case of insurance policy-holders would but in part reimburse the companies for the necessary expense of such treatment. Evidently, unless the gain in longevity as the result of sanatoria treatment is at least of sufficient length to reimburse the companies by additional premium payments for the expense incurred, they would not be justified in using the sums contributed by all their policy-holders for the treatment of any particular class."

Dr. Hoffman believes that the best service the insurance companies can ren-

der the antituberculosis cause is to make a careful study of the vast mortality statistics of the companies to learn more regarding the cause of tuberculosis.

"With all our present-day knowledge on the subject of tuberculosis there is still very much that is indefinitely known or but partly understood." "Research work of this kind will tend to focus preventive effort upon the true sources of consumption mortality, and to that extent aid materially and most practically every rational effort toward the prevention and ultimate extermination of the disease."

The Ordinary "Cold"

THE New York *Medical Journal* suggests that it would be well for bacteriologists to concentrate more attention on the plain every-day cold. Though it is a trivial disease, it produces a vast amount of incapacity. The treatment is highly unsatisfactory. Local treatment is apt to be but temporary in its relief, and in the case of cocain, there is great danger of forming a habit.

Almost any of the theories as to cause is correct as regards some cases, but incorrect if applied to all.

"Under conditions of hygienic open-air life, all sorts of exposures to cold and dampness may fail to produce coryza [cold]. On the other hand, colds are certainly more prevalent in cold, damp seasons; they occur without obvious source of infection from previous cases, among persons in whom close housing due to the weather is not prominent."

On the other hand —

"in many epidemics, the infectious origin is obvious."

Pollen colds constitute a well-defined class. Hot-weather colds, with no traceable source of infection, are difficult to explain. The very fact that colds vary in their causation, shows the need of discrimination as to cause and proper adaptation of treatment.

The term *la grippe* is usually applied without adequate bacterial examination, often when the presence of the true influenza germ is improbable.

Are colds due to a miscellaneous lot of germs? If it is true that almost any of the ordinary mouth germs may, under favorable conditions, cause a cold, it becomes necessary to study more carefully the predisposing conditions under which these germs become virulent.

Pulmonary consumption often appears to have begun with a cold. Is it a mere coincidence? Is the cold a favorable opportunity for the lodgment of the tubercle bacillus, or is the apparent cold the first stage of tuberculosis?

"It may be that a serious attempt to solve these problems will show that they have been incorrectly stated; in other words, that various fundamental beliefs are fallacious."

The *Medical Journal* concludes: —

"There can be no question that a frequent and perhaps frequently repeated inflammation, whether strictly infectious or not, undermines the general health, and predisposes to various disorders. Moreover, an ordinary cold is often the last straw in overturning the balance of resistance in the aged and in persons with widely different diseases."

It behooves us to avoid colds as far as possible; to avoid dust, unnecessary exposure to infection from those having colds, and the like; to keep the air-passages in a condition that will not invite colds, and the body in a high state of resistance. A body that yields easily to colds is in a dangerous condition.

Insanitary Handling of Foods

FROM the Ninth Biennial Report of the Colorado State Board of Health we learn that —

"five times as much is appropriated by the average Colorado Legislature for the protection of game and fish [which furnish recreation and amusement for the lawyers and legislatures] as is appropriated for the lives of our citizens.

"The loss to the State alone in infant mortality, we are told, is greater than if all the game and fish were exterminated, and every factory and mine shut down."

Mr. Cannon, chief food inspector, highly commends "the prompt compli-

ance with instructions and willingness to do everything requested *except along sanitary lines;* and it seems that the federal and State laws were —

"*not intended to deal with sanitary production, handling or sale of food products.* A careful study of the provisions of each act fails to show legislative intent providing for this."

This would seem to be a regrettable circumstance, for the sanitary condition of the food is in at least as much need of legislative control as the misbranding.

But somehow our legislators can see nothing tangible in that which can not be stated in terms of dollars and cents. They can handle rebates, and railroad rates, and tariff (after a fashion), for these represent money. So they can legislate concerning the misbranding of oleomargarine and selling it for butter. This fraud means financial gain to the oleo man and financial loss to the dairyman. This is tangible, and so they can meet it with laws; but where it is merely human health and life that are involved, there is an etherial nothingness about it that does not appeal to them. They have no time to make laws for health. There is too much pull for the public funds in other directions to permit much of it being devoted to the saving of baby lives.

Mr. Cannon emphasizes the need of an inspector continuously present at every slaughter-house,—

"not only because of the spread of tuberculosis and tubercular meningitis, but in order that ptomain poisoning should be prevented, and that meat products consumed by the public should not be given them in a filthy and decomposed condition."

"In addition to that, sufficient inspectors should be employed to properly control the handling and sale of meat products in the retail markets. The conditions in many of these places are anything but pleasant to think about, yet under the pure food acts, federal and State, it is absolutely necessary to demonstrate to the satisfaction of a jury that these meats or meat products consist in whole or in part of a filthy, decomposed, or putrid substance, or are unfit for food, or the product of a diseased animal, or one that died otherwise than by slaughter — a physical impossibility in almost every case to demonstrate by the condition of the substance when exposed for sale."

That is to say, in simpler language, that the federal and State meat inspection laws at their best are utterly inadequate to protect buyers from imposition with meat products in a decomposed or filthy condition, or from diseased animals, or animals that have died by themselves. Ugh!

"Trying It on the Dog"

THE *Lancet* of February 6 contained a paper by a Dr. Schryver, who performed a number of experiments upon himself and upon dogs in order to determine whether the presence of tin in certain canned foods is injurious to the eater, and who concludes that the experiments —

"do not indicate much probability of serious risk of chronic poisoning by the absorption of non-irritant compounds of tin as the result of a diet which consists largely of canned foods and is continued over considerable periods of time."

Dr. Harvey W. Wiley, though in a general way rendering praise for the high character of the work done in these investigations, writes (justly, we think) to the *Lancet* in protest against statements which "may be used . . . to protect . . . immoral practises in food preparation." Dr. Wiley says:—

"Dr. Schryver should not intimate that tin salts are not injurious until he has tried them upon infants, sick people, and convalescents. There are millions of people who eat canned foods besides Dr. Schryver, and of these millions, a very large percentage have disordered digestion, are not in good health, and are not in a condition to resist toxic effects of even small quantities of tin."

Dr. Wiley has not thought of advising that these poisons be tried on "infants, sick people, and convalescents;" that

would be farthest from him. But not having tried it on them, he believes it is unwise for the healthy man to try these things on himself, and on the basis of that experiment, to assert their harmlessness.

Dr. Wiley should be upheld in his effort to protect the public and the sick, and should be sustained in his contention that the food consumer rather than the food producer should be given the benefit of the doubt when any such exists.

⁂

Athletics Not Altogether Beneficial

UNDOUBTEDLY athletic sports have been a benefit in that they have practically done away in our colleges with the anemic student with brain developed at the expense of body. The tendency now, however, seems to be to develop the body at the expense of the brain. A recent editorial in the New York *Medical Journal* calls attention to this tendency: —

"There appears to be little doubt that athletic training, when pushed beyond certain limits, develops the purely physical at the expense of the mind. We have seen a 'strong man' kicking his hundred-pound dumb-bells about the floor in an ecstasy of profane rage because they had not been constructed strictly according to specifications. Childish weeping by a loser at the close of a race is by no means an uncommon spectacle. The gossip privately retailed by professional athletes concerning one another surpasses that of the small country village, particularly in the villainous nature of its accusations, which is evidence of lack of mental development. It might be just as well if our college men and others gave a little more attention to mental exercise."

American Medicine, speaking of the danger of the Marathon races, says: —

"The nervous exhaustion of athletics is another cause of condemnation of great efforts. The 'stale' athlete is not the only one exhausted, and there is a beginning apprehension that all training is dangerous business."

If the aim of athletics were, in this country, as it is in England, recreation and improvement of the health, instead of to furnish excitement for the betting man,— that is, if it were "sport" in the good and not in the bad sense,— it would not be so objectionable.

⁂

A Side-Light on the Patent Medicine Business

THE publication, *Printer's Ink,* is not a medical paper. It is prepared for, and in the interest of, advertisers and producers. A recent issue gives some information regarding the value of testimonials to advertisers. Such statements, when made public, ought to do much to limit the output of those who use such methods. But the advertiser has an assured trade; for a fool is born every minute, and every one that is killed off by patent medicine is immediately replaced by another.

What would you think of this demonstration that a patent medicine is genuine? —

"The average 'patent medicine' testimonial is genuine . . . because the 'patent medicine' ad. appeals chiefly to hypochondriacs who are not sick, but imagine they are when they read their 'symptoms.' The same ad. creates the sickness and effects a cure a la Christian Science. The purchase of the medicine is really unnecessary except from the advertiser's view-point."

The writer of the article evidently realizes that the effect of these so-called remedies is only temporary; for —

"the best time to get a testimonial is shortly after the purchase is made, while the buyer's first enthusiasm is at its height. . . . Further, advantages resulting from the use of an article are not always permanent, and unless the testimonial is secured at the psychologic time, it can not be obtained at all."

Here you have in a nutshell the philosophy and the ethics of the patent medicine business.

The Medical Missionary At Work

Preaching the Gospel of the Kingdom and Healing the Sick

A. C. Selmon, M. D.

SUFFERING and disease are found wherever sin reigns. Sin originated with the devil, and the Son of God was manifested that he might destroy the works of the devil; and so, in the work of our Lord, the healing of the sick and preaching of the gospel were associated together. The Acts of the Apostles is a history of missions, and could as appropriately have been called the Acts of the Missionaries; for an apostle is one sent on a mission. We should expect to find in this book the qualifications of a missionary; and in one of the first chapters, mention is made of medical missionary work. It was an essential part of the work of those who raised up the first churches. In answering the Jews Christ said: "The works that I do in my Father's name, they bear witness of me." His healing of the sick was not only the proof of his divinity, but it was a practical demonstration of the spirit of the message he taught. The missionary who can both preach and heal the sick as he goes about, is more in harmony with the command and example of our Lord than he could be were he to carry on any other line of work.

The history of missions shows that the medical missionary work has always held first place as a means of disarming prejudice. Peter Parker went to China as an ordained minister and medical missionary. In 1835 he opened a hospital and dispensary in Canton. Many days he had more than one hundred cases to care for. It is said that morning by morning the approaches to his hospital were crowded with patients coming for aid, some in their eagerness rising at midnight, others spreading their mats the previous evening and sleeping by the threshold that they might be the more certain of early admission.

As Dr. Parker worked to relieve their bodily ailments, he was no less zealous in presenting Christ to his patients and urging that they accept him as a personal Saviour. "Thus it happened that in three months the successful cures from his hospital did more to remove the frowning wall of Chinese prejudice and restrictive policy than could have been accomplished by years of customary missionary work."

There are many reasons why the medical missionary work is peculiarly adapted to aid in the proclamation of the gospel in China, or any other heathen land. In the first place, the people are entirely ignorant of the nature of disease. While conducting mission work near the city of Siang-cheng, I was called to see the head man in one of the largest firms in the city. Five Chinese doctors had been treating him for several days, and when I arrived, they were there. The spokesman at once informed me that, owing

to a disagreement of the "yin" and "yang," the man had the "inside hot and outside cold" disease. According to the Chinese philosophy, the "yang" and "yin" are the male and female principles of nature. They pervade all and influence all. Too much or too little of either in the body will bring on disease. Upon examination I found the man suffering from uremic poisoning, and so far gone that he died in a short time.

The nature of their common remedies is such that they are much more potent in causing disease than in curing it. The smallest scratch or bruise, when it shows the first signs of pus — and because of the all-pervading filth, every break in the skin festers — is at once sealed up tightly with a plaster made of oil that has been boiled down to the consistency of tar, and contains various medicines. The plaster imprisons the pus, and makes it burrow under the skin and deep down into the flesh. Often a trivial scratch under such treatment becomes a large, running ulcer, which may lead to blood-poisoning.

"THE CHILD IS ALLOWED TO PLAY IN THE DUST OF THE NARROW, FILTHY CITY STREET"

The native doctors have no knowledge of anatomy and physiology. The pulse is to them the index of every condition of the body. In their medical books we find that by lightly pressing the pulse in the left wrist the condition of the small intestines may be learned; by pressing heavily we may learn the condition of the heart. Lightly pressing the pulse in the right wrist, the state of the large intestines may be known; pressing heavily, the state of the lungs is ascertained.

Surgery, as practised by the native doctors, is most rude and barbarous, as the following case, which came to my notice, well illustrates: A doctor was called upon to treat a man who had a growth on the eye, which was shutting off his vision. The doctor had no surgical instruments, but having just come in from his poppy field, where he had been gashing poppy bulbs, he had with him a small three-cornered piece of sharpened iron. With this he at once proceeded to operate, with the result that the eyeball was cut open, the fluids escaped, and the eye completely collapsed, leaving the poor man hopelessly blind for life.

Many diseases are supposed to be caused by evil spirits. The Chinese doctor seeks to cure them by expelling the evil spirit; and for this purpose he uses a long needle. Without taking the least pains to clean it, he thrusts this into the part of the body affected by the disease. In this way an opening is made through which the spirit may depart. It is needless to say that vital parts of the body are often injured, and deep abscesses result. Cases of partial

or total blindness are met with in which the loss of sight resulted from the needle having been thrust through the cornea into the eyeball.

The poor Chinese women, in cases of difficult child-birth, must submit to barbarities that are something beyond description, and the medical missionary who is called in to help at this time of need wins their undying gratitude.

Thus far no one has dared to venture an estimate of infant mortality in China, for the figure would be so high that those not acquainted with the conditions would be led to disbelieve it. During the summer months eight out of ten of the small children will be found to have pus reeking from both eyes. Flies carry the contagion from one child to another. Dirty cloths are applied indiscriminately to the pus-infected eye and to the healthy eye. The mother is busy, and the child is allowed to play in the dust of the narrow, filthy city street, exposed to the glare of the tropical sun, and the result of all this is that China is filled with a host of blind children.

The medical missionary has it within his power to destroy faith in time-honored superstitions by teaching the people the cause and nature of disease. Malaria is believed to be caused by a demon, and the little child, with his face painted and disguised so as not to be recognizable, may be seen being hurried by his parents to the house of a neighbor to be hidden away until after the time for his chill is past. It is thought that in this way the malaria demon will not be able to find and recognize the child, and thus the poor sufferer will escape the disease. They need to be taught that the parasite which causes malaria finds entrance into the body only through the bite of the mosquito. This would lead them to be more careful about sleeping on the damp ground, a practise very common among the farmers during the time they must keep watch over their ripening crops. And when the disease has been contracted, they would not go to some old tree having a decayed knot-hole and supposed to be inhabited by a disease-healing spirit, and there burn incense and pray for the spirit to cure them; but they would come to the missionary for rational treatment.

These conditions are not confined to any one section or province, but are practically universal. It is true modern schools of medicine are being started, and in some enterprising cities attempts are being made at sanitation. Yet what has been done so far is but as a drop in a bucket. The missionary, whether he has any medical training or not, is constantly besieged by the sick and suffering. The people confidently expect that every missionary has some ability in the healing art, and when there is so much suffering that can be so readily relieved, it makes a certain amount of medical training an essential part of the qualifications of every missionary who goes to China. An added value of such training rises from the fact that it will enable the missionary to care for and preserve his own health amid such unfavorable sanitary conditions. Fully qualified physicians, men and women, are needed to conduct hospitals and dispensaries, not merely for the purpose of relieving suffering and patching up diseased bodies that they may go on in sin, but with the definite purpose ever uppermost of winning souls for Christ.

Chinese young men and women are waiting to be trained in medical lines, and with the majority of the vast population of China in dire need of medical help, the importance of this work can not be overestimated. In no other mission field in the world of any magnitude can the missionary, with a more limited medical training than that of the physician, find such a field of usefulness.

EDITORIAL

The "Typhoid Fly"

DR. HOWARD, the eminent entomologist of the United States Department of Agriculture, has proposed that we abolish the name "house-fly," as suggesting that this insect belongs naturally in human dwellings. He would substitute the more appropriate and significant title, "manure fly" or "typhoid fly." Let us remember the insect under one of these latter names, and work strenuously for its extermination.

The Merchants' Association, which in 1907 published a pamphlet containing conclusive evidence that the fly is an important cause of the spread of typhoid and dysentery in the city of New York, has sent a letter of inquiry to health officers, physicians, and other authorities throughout the United States and Canada, and as a result of the evidence collected, suggests that "the common house-fly is one of the most dangerous pests in the world," and urges that all who become informed in this matter enter actively into a campaign of extermination by a removal of the conditions that breed it.

Returns have come from all over the country showing that the fly has been "caught in the act" of destroying lives in many cities and villages.

Not that the fly is the only cause of typhoid; some epidemics are proved to be due to the water-supply — the city water being taken from a river, perhaps, into which cities higher up have emptied their sewage. Other epidemics have been proved to be on the route of the milkmen delivering for a certain dairy where, investigation shows, some member or members of the family have had typhoid fever, and the discharges have found their way into the well supplying the water in which the vessels are washed, or else where flies have free access to both the privy and the dairy house.

In large cities where there are no open privies, there are often numbers of patients in the fall, many of them having just returned from a country vacation.

Can there be any relation between a country vacation and typhoid? Most certainly. Typhoid fever is sometimes contracted in a mild form; and after one has had it, he may not have another attack, yet he may for years have the typhoid germs in his intestine infecting his discharges. The close proximity of the privy vault to the well may contaminate the water-supply, or the flies, having access to both privy and kitchen, may contaminate the food.

Probably many farmers' families are typhoid immunes, having at some time in the past had a light attack of the disease, and the farm in this way may become a typhoid breeder for any non-immune who goes there from the city.

Beware of the farm on which the well

is suspiciously close to the privy vault, or where the flies are allowed access to the kitchen, dining-room, pantry, or milk cellar. Otherwise your vacation may be a costly one.

The health officer of Binghampton, N. Y., spoke significant words when he said: "We have had more than our usual number of fall typhoid cases, in persons who had their summer outings in tents and in attendance at camp-meetings."

Remember the name — *typhoid fly*.

Milk and Tuberculosis

THIS is a subject that would seem to be worn threadbare, yet with all that has been said it seems impossible for men who are studying the matter from various view-points to arrive at conclusions which are generally acceptable.

Recently, Dr. E. C. Schroeder, of the United States Department of Agriculture, has asserted that milk and its products is "the greatest tuberculosis danger to which public health is exposed." Coming from such a source, the utterance is worthy of respectful attention, and he is not alone in his opinion, for veterinarians and laboratory men are generally convinced that milk is a most important cause of the spread of tuberculosis.

Not long ago Mr. Nathan Strauss the New York philanthropist, took up the cry against raw milk, urging that all milk be Pasteurized.

Considering the fact that there is so much tuberculosis among dairy cattle, and that in many, if not most, of these cases the bacilli are thrown off in immense numbers in the bowel discharges to form part of the barnyard or stable "dust" that finds so ready access to the milk pail; it is no wonder that the men who are studying the subject from this view-point consider raw dairy products a grave source of danger. It must be admitted, however, that many physicians, for apparently excellent reasons, doubt that milk influences largely, if at all, the production of pulmonary tuberculosis in adults.

Here is the important point. If we must use milk, the caution to Pasteurize it is well taken, if the cows from which the milk comes have not been proved by the tuberculin test to be free from the disease. This is especially important in the case of children; for whatever differences there may be as regards bovine tuberculosis in adults, it is very generally admitted that in the case of children tuberculosis from cattle is not uncommon. The little hunchbacks, the unfortunates with hip disease, and those that die from tubercular meningitis and tuberculosis of the bowels, all attest the danger of tubercular milk.

Again: it should be remembered that it is not consistent to demand milk from healthy cows, or else Pasteurized milk, and then use butter as it is obtained in the market; for the tubercle bacilli in the milk rise with the cream, and they are present in larger numbers proportionately in the butter than in the milk. Moreover, they are shown to be able to live in butter for three months with undiminished virulence.

So much for that side of the question. But it should not be forgotten that there is every reason to believe that, so far as adults are concerned, milk is not the most important source of the disease. To focus the glare of public attention entirely on milk is to neglect another grave dan-

ger; namely, that of human transmission, by means of dried sputum or by droplets coughed up by the consumptive.

The most eminent of tuberculosis specialists consider the disease to be emphatically a house disease, caused by carelessness in the matter of discharges from tuberculous patients.

We should not forget that the uninstructed and the careless consumptives constitute, perhaps, the most fruitful source of the disease.

Only a short time ago many were victims of "phisophobia." There was such a tuberculosis scare that the unfortunate consumptive was expected to get off the earth. At the same time there were, and there are now, thousands who seem to be absolutely ignorant of the infectious nature of tuberculous discharges. Until the people are educated to take proper precautions, or until consumptives who can not be taught are segregated in appropriate institutions, the disease will continue to spread.

It is for this reason that it seems unwise to make the case against dairy products so strong that we shall forget that there are other important means by which the disease is transmitted.

Queer, Isn't It?

THAT men who warmly advocate prohibitive measures regarding morphin and cocain, begin to cry "sumptuary legislation" and "personal liberty" when prohibition of the liquor traffic is broached? Any argument against the one prohibition would seem to the ordinary person to be valid against the other. There is this difference: there is a greater number of men who feel able to play with the alcohol demon, and who think the man who is unable to cope with the temptation does not merit any consideration or any protection. Moreover, there are strong moneyed interests back of the alcohol business; and there are government officials who regard it as a most approved method of raising revenue.

But why not raise revenue from prostitution, and from the sale of cocain and morphin? Why not say, "They can not be prohibited; prohibition is an interference with personal liberty; the only adequate legislation is State regulation with high license"?

Why should not the government enter as a silent partner of the brothel, the opium joint, and the gambling hell, as well as of the saloon? Why not?

The Laboratory as an Aid to Physicians

THE laboratory has its use. It has been an important, if not the most important, factor in the development of modern medicine.

It also has its abuses, and among these is the misconception of many physicians, who imagine that the laboratory can take the place of the bedside diagnosis.

As a matter of fact, the old practitioner with good "horse sense" will do more without any laboratory aid than will some who neglect the history and physical examination and depend on the laboratory man to find out what is the matter.

Another source of abuse is the im-

pression that specimens can be collected in "any old way," without careful technical skill, and sent into the laboratory with little or no history or description of the patient's trouble, and the laboratory man will be able in a few hours to tell just what the trouble is.

Such is the condition in nearly every community where laboratories are established; and Dr. D. L. Harris, bacteriologist and pathologist of the health department of St. Louis, Mo., rendered an excellent service to his medical brethren when he showed in an able paper presented to the physicians of St. Louis and published in the St. Louis *Medical Review* of April, how the laboratory is often abused by physicians not understanding the true rôle of laboratory work, and how, by intelligent co-operation of physician and laboratory man, it can be made a real help to the physician.

No physician nowadays should attempt a diagnosis without all the aid the laboratory can afford him. On the other hand, he should not let the laboratory findings take the place of intelligent, painstaking work on his part at the bedside.

To tell a patient he has no tuberculosis because tubercle bacilli are not found in the sputum, ought to be counted malpractise; and yet it is not infrequently done. The most painstaking work by a skilled bacteriologist may sometimes fail to find tubercle bacilli in the sputum of a tubercular patient, even after a number of examinations.

A diagnosis of the medical reaction, whether positive or negative, based entirely on the laboratory findings without reference to the history and symptoms of the patient, may be entirely misleading.

What Is Insanity?

IT is very convenient to be insane or not insane, according to circumstances. A man with delirium tremens in New York was committed to an insane asylum. He was violent, and had threatened to kill his wife. Not long after his committal he recovered and was acquitted. The first thing he did on securing his freedom was to sue the physicians who committed him, for fifty thousand dollars. He may win it, for in a similar case recently a man who in an attack of delirium tremens was committed to an asylum sued the committing doctors for malpractise, and they had to settle with him.

Now if this man had killed his wife, his lawyer would have pleaded insanity, and doubtless the man would have been freed.

Strange the constructions the law will permit.

THE CONSULTING ROOM

Conducted by G. A. Hare, M. S., M. D., Fresno, California

You Need Rest

Mrs. C., I do not think the pain you complain of over the heart is due to any heart-disease. The spot over the heart is very tender, and there is also great tenderness along the spine. Both of these conditions, together with the great discomfort and sense of heaviness in the pelvis, of which you complain, are a result of the tired-out, exhausted condition you are in; and your neuralgic headaches are due to the same cause. Let us inquire a little into your home life. You are living in a small house without any shade. It is very uncomfortable. You work from five o'clock in the morning till nine or ten at night, with hardly a chance for an hour's rest. You do your own work, cook for your husband and one boarder.

Your two children, one and three years old, are just getting over the measles. In addition to your household duties you have cared for them yourself; and you want to know if I can give you something to cure your heart-disease, and advise you as to whether or not you need a surgical operation. What you need is rest, with an entire change of surroundings, for two months.

Neither tonics, medicine, nor treatment will restore you. *You need rest.* A surgical operation is not what you need. You are exhausted from long hours of overwork; your whole system is so tired that it is crying for rest. Nature's power to rebuild is remarkable, but she can not keep up with your present pace. You think you can not afford it? It is less expensive than either treatment or surgery, and will outdistance them in bringing you back to good health.

If need be, make your vacation inexpensive. Your husband can keep house for a month or two, and if he will also care for the children a few days while you are getting ready, he will better appreciate your need of a vacation. Get some good, reliable woman to go with you to relieve you of all possible care of the children; rent a cheap cottage in some restful locality, in a beautiful country spot where you can drink of the inspiration which nature offers so abundantly, or if the weather will permit, use a tent that is well fitted for comfort. After a few days' rest and sleep, your appetite will call for more food. Do not spoil your vacation by living on dry, stale foods; get plenty of choice fresh fruits and crisp vegetables, with good sweet creamy milk, and other good foods that you can relish, and nature will transform them into good blood.

Sleep at least twelve hours every night, and several hours during the day if you can; the day nap is a wonderful rebuilder of nerves. You may not like the effect at first, but you will soon learn to appreciate it as the best hour of the day. Go into nature's great repair shop and remain long enough for her to rebuild you. It will take time and a little expense, but your husband will say it is the best investment he has made since he married you.

A Century of Women's Hats

Mrs. Harriet E. Bell

SOME one has said there is no better way of getting at the real history of women than through a careful study of their headgear. The accompanying pictures seem to tell a story all their own. The older bonnets, or those worn before the middle of the century, because of their uniqueness are the most interesting. There may be a

few still living who remember when some of these bonnets reigned in popularity.

The curtain-like drapery of 1810, the tall crown of 1820, the collapsible buggy-top affair of 1830, and the huge shaker of 1840, do not at this time especially appeal to one, and yet they have all had their day and occupied their positions on the pinnacle of fashion. In view of the foregoing, is it better for all to adopt one style like the Shakers or the Quakers, or for each woman to choose for herself? Conformity or individuality?

Teaching Causes Neurasthenia.— A large percentage of retired public school-teachers in New York City give as the cause of their disability that dread malady — neurasthenia.

Roof Playground.— Mr. Boldt recently turned over to the New York Playgrounds Association the new pine grove on the roof of the Waldorf-Astoria, where more than a hundred children can play.

Tuberculosis Death-Rate Diminishing.— Cities in New York State report a smaller death-rate from tuberculosis in 1908 than in 1907. In some of the larger cities there was an increase, also in some of the rural districts.

Sanitary Towels.— Towels made of tissue-paper are now used in a number of schools. The paper may be procured at a low figure in large quantities, and cut into any desired size. After once using, these towels may be thrown into the waste-basket.

Poisonous Effects from Epsom Salts.— Ordinarily, Epsom salts are taken without apparent injury; but there have been a number of well-authenticated cases in which the use of the salt, sometimes in a dose not considered at all excessive, was followed by death of the patient in a manner that indicated that the salt was the cause of the death.

Petition to Do Away With Smoking-Cars. — President Bancroft, of the Boston Elevated Railway Company, has assured the medical men and others who signed a petition asking the company to do away with smoking-cars on the elevated trains because of the "unhygienic and usually filthy condition" of these cars, that every consideration will be given to this matter.

Tuberculosis in Milk the Gravest Peril. —As a result of his investigations, Dr. E. C. Shroeder, of the United States Agricultural Department, makes the following statements: "The frequency with which milk contains living, virulent tubercle bacilli is so great that no one who uses raw milk extensively, or as a beverage, can reasonably hope to escape introducing many tubercle bacilli into his body." "It is reasonable at present to believe that we have two great sources from which tubercle bacilli are disseminated in a way that is dangerous to public health — tuberculous persons and tuberculous dairy cattle." "It is clearly desirable that milk and cream should either be Pasteurized or should be obtained from cows that are known to be free from tuberculosis, and are stabled, pastured, and milked in a healthful environment."

To Lengthen Life.— Life insurance men, realizing that the diseases which shorten life begin in an insidious manner, and that at their inception they may often be averted by proper measures, are proposing to re-examine their policy-holders at stated intervals without any cost to the person examined, and with the one purpose of suggesting measures by which incipient disease, otherwise unsuspected, may be discovered and remedied. Such a procedure, it is thought, will materially add to the average life of policy-holders, and thus be a financial advantage to the companies.

Health Rules for Centenarians.— Mrs. Fannie Friedman, of New York, who recently died at the advanced age of one hundred twelve years, is said to have observed during her long life the following rules: "Don't worry; take things easy; sleep ten hours a day; and eat five meals." Another centenarian, still alive (Simon Bildstein, of St. Louis), attributes his long life, so it is said, to his habit of taking things philosophically and never worrying. He is reported to have been a heavy user of tobacco and liquor. Perhaps, after all, worry is even a more potent hastener of death than what we are accustomed to count very bad habits.

Care of Teeth Among Schoolchildren.— In the primary, grammar, and high schools of Providence, R. I., out of a group of 1,203 children, 1,160 were found to have decayed teeth. Upon further investigation it was discovered that less than one fifth brushed their teeth regularly, and nearly one half never used a tooth-brush. A child whose mind is disturbed by aching teeth

can not do efficient work in the schoolroom. And outdoor schools for tuberculous children would not be so imperative if the children were properly instructed in the hygiene of the mouth at home and in the regular schools; for much of the spread of tuberculosis can be attributed to unclean mouths.

Outdoor School for Tuberculous Children.— The first real outdoor school for tuberculous children in America was that begun in Boston on the top of Parker Hill last July. The purpose of this school was to give the children fresh air, plenty of the best food, and a healthful life. An old orchard containing many trees, hammocks, reclining chairs, pillows stuffed with hay, a large dining-tent, and also other tents furnished with beds for emergencies, was the camp for the school. The children had breakfast at 8 A. M. Cleaning the teeth and rinsing the mouth were enforced. They worked in the vegetable and flower gardens until an hour before noon, when they joined in frolicking play. Though the children slept at home, they improved daily, gained in weight, and became much brighter. Care was exercised that the children should not overtire either physically or mentally. Within fifteen weeks nine of the thirty-two were able to return to their regular schools.

Action on Animal Experimentation.— At the recent meeting of the American Association for the Advancement of Science, the most authoritative and most comprehensive body of scientists in America, a resolution was adopted to the effect that "the unrestricted performance by proper persons of scientific experiments on living animals is essential to the maintenance and progress of medicine and biology." This resolution was adopted because — as the preamble states —"from time to time attempts, fostered largely by erroneous statements and accusations and false sentiment and prejudice, are made in some parts of the country to enact specific legislation prescribing the conditions under which experiments on animals may or may not be performed." The preamble further states that "animal experimentation has been of incalculable benefit to medical science and art, the progress of which is absolutely dependent upon experimental methods;" and that "no abuse of the practise of animal experimentation in the country has been shown to exist to warrant specific legislation."

Esperanto the International Medical Language.— At the recent Pan-American Scientific Congress, Esperanto was recommended as a proper language to use in the programs of American congresses. Official announcement also states that Esperanto will be accepted by the International Medical Congress at Budapest for communications and discussions.

The Playground Saves Child Life.— A Rochester coroner has published the statement that "Rochester playgrounds, and the swimming-pools in the parks, have resulted in a much smaller number of accidental deaths of children during the past year than usual."

Stamp Out Tuberculosis by Isolation.— Dr. Woods Hutchinson offers, with sixteen million dollars, to rid New York City of tuberculosis, by providing an isolation camp, and removing every consumptive in the city to this camp. If ten thousand tuberculous persons die yearly, the monthly cost to the city every year from tuberculosis is much more than the sixteen million required to stamp it out. "Good business sense" would suggest that the city officials and the health officials should decide on some practical plan for the care of infectious cases.

Increase of Tuberculosis in New York City.— The startling charge was made recently by Nathan Straus, the New York philanthropist, that "the vigorous campaign against tuberculosis has failed to check the great white plague." He asserts that this disease in New York City shows an increase in new cases of thirty-three per cent in two years, and that this is due to neglect of the mischief wrought by the tuberculous cow. He believes that the abolition of tuberculosis will begin when it is made a crime to sell milk unless it comes from tuberculin-tested cows, or has been properly Pasteurized. These figures are probably an exaggeration. They were based on the returns of the first four months of the year, and may be accounted for by the fact that much more care is exercised in the reporting of new cases to the health department than formerly. If milk were the sole cause of tuberculosis, it is hard to understand why it should cause a sudden increase in the disease when we have no evidence that there has been a corresponding increase in the tuberculosis of cattle. A campaign directing attention to milk as the cause of tuberculosis to the exclusion of other causes might not be an unmixed good.

Serum Treatment of Cerebrospinal Meningitis.— A New York physician has reported the result of the treatment of 523 cases of this disease by means of serum from an immunized horse. There were 155 deaths, a mortality of about 30 per cent. In the epidemic of 1905 there was in 2,700

cases a mortality of 73.5 per cent. This same percentage in the present series would have amounted to 383 deaths. It therefore appears that 228 lives were apparently saved as the result of the use of the serum. Much better results were obtained when the serum was administered early.

Drug Habits Disqualify Doctors.— The Philadelphia Medical Society has prepared a bill which provides that the license of any physician who is addicted to the use of alcohol or drugs shall be revoked. In case a cure is effected, the physician may be reinstated in his practise; but for a second offense he will lose his license permanently. A drug habit should certainly disqualify a man from taking the responsibility of cases involving life and death.

Movement Against Tuberculosis Becoming National.— Nearly all the State legislatures are considering legislation regarding tuberculosis. Ten legislatures are considering measures for the erection of State hospitals. A number of other legislatures are making provision for State educational work. At present there are only five States, including the District of Columbia, which compel the registration of consumptive cases. Nine forbid spitting in public, and twelve maintain consumptive hospitals. It is predicted that within two years every State will be doing aggressive work against the white plague.

Washington Milk Has Been Declared Unsafe.— Nathan Straus, the New York philanthropist declares that his investigation of the milk supply of the capital city reveals that one of every eighteen samples is tuberculous.

Smiling Joe Graduates.—"Smiling Joe," whose photograph has been the means of enlisting the interest of hundreds of people in the work at Sea Breeze, has been discharged as cured. According to older methods of treatment, he would have been a hopeless cripple for life.

Tobacco Is Barred.— The Presbyterian General Assembly approved the report of its temperance committee which commended President Taft and former President Eliot of Harvard for being teetotalers. A resolution introduced by a minister, that ministers should not use tobacco, was amended to include laymen, and was adopted with cheering.

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