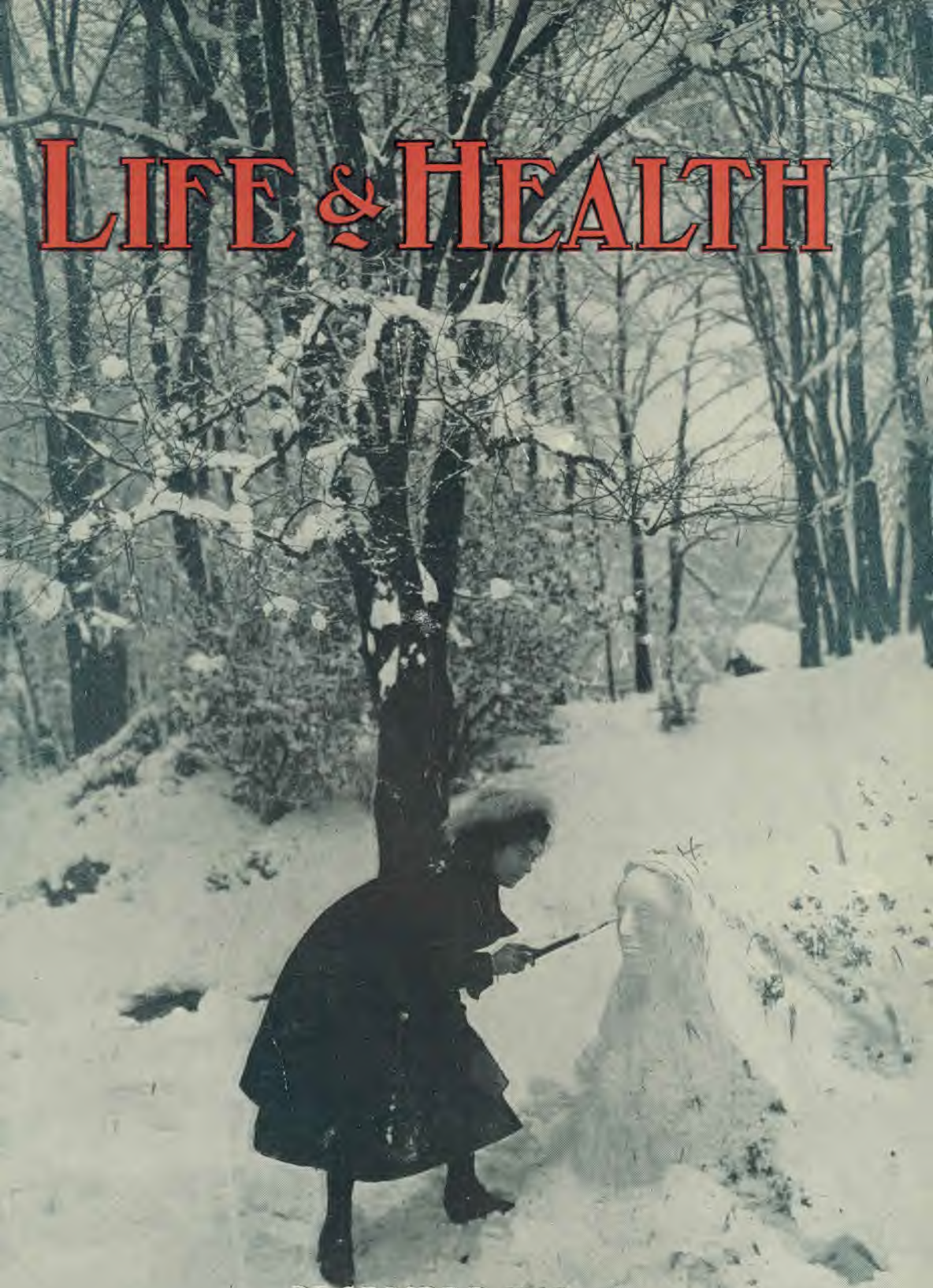
LIFE & HEALTH



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ANNEX

LIFE AND HEALTH

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

GEO. H. HEALD, M. D. - - - Editor

G. A HARE, M. S., M. D. }
D. H. KRESS, M. D. } - Associate Editors

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Questions or correspondence relative to any of the departments should be sent to the head of that department.

Question Department

The editor can not treat patients by mail.

Those who are seriously ill need the services of a physician to make a personal examination and watch the progress of the case.

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2. That they are LEGIBLE AND TO THE POINT; long letters most likely go into the waste-basket without reply.

3. That the request is ACCOMPANIED BY RETURN POSTAGE.

IN THE MAGAZINES

THERE is scarcely a family, hardly a person, in our country but should know for his own sake the best and most practical methods of treating the tuberculous patient at home. "The Dispensary Treatment of Tuberculosis," by Arthur T. Laird, M. D. (*Journal of the Outdoor Life,* August, 1909, Trudeau, N. Y., 10 cents), gives just such information. Not every consumptive will come under dispensary treatment, but every one should know what is *best* in home treatment, and this the article attempts to give. Another excellent article in the same number is "The Hopeful Outlook of the Tuberculosis Problem in the United States," by Dr. S. A. Knopf. We must commend the *Journal* for its vigorous campaign in favor of the individual drinking cup.

The *National Geographic Magazine* (Washington, D. C., 25 cents a copy), August, 1909, contains an article of medical interest by Dr. L. O. Howard, the government entomologist, entitled "Economic Loss to the People of the United States Through Insects that Carry Disease." The insects considered are the mosquito and the fly. Dr. Howard tells us that, notwithstanding all efforts to the contrary, malaria is still spreading, and that it is responsible for more deaths than any parasitic disease. Prosperity in some sections is very much retarded by the scourge, and some of our best farming land lies idle because of malaria. Then the doctor, after explaining that malaria is preventable, describes the method of stamping it out. He next takes up yellow fever, and shows how the application of our knowledge of a certain species of mosquito as the agency of transmission has resulted in the control of this disease. Then he considers the "typhoid fly" as a means of spreading various diseases, and gives careful directions for protecting against and eradicating this pest.

One of the most practical articles on the care of trees, whether for ornament, or food, or *health,* appears in the editorial columns of the *Independent* (N. Y.), Oct. 7, 1909, page 837.

McClure's October has an article, "The Vampire of the South," which is, perhaps, the best popular description of the hookworm disease that has appeared. The November number of *McClure's* has two articles on pellagra, probably giving the most complete popular description of the disease yet presented. In the same number is an article describing the

(Continued on page 757)

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LIFE and HEALTH

"Something better is the law of all true living."

Vol. XXIV Takoma Park Station, Washington, D. C., December, 1909 No. 12

The Girl a Factor in the Social Fabric—No. 1

Mrs. W. H. McKee, Matron Michigan Home for Girls, Byron Center, Mich.

Twin gems of fairest pearly hue,
Within the heart's deep casket, true,
Possessed on earth but by a few,—
Pure and precious, if you but *knew*,—
Modesty and Purity! Come, view
Their rarity and beauty!

AMID humanity's kaleidoscopic changes, and the chance glimpses of influences here and there in the turn of the wheel, what is more beautiful than the radiance emanating from the life of a good woman? The dignity of a noble womanhood, benign, winsome, yet with that iron strength of character to withstand the tempest of temptation which may beat with fury at her feet,—who can estimate the worth of such a factor in society? "Her price is far above rubies." But the charm of maidenly modesty, and the powerful check it puts upon evil, which slinks away, abashed, in the presence of that sublime strength of character, is comprehended but dimly by the average girl. The knowledge that woman was created to be a blessing, a safeguard to man, a queen in her realm, possessing a domain over which she has absolute power, is pitiably withheld from our girls.

Woman was taken from man's side, as indicating equality,—not from his head, to be superior to him; not from his feet, as inferior to him,—to be a helpmeet (meet, or fit) for him. Man can not respect an inferior being; hence no influence for good can be exerted by a companion unworthy of his respect. The fact that the knowledge of a woman's real mission in life is withheld from her, through traditional ignorance, lack of information, or wrong education, causes her to have a deficient grasp on life, placing her at a great disadvantage in the world, and making her a loser in the struggle with sin. "If I had only known!" is the wail that goes up from the throng of wretched women, whose blighted lives cry out against the injustice done them by withholding from them in their early girlhood the knowledge of their own rights, their mission, and their powers.

What a sad spectacle is a perverted life! A girl of this class came to our home to die. She had been beautiful, with large dark eyes that had once shone with sweet purity and innocence, now heavy with disease of both soul and body, looking out on a hopeless future. As I talked with her, tears welled in those

large mournful eyes. This is her story: —

"When I was two years old, my mother died, and a year later my father died. A man and his wife adopted me. The foster-mother was very kind, but after seven years she died, and the man was very cruel to me, whipping me for every trifling thing. I ran away to some friends I knew, and lived around with different girls whose parents kept me for a few weeks at a time. They knew my home life was not right, and pitied me. I longed to be an artist. I had unusual talent. I could, with chalk or pencil, sketch anything I saw,— landscape, flowers, and animals,— but no one took any interest in me, or *cared* what became of me. I fell into the hands of evil companions who led me into sin, and since fourteen years of age I have lived an evil life. I am twenty-four now, and ten years of sin is all my life. O Mrs. McKee, if you had found me when I was fourteen years old, you might have saved me! But it's too late now!"

This poor girl is an example of powers and influence perverted. All cases are not alike, but the failure to impress the young girl with the sense of her possibilities in life, mentally, morally, physically, and spiritually, inevitaby result in more or less perversion of character. To have no higher ambition than to be a plaything to amuse men, a doll to be admired of men, or a slave to be degraded by men, is perverting, in the grossest manner, God's beautiful and noble plan for the sexes.

Because of this lamentable condition of our young womanhood, the result of somebody's ignorance or neglect, the average girl of to-day, as a factor in the social fabric, is, in varied degrees, largely responsible for the weak social status which makes it possible for men to be guilty of such dastardly deeds as are tolerated. One thing is absolutely certain, that if girls are taught to respect themselves, men will be compelled to respect them. The valuation a woman places upon her own womanhood will measure the estimation in which she will be held by men. A deplorable lack of instruction along these lines in homes, schools, and churches is responsible for the present social degeneracy. Questions of vital importance to both boys and girls are mooted topics, tabooed and ignored. The harvest of the ignorance and indifference to these solemn and vital matters in our social life is seen in the blighted lives of wrecked humanity, diseased, despairing, hopeless, criminal, insane, and dying. Among all classes, from the ranks of wealth, culture, and education, as well as from the poor and illiterate, humanity presents a revolting spectacle — a turbulent stream bearing on its bosom a tempest-tossed crowd, riotous, hilarious, jesting, weeping, morbid, shrieking,— a maddened mass of beings, in all stages of deterioration, from the "first glass," "the first lapse of virtue," to the faded roué and the abandoned woman: "all have sinned," and in the various stages of their downward career, they are sweeping to their final doom. The travelers of "the broad road" have thrown away their true happiness because they have *not known* the real purpose of their creation, to glorify God their Creator. The realization of this is the unhappy meditation of the powerless onlooker, who longs to stay the tide of evil. Sounding down the centuries are the words of the prophet Hosea, "My people are destroyed for lack of knowledge."

The average girl thinks it necessary, in order to be admired, to be bold, pert, and familiar with men, to joke, to laugh immoderately, to be "jolly," with loud, conspicuous clothing, glaring belt-buckles and jewelry, enormous "chignons," hair arranged as fashion advises, ignorant of the fact that the fashions are

set by Parisian prostitutes. With these mistaken ideas, ignorant, misguided girls start out in life as "sign-boards," advertising themselves by their appearance for just what they really are. Men read their signs, and shortly the poor, vain, frivolous girls are reaping the penalty of their ignorance and folly, in wretched despair and dishonor.

There are some who struggle to regain lost ground; to reinstate, in themselves, respect for their own womanhood. Others grimly submit to what they feel is inevitable, and go down to the "bottomless pit." Some, struggling to rise, having profited by their sad experience, are frowned down by their more "respectable" sisters whose wealth or position may enable them to crush these humble but sincere ones, too often, into a hopeless resignation to a false social standard.

If only that sweet word "charity" could be allowed its real meaning, how much less of sad injustice our women would do one another! Ignorance and wrong education along social and ethical lines have perverted the social fabric, and obscured the moral vision of the young women who become wives and mothers. These conditions have existed so long that it would take a mighty revolution to correct them. Even so, neither civil laws, social customs, nor human efforts can change the heart. God's power alone can accomplish this transformation, in accordance with the earnest wish of the individual.

While seeing "through a glass, darkly," let this thought be in our minds, "What might not *I* have been or done in life, had *I* been born with her heredity, had her environment and training, her special temptations and associations? Let me (if fortunate enough to have escaped the prevailing influences) not be critical of others, but humbly feel that I know not what *I might* have been or done had I been just where she was."

This sweet charity will indeed cover "a multitude of sins," and encourage the repentant to desire the "better way."

WINTER SPORT FOR THE LITTLE ONES

BANANA CULTURE AT ORLANDO. A VERY PROFITABLE BUSINESS

WHERE FLORIDA ENTERTAINS A FEW OF HER WINTER GUESTS

Florida as a Winter Resort

R. W. Parmele

Until a little more than two years ago, the writer of these lines was entirely unacquainted with conditions in Florida. He had formed some opinions concerning the State, which opinions doubtless are shared by many residents of the North. To him Florida was a synonym of swamps, alligators, mosquitoes, malaria, and yellow fever. Two years ago, answering a call of duty, he was requested to take up work in this State. Having now been a constant resident of the State for two years, in a line of work which has called him to all parts of it, he is in a position to speak intelligently and reliably concerning it. Omitting mention of its delightful summer climate, he will confine himself to a description of the advantages of Florida as a health resort in winter.

FLORIDA is the most southerly State in the Union. This fact alone would suggest its advantages as a winter resort; but that is not the only reason for its mild winter temperature. The equatorial current following the equator for hundreds of miles, gathers warmth from the direct rays of the sun. Off the coast of South America, it takes a northwesterly course, entering the Gulf of Mexico. It then takes an easterly and northerly course through the Straits of Florida, in the channel of what is known as the Gulf Stream, along the eastern shore of Florida, returning again to the equator along the western shores of Europe and Africa. In the Straits of Florida its temperature is sometimes as high as 85° F. Says Maury, late superintendent of the Naval Observatory at Washington, D. C.:—

"So much heat is conveyed by this stream to northern latitudes, that the winter climate of the whole western face of Europe is softened and tempered by the winds blowing from its surface. The ponds of the Orkney Isles, though bordering on the parallel of sixty degrees north, owing to this moderating influence, never freeze; and the harbor of Hammerfest, the most northerly seaport in the world, in latitude 70° 40′, is always open." Thus it will be seen that Florida is really a steam-heated State.

When Jack Frost assumes control in the North, thousands of persons seek protection in this genial climate. The city of Jacksonville is "the gateway to Florida." To this "gateway" come boats from New York and Baltimore, and daily about a score of splendidly equipped trains from the principal cities of the North, each loaded with tourists. From this point they are distributed to all parts of the State.

The Florida East Coast Railroad starts south from Jacksonville, and parallels the Atlantic shore for more than five hundred miles, then, as if it could resist the lure of the sea no longer, it leaps out into the briny deep, and jumping from key to key, pushes its way on toward Key West. It will soon establish its terminal in that "hermit city." The scenery along this route is most beautiful. Palms hanging heavy with cocoanuts, orange groves laden with golden fruit, sights incident to the sea, etc., greet the tourist at every turn of the wheels. Along this route are some of the largest hotels in the world, and the aristocracy of the North here find their tastes fully satisfied.

The Atlantic Coast line and the Seaboard Air line traverse the interior of the State, both terminating at Tampa. Along these routes, fruit and truck farms, thriving little towns, beautiful lakes, and turpentine and lumber camps, are seen in abundance. Those who prefer the more sober things of life usually choose these roads.

The summer is the rainy season in Florida, while the winters are dry. In this respect the climate of Florida is the reverse of that of California. The result is that the summer heat is tempered by frequent rains, and the winters are rendered simply delightfully cool summers.

In summer there are a good many mosquitoes in some localities, but they are by no means general, and in winter they are almost entirely unknown. They are but little more numerous at any time than in the Northern States, while flies are not so plentiful. Alligators at large are rarely seen, and are no menace whatever. In the rural districts deer, black bears, and turkeys abound, and the waters of the lake are filled with fish.

FLORIDA PINEAPPLES GROWING UNDER A SHED

Of course, in a State favored with so many visitors as come to Florida every year, we may expect there will be offered plenty of amusements. In addition to the pleasures afforded by Florida's natural advantages, such as bathing, boating, etc., polo, golf, automobile races, and many other games occupy the time of the winter visitors. All of these conditions tend to encourage the outdoor life so essential to health.

Bananas, oranges, and other tropical and semitropical fruits, fresh from the trees, the plants, and the bushes, tempt the appetite, and encourage the adoption of a proper dietary. The equable temperature and the pure air coming from

the broad expanse of water on three sides of the State are certainly important factors in the restoration of health.

The sectional feeling engendered by the war is a thing of the past, and Florida's citizens extend to their Northern brethren a cordial invitation to try a winter's sojourn with them. For the sick, ample provision is made. Skilled physicians are plentiful in all localities, and a number of sanitariums and hospitals are operated within the State. Almost in the center of the State, at Orlando, is located one of the chain of sanitariums which carry out the principles advocated by this magazine.

Profitable employment may be obtained in abundance during the winter. In the winter the fruit crop is marketed, and the vegetable crop is raised. Building work is also more active in winter. The State is advancing, and everywhere improvement is the order of the day.

Thus it will be seen that whether on pleasure bent, in quest of health, or seeking employment, Florida is a good place to come to.

Drawer 28, Orlando, Fla.

A FLORIDA ORANGE GROVE

Is Alcohol a Food?

E. C. Jaeger

A FOOD is any substance which, when taken into the body in moderate and repeated quantities, will nourish, repair waste, and furnish heat and energy without doing harm to any organ or to the system, taken as a whole.

Chemists have often defined a food as any substance that, when taken, can be oxidized in the body. But such a definition is not a true one. A food must be of use in —

1. Providing nourishment to the tissues.[1]
2. Saving the wasting of the tissues.
3. Providing energy for work.
4. Maintaining heat in the body.

According to the chemical definition, alcohol has been held up as a foodstuff because it is at least partially oxidized in the system. But the results of its

[1] This is not necessarily so. Starch, sugar, and fats are true foods, though they do not build tissues.

oxidation do not benefit the system in any of the four ways just mentioned. Many poisons, for instance, morphia and phosphorous, are oxidized to a certain extent by the body tissues, for this is the method our Creator has endowed our organisms with to get rid of such poisons. But who would think of calling opium or phosphorous a food?

We shall now seek to find if alcohol satisfies any of the four qualifications of a food.

1. *The Building up of Tissues.*—Milk, bread, eggs, and foodstuffs of like nature are genuine body-building materials, and allay true hunger. Alcohol does allay the sensation of hunger (by its delusive action on the brain and nerves), but does not repair the tissues. None of the alcoholic beverages contain practically any nutritive material. Liebig states that nine quarts of ale contains as much nourishment as would lie on the end of a table-knife. There is not as much food in five barrels of beer as in a single loaf of bread.

Any increase in weight due to beer drinking is caused by delayed metabolism. The term metabolism denotes the chemical changes going on in the body. Such changes either build up the tissues, or break them down, thus creating waste substances which the body must get rid of if health is to be maintained. Alcohol delays the carrying off of these waste substances, and they are stored up in the cells as fat (half-oxidized waste), causing them (cells) to swell to five or six times their normal size.

2. *Saving the Waste of the Tissues.*—All the evidence gathered by Muira, Romeyn, and other noted physicians points out alcohol as a poison leading to increased tissue waste.

3. *Providing Energy for Work.*—Alcohol produces no energy for muscular work. A large number of practical experiments have been made to prove this. A most interesting experiment made by Dr. Parkes of England, is recorded by Sir Victor Horsley: "A number of soldiers of the same age and same type of constitution, living under the same circumstances, and eating the same food, were collected together, and then divided into two gangs,—an alcoholic gang, and a non-alcoholic gang. Certain work was given them to do, for which they were paid extra by Dr. Parkes, according to the amount of work they accomplished. The men in the gang which was allowed alcohol had beer at their disposal, and when they felt tired, they resorted to its use. For the first hour or two the alcoholic gang went ahead; but after a time their energy began to flag, and before the end of the day their rivals, the non-alcoholic gang, had accomplished far more work, and received more pay. When this had gone on for some days, the men who were having beer begged that they might be transferred to the non-alcoholic gang, that they might earn more money. Dr. Parkes declined to allow this, but in order to make the experiment conclusive, he transposed the gangs, the men being willing to lend themselves to the experiment. Those who had so far had beer, were now allowed none at all, the others, who had so far been abstainers, being given the beer. The results were exactly the same, the alcoholic gang went ahead at the starting, but failed utterly toward the end of the day, the non-alcoholic gang now accomplishing far more work than the other."

Sir Frederick Treves gives the following comment: "As a work producer, alcohol is exceedingly extravagant, and like all other extravagant measures, leads to a physical bankruptcy. It is also curious that troops can not work or march on alcohol. I was, as you know, with the relief column that moved into Ladysmith, and of course it was an extremely

trying time on account of the hot weather. In that enormous column of thirty thousand men, the first who dropped out were not the tall men, nor the short men, nor the big men, nor the little men; they were the drinkers; and they dropped out as clearly as if they had been labeled with a big letter on their backs."

4. *Maintaining Heat in the Body.*—Alcohol may, and does, produce in its oxidation some heat in the body, but this is far outbalanced by the marked interferences in the well-being of the body as a whole, and the extraordinary loss of heat it occasions in the skin by swelling the blood-vessels on its surface. Even though alcohol does produce some heat, it would not be a paying proposition to use it.

Notice now a similarity. "Sea water may be used in the boiler of a steam-engine, and the steam from its evaporation will transmit the energy of the fuel to the revolving wheels, but its corrosive action on the steel forbids its use except in emergencies."

1462 W. Sixth St., Riverside, Cal.

Starchy Food Indigestion

Charles Cristodoro

BOIL a little flour and water until it forms a heavy, stiff paste, so firm and solid, when it begins to cool, as to resist stirring with a spoon. When cooled to 100° or 120° F., add a teaspoonful of good extract of malt, and note the instantaneous transformation that takes place. The heavy mass of paste seems to melt, to become liquid, and you can now stir it with a spoon. What does this mean?

The digestive process begins with the preparatory work of the teeth. As we minutely subdivide and mechanically grind our food, in the same ratio do the digestive secretions, beginning with the ptyalin, attack and render it soluble.

Breakfast foods and starchy foods in general receive little or no subdivision of the teeth, and a very sparse salivary comixing. For this reason the "starch-into-sugar-inverting" principle, the ptyalin of the saliva, is avoided, and the starchy foods are deprived of the primary digestive process that they require. Before they leave the first stomach, as Dr. Hutchinson, of England, puts it, a first-class "sour mash" is under way in the body, the starchy substances and the temperature of the stomach making an ideal distillery combination.

Fermentation under these conditions results, and unless corrected in the second stomach, this fermentation may extend through the entire intestinal tract.

Starch or carbohydrate "indigestion," "gas," "fermentation," "intestinal irritation," etc., may be terms applied to this situation. Had thorough mastication and insalivation taken place, in the majority of cases no digestive disturbance would have followed.

Barley, from which malt and malt extract are obtained, is the richest in diastase of all the cereals. Diastase, like ptyalin, has the power of converting starch into dextrin and sugar.

To produce malt extract (which in its commercial form is very similar in appearance to a heavy cane-sugar sirup), the barley is malted. The grain is steeped in water until soft, and it is then strewn upon the floor, and kept at an even, growing temperature. This grow-

ing process develops the diastase, which, in turn, acts upon the raw starch and gluten in the grain, rendering them more or less soluble. At the proper time the growing process is checked by a heat that dries the barley malt, but does not injure the diastase in the grain.

A change has taken place. The raw barley, before malting, would resist effectually the grinding pressure of the teeth; the grain of malted barley will grind to a powder under a slight pressure of the jaws, the contents being quite sweet.

This malt is ground preparatory to the making of the extract. It is steeped in warm water, the liquid is drawn off and is condensed, just about as milk is condensed, the malt extract leaving the condensing pan in the form of a sweet sirup. It is now extract of malt, and in reality is nothing more nor less than a liquid, unfermented barley bread, rich in diastase. It is the diastase in this malt extract, like the ptyalin of the saliva, that acts upon the starchy food, and inverts it into grape-sugar, a process all starchy matter must go through before assimilation is consummated.

Dr. Fothergill, of London, for years advocated the use of a teaspoonful of malt extract stirred into one's oatmeal or cereal, and held that the indigestion of starchy matter could be controlled thereby.

A tablespoonful of malt extract in a glass of water after a meal will, where starchy indigestion is prevalent, correct the same almost invariably. The diastase in the malt will have ample time to saturate the food before acidulation supervenes.

Besides being a corrector of ptyalic insufficiency, malt extract is a food of the highest value, containing in a readily digestible form the carbohydrate and protein elements of the barley. Where no other food can be retained, an administration of malt extract is found to be invaluable.

It is manufactured by a score or more of malt-extract manufacturers, its use even extending to the bakery trade of the country. It is safe to say that every first-class baker in the country uses malt extract in connection with the making of his bread, two to five pounds of malt extract to each barrel of flour used. Bread so made, for obvious reasons, becomes more digestible and wholesome.

But there are thousands of cases of carbohydrate indigestion, "starchy dyspepsia," that could be kept well under control by the use of malt extract taken with the breakfast cereal, or by taking a tablespoonful after the ingestion of a meal.[1]

Point Loma, Cal.

[1] This sirupy malt extract should not be confounded with the liquid, alcohol-containing "malt extract" of the brewers.— ED.

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OLESON FARM, BROOKINGS, S. D.

Exercise for Curing Contracted Chest, Round Shoulders, and, in Some Instances, Curvature of the Spine.— Lie face downward on the floor, with the hands upon the hips, the fingers pointing forward. Now raise the head and the chest, keeping the hands on the hips. Bend the head and the trunk as far backward as possible. When you have attained what you believe to be the maximum elevation of the back of the head, make an effort to bring it back a half inch or so farther. At the same time, strain the shoulders backward. Hold this maximum as long as possible, and then let the head and trunk come slowly toward the floor until they touch it. Rest for a moment or two, and repeat. For the first few days after taking this exercise, you will probably feel stiff and sore at the shoulder-blades, between them, at the back of the neck, and the upper portion of the chest. This is a good sign, because the soreness shows that you are exercising muscles that have hitherto suffered from disuse. The best time for taking this exercise is immediately after rising and about half an hour before going to bed.

Physical Culture for Special Development

Herbert M. Lome

VERY few persons possess the physical proportions that nature intended should be theirs. The exceptions to this rule are those who have lived the physical-culture life either through instinctive preference or by reason of their having realized and put into practise its principles. For the most part, the habits and occupations of civilization are responsible for departures from the normal. It is also true that there are hereditary tendencies which make for puny, feeble frames or for certain diseases. But these defects, together with those others that are the outcome of neglect or circumstances, can alike be remedied by an observance of hygienic law, including diet, exercise, etc.

For the purposes of this article, the physical system may be divided into five sections, or "areas," these being the head and throat, the chest or upper portion of the body, the abdomen, the arms, and the legs.

The habits or occupations alluded to, unfavorably affect one or more of such areas. The results are usually of an obvious nature, as far as externals are concerned, while at the same time the action of the internal organs in one or all the parts is also affected. Thus, the man who spends many hours of the day stooping over a desk, or who is a victim of the "quick lunch" counter, or who fails to secure necessary ventilation, or who, in a dozen ways, tampers with the needs of his system, is bound to show the signs thereof. The remedy is of a sufficiently plain nature. The contributory causes to the defects or organic troubles must be eliminated, and this can only be done by the physical-culture

practises described in the articles of this series. That which we shall now consider is the special development of those external parts of the body which are lacking in normality. To this end, let us begin at the top, as it were, and speak, first of all, of the head and neck.

The face of the individual whose health is not as it should be, furnishes indications of such a condition. The cheeks are thin or bloated, the eyes lack luster, the neck is scrawny or puffy, and the hue of the complexion is sallow or unduly flushed. The cure for the appearance of the countenance can only be brought about by a general observance of physical-culture law, because the digestive, the respiratory, and the excretory systems must be gotten into working order before the face can assume the hue and the proportions of health. With the neck, however, it is somewhat different. Here, I would repeat the first principle of muscular law, which is, that if you fail to use a set of muscles, they either became atrophied or shrunken, or else their tissue is, to a very great extent, replaced by fatty matter of an unhealthy sort. Hence, the bloated or the scrawny neck, both symptoms indicating a disuse of the neck muscles. In this connection, it may be shown that nerves and blood-vessels which connect the brain with the trunk of the body also suffer from lack of exercise, the result being that both the mental faculties and the assimilative powers which are closely identified with the brain, become weakened and defective because the neck is not properly exercised. In one of the illustrations for this article, an exercise is shown that, if persevered in, will assuredly bring about due proportions of the muscles of the throat, and, incidentally, aid in restoring the general health. Have you ever noticed the magnificent throat development of the American man-o-war's man? Such development is due to two things — the absence of any constrictive article of wear, and the daily exercise of the muscles referred to. I speak with authority on this subject, because I have made careful inquiry and observations in regard thereto. This exercise, which is here given, should be taken on arising and just before going to bed. Five minutes or less is sufficient in the first instances, but later, it may be continued for ten or even fifteen minutes. Never mind the giddiness from which you will probably suffer when you begin the work; this will pass away, and in a very few weeks, you will notice the difference for the better in the appearance of your throat and your health in general.

Exercise for Increasing the Development of the Neck and Stimulating the Action of the Blood-Vessels in that Portion of the Body.— Stand erect, with the heels touching, the hands behind the back, as shown in the illustration. Throw the head back and then downward as far as possible. Do this for twenty or thirty times in succession. Then throw the head sideways and in both directions alternately. The writer can testify through his own experience as to the almost immediate benefits which accrue from this movement. In addition to developing the muscles of the neck, the exercise has a tendency to invigorate the mental faculties.

The man who stoops, or whose chest is contracted, is not doing justice to his lungs or his appearance. The former condition is serious, because he who robs his body of its needed supply of air by not breathing properly is guilty of inducing oxygen-

starvation, which is the same thing as saying that he is putting a premium on weakness, and courting disease. To remedy an undeveloped chest is easy. In the

Exercise for Intestinal Troubles, Obesity in the Abdominal Region, Undue Thinness, and Indigestion.— The movement about to be described is sometimes known as the "harvesting action," because it roughly represents the movement executed by a man with a scythe. Stand erect and bend the trunk somewhat forward. Clench the fists so as to tense the muscles of the forearms, and then throw the arms strenuously from side to side, letting the trunk follow their direction. Do not shift the position of the feet or that of the body from the hips down. The feet should be about twelve inches apart. Swing with vigor, letting the right and left arm alternate in the stretch. Continue exercising until you feel fatigued, when rest, and resume. This is a capital movement for the purposes named. In this, as in all other movements, it is well to have a cold sponge-bath at its termination, followed by a brisk rub-down with a rough towel.

first article of this series, there was given an exercise for curing round shoulders; this, too, is capital for broadening and opening the chest. I now describe another exercise for the same purpose. The two in combination will, if persevered in, assuredly bring about a normal chest development.

Intestinal troubles of any kind, together with a waist-line of abnormal proportions in the direction of either obesity or thinness, are due to an improper diet, lack of exercise, or unnatural positions assumed during the daily task. Here, again, the patient must reform his dietetic habits, and take a due amount of exercise. Practise the movements that are shown in the illustration which deals with this defect. Three weeks of faithful attention to this movement will assuredly bring about a condition for the better.

One of the most common of physical defects is lack of muscular development in the arms. There are scores of movements and exercises which furnish the needed remedy; the one shown in this article is of a characteristic nature. All movements which have to do with the legs or arms should be performed briskly.

Exercise for Developing the Legs and the Muscles of the Lower Part of the Abdomen.— Stand upright, with the feet about twelve inches apart. Now lower your body into a crouching position, and extend the right leg forward, as shown in the illustration, at the same time balancing yourself by the extended arms. Do not let the heel of the extended foot touch the floor, but when you have gone down as far as possible, raise yourself on the leg which is supporting your body, rest for a moment, and then go down on the other leg in the way described. In the first instance, you may find a certain amount of difficulty in performing this exercise in the manner told, but after a little time, you will be able to accomplish it with readiness and benefit.

and continued until you feel somewhat fatigued. Then rest for two minutes and repeat. Unlike some of the other exercises, you can hardly overdo the arm

movements, and while they are best performed on rising or going to bed, they may be taken with advantage two or three times during the day. It is not advised, however, that you exercise immediately after any meal. Do the movements at least an hour before, or an hour and a half to two hours after, eating. I need not give the physiological reasons for this, but you may accept my word for it, nevertheless. If you wish to perform other movements, consult a reliable physical-culture book which describes them in detail, but I think you will find that the one which I give here will answer all practical purposes.

Exercise for Developing the Arms.— Stand erect, heels touching. Clench the fists and bend the arms smartly upward until the fingers touch the shoulders. Then shoot the arms up above the head with a vigorous movement. Bring the arms down straight to the sides, and repeat the exercise. This movement brings into action the two sets of muscles that are found in the arms, these being those that are used for pushing and for lifting.

The leg movement described is of an excellent nature. Not only will it harden and develop the muscles of the lower limbs, but it has a beneficial effect upon the body in general, especially the organs of the abdomen. In this case also, you may perform it until you feel tired; then rest and repeat.

Finally, and again, do not fail to remember that perseverance is the secret of success in physical culture. You can not expect to overcome bodily defects which have been brought about by years of improper living in the course of a week or two. A month's sincere work will, however, give you visual proofs that you are on the right path, and your feelings in general will be added assurances thereof.

This series will be continued in the next issue. The articles deal with facts, not theories, and the reader will be benefited, not by reading, but by practising what he reads. The objection to physical culture is, it is not usually practised.— ED.

To Stamp Out Hookworm Disease

THEORETICALLY the eradication of hookworm disease could be accomplished in a short time by treating all the harborers of the parasite with thymol; shoeing the entire population for a time, until the present soil pollution could be remedied; and burning or chemically treating the stools of the infected. That such measures could never be universally or simultaneously carried out, is evident; but much can be done by individual and concerted effort.

The charitably disposed and the patriotic people of the South could do no greater good to their land and its inhabitants than by organizing leagues for combating hookworm after the plan of the antituberculosis leagues; for it is no exaggeration to say that the regeneration and lasting prosperity of the South depend absolutely upon the extermination of this detestable parasite, that is literally sucking its life-blood.— *Editorial in Medical Record.*

The Washington (D. C.) Day Camp

Isabel L. Strong

THE attention of the world has been directed toward tuberculosis during these first years of the twentieth century. It is indeed a great danger, which threatens the very life of the new century. Of all the diseases attacking man, there is none which causes more economic waste and misery; and unless we are vigilant and active in our campaign, a tremendous loss of life, at a tremendous cost, will go on increasingly. Much has already been done by public and private charitable organizations toward taking the proper care of patients suffering with tuberculosis. Yet there still remains a wide field of activity, if we wish to save eight million of our present population from this dread disease. Many municipal hospitals and sanatoriums for incipient and advanced cases have been built, and many dispensaries are equipped solely for the purpose of treating tuberculosis. Various societies for the prevention and control of tuberculosis are also most active in their work. There is, however, a large class of patients who do not wish hospital care, and it is also true that hospital facilities are as yet insufficient in the majority of our cities. It was to meet this need that day camps were first established. The idea was borrowed from Germany, where similar camps are maintained by the government. Boston was the first city in the United States to try the experiment, and there it was first started by the Boston Society for the Relief and Control of Tuberculosis. The camp at Mattapan is now under municipal control and government. This camp has been eminently successful, having an average attendance of sixty-three and one-half patients a day and a capacity for two hundred patients. Since the Boston camp was started, at least twenty other camps have been organized in New England cities and towns.

The Washington branch of the Red Cross opened a day camp here on Aug. 4, 1908, the necessary funds for the maintenance and equipment coming from the sale of Christmas stamps. The camp is ideally situated on rising ground back of the new Municipal Hospital for Tuberculosis at Fourteenth and Upshur streets, N. W. It is surrounded by trees, and has a pleasant outlook toward the Soldiers' Home. The building is of wood, of the lean-to type, facing south, open in front, and divided into three sections. The Fourteenth Street and the

Georgia Avenue cars make the camp available from all other lines. The middle enclosed section is the kitchen; the right-hand division is for white patients; and the left-hand for colored. Two large tents, loaned by the War Department, are used for the administration building, and for a play-tent for the children. Behind the camp, an outbuilding provides toilet facilities.

The camp's second season began the first of April, 1909, with several improvements. We now have two visiting physicians, Dr. Norcross and Dr. Lawson; a caretaker, who sleeps in one of the tents; and our own cook and kitchen equipment. We have also printed camp rules, cards of admission, and history cards and records. One of the nurses of the Instructive Visiting Nurse Society is in charge. The patients belong to that wide class, the ambulatory consumptives, of whom much or little may be expected. The five city dispensaries are the camp feeders. The patients are given a lunch of milk and eggs upon arrival at about 9 A. M., and after the record of the temperature and pulse has been made, they wander out under the trees, where hammocks and chairs are to be found. Blankets and wraps are supplied for cold days, and an outdoor fire also adds to the attractiveness of the scene, as well as to the comfort of the patients. At noon a hot dinner of meat, potatoes, a vegetable, bread, butter, milk, and a dessert is served. After an hour's rest, the children are allowed to play one game of croquet, or to visit the spring in the woods. During the summer they became much interested in a family of puppies found in the woods. Of course, these were all promptly adopted. A setting hen formerly belonged to our family, as well as a kitten and a "Jenny Wren." The older camp members play cards or read; but for the most part the order of the day is rest and sleep. Again, at four o'clock, a lunch is served of milk and eggs, bread and butter; the evening temperatures and pulses are taken; the patients are given car tickets for going home and for returning the next morning; and the camp is closed at half after five.

During the last six months there have been eighty patients sent out to the camp. Of these, fifty-five were enrolled, the others not being considered camp cases. The present number is sixteen, ten being on the improved column, and six being doubtful cases. Of the thirty-nine discharged cases, five are cured, three have shown decided improvement, six are working (against advice), three were transferred to the hospital, six have died, three were discharged for misbehavior, two left the city, and eleven have stopped coming as too advanced.

The most stringent camp rule is in reference to the disposal of sputum. Cups and napkins are provided, and the patients are required to use them, and to burn them before leaving for home. The children are not allowed to leave the camp-grounds. All but one of our seven schoolchildren are now attending school, returning to the camp on Saturday. During July and August a teacher was provided for two hours in the afternoon, so that the children might not disturb the rest of the older patients. We hope that this school nucleus may lead to an outdoor school for children suffering with tuberculosis. It has been recently stated that sixty per cent of schoolchildren have enlarged cervical glands; that is, have tubercle bacilli in their lymphatic vessels. Under such circumstances of what inestimable value an outdoor school would be! With so large a population as we have here in Washington, it would seem as if such a school were an imperative necessity. The daily average camp attendance for six months has been thirteen and three fourths, the

highest average being sixteen, and the largest attendance twenty. The average cost has been forty-seven and two-fifths cents a day for each patient. The average quantity of milk used daily has been three and two-fifths gallons. The total number of dinners served for five months was 1,595. The white patients have been more regular in attendance than the colored, and to them and the schoolchildren we feel that the greatest permanent good has been done. For another year we recommend the utilization of the camp either entirely for the children, both colored and white, or for white patients only.

The camp life is educational as well as beneficial, and the cost for each patient is comparatively small. It might well be regarded in the light of a training-school, demonstrating day after day the lessons taught in the dispensaries, and becoming more forceful because each one sees his neighbor doing likewise. The love of fresh air, cleanliness, and carefulness is constantly being taught, and each patient becomes a little center to spread the knowledge of the cause and prevention of tuberculosis in his own home. All the camp members are under the direct home supervision of the visiting nurses of the Instructive Visiting Nurse Society, so that the home conditions of each patient are known, and the rules of sleeping alone and with open windows, and the use of sputum cups, are enforced. Whenever a camp member fails to appear after two days, the camp nurse reports him for home investigation. Sometimes he is found too sick to return, and sometimes the chance for working proves too strong to be resisted, even with the danger ahead of losing all he has gained.

If the improvement to the schoolchildren were the only good accomplished, we should yet feel that our second season had been successful; but we rejoice also in the cure of three of our wage-earners, who were ready for work when the camp closed in November. When it is true that the most permanent good is done to the incipient cases, should not a place be provided for those who may yet be restored to partial health and working capacity, preferably for the white patients, as they seem the most anxious to receive the benefit given by the camp life? And for those others also in that all-embracing class, the ambulatory patients, for whom the door of hope is soon to close, has it not been worth while to provide a place under the trees in pleasant surroundings, away from home worries, and hot, crowded rooms? To them, indeed, the Red Cross day camp has been a godsend, and to some it has given a first and only vacation. We feel therefore encouraged to say, in ending, that now that Washington has a camp, may it never be without one.

The Use of Milk as a Food

The Editor

MILK is one of our most important foods. There are few families indeed in which dairy products in some form do not form part of the daily ration. A recent estimate made at the Bureau of Animal Industry indicates that on an average a glass of milk daily is consumed in the form of milk or cream for every man, woman, and child in the United States. Including the amount used in the manufacture of butter and cheese, the amount would aggregate three glasses a day for each individual.

Milk is the natural food for the young of all mammals, and is well adapted in composition to its purpose. It has been noted that there is a vast difference in the composition of milk of different species, and this difference bears a striking relation to the rapidity of growth of the animals. For instance, a young rabbit doubles its weight in six days, and an infant in one hundred eighty days. Between these range different species of mammals, the cow approaching more nearly to man in this particular than the others. Corresponding to this difference in time required to double in weight, or in rapidity of tissue change, there is a difference in the proportion of tissue-building material in the milk. This would indicate that for each species there is a definite composition of milk, adjusting it to the requirements of the young of that particular species.

Cow's milk is perfectly adapted to the needs of the calf, but is not so well adapted to the wants of the cow, because the cow has ceased to grow, and does not need such a large proportion of tissue-building food. For infants it does fairly well, especially when modified; that is, changed in composition by the addition of water, sugar, fat, etc., to suit individual needs; but to say that cow's milk is a perfect food for man is to disregard the facts. As a full-grown person requires much less tissue-building material proportionately than an infant, the proportions of proteid in milk are too large for adults. From an economical standpoint, milk has much in its favor; for with the exception of pork, it is probably the cheapest of animal foods.

Another fact not generally recognized is that at ordinary prices, skim milk or separated milk is a much cheaper source of proteid than whole milk. The deficiency in cream can be made up by substituting a cheaper fat. For this reason skim milk should be used much more freely by the poor than it is at present.

While milk is valuable as a food beverage, and for use in cooking, its most important use is perhaps in the artificial

feeding of infants, where it is often indispensable. There are many artificial infant foods, but none is so universally useful as cow's milk. All man's ingenuity has thus far failed to produce a perfect artificial infant food,— for the reason, partly, that each infant is a law unto himself as to his requirements.

The relative composition of various milks and milk products are as follows: —

MATERIAL	PROTEIN PER CENT	FAT PER CENT	CARBOHYDRATES PER CENT
Whole milk	3.3	4.0	5.0
Skim milk	3.4	.3	5.1
Cream	2.5	18.5	4.5
Buttermilk	3.0	.5	4.8
Butter	1.0	83.0	..
Cheese, cottage	19.6	23.2	2.1

These are only averages, as there is a difference in the composition of milk of different animals, and of the same animal at different times. However, there is a constant difference between cow's milk and human milk, the latter being richer in sugar, and poorer in protein. Milk may be made more like human milk by adding water to dilute the protein, and adding sugar and fat.

In the feeding of infants great care is sometimes exercised by physicians in adjusting the proportion of the ingredients to the needs of each individual infant. It is said that Holstein milk more nearly resembles human milk in composition and ease of digestion than Jersey milk or the ordinary milks.

The reader will remember that foods are classified according to their chemical composition into protein, fat, carbohydrate, and mineral. The protein is the tissue-building material. One might do fairly well without the other ingredients, but he must have protein. The protein of milk is of two kinds — albumen, which coagulates when the milk is boiled, and casein, which coagulates, or curds, when the milk curdles or "sours." In the cow there is comparatively little (less than one-sixth) albumen; in the woman, the protein is two-thirds albumen. In other words, mother's milk would form a heavier scum when boiled, and a softer curd when soured.

The carbohydrate of milk is milk-sugar, which under certain conditions is transformed into lactic acid, changing "sweet milk" into "sour milk." It is a fuel food, being used in the body for the development of heat and energy. The fat (cream or butter) serves a similar purpose. Inasmuch as milk for adults is rather rich in protein and fat, an ideal dish is prepared, so far as composition is concerned, by the combination of rice and milk, as the rice is very largely carbohydrate (starch).

In purchasing milk one is apt to proceed on the principle that milk is milk, and that it is cheaper to buy milk sold at six cents a quart than that which brings eight cents a quart. But there is a vast difference in milk, both as to its chemical composition, its richness, etc., and as to its purity, cleanliness, and healthfulness. Even where milkmen are honest, milk tests show a great variation in the richness of milk. Creameries now purchase milk on the basis of the fat content, a milk having three-per-cent fat bringing only three-fourths as much as milk having four-per-cent fat. The variation in richness depends partly upon the breed of the cows, partly upon the feed. Every cow has a certain capacity for milk. If poorly fed, she will run down in milk, but if overfed, she will not yield more than if fed her normal amount. And the nature of the food does not greatly alter the proportions of the proteid, fat, and carbohydrate.

In addition to variations caused in this way, it is not uncommon for dealers to "doctor" milk. One of the simplest tests for the purity of milk is the *lactometer*, an instrument which, when placed in normal milk, sinks to the mark 1030.

If cream is removed, the milk is heavier, and the lactometer does not sink so deep. To mask this tell-tale heaviness, the milkman adds water to make the milk lighter, thus covering up one fraud by perpetrating another. If a person buys this kind of "milk" at six cents, in place of paying eight cents for honest milk, he is practising very poor economy. Moreover, he is running the risk of another danger; for one who is not above the fraud of adulteration will have no scruples regarding the healthfulness and cleanliness of milk.

Very often the impurity of milk can be detected by the flavor caused by the growth of certain varieties of germs. For instance, milk is sometimes said to "taste as if the cow had stepped in it." Such milk, rich in growth of barnyard germs, is unfit for use. Occasionally at the bottom of the vessel will be seen some sediment — barnyard filth which has fallen into the milk from the body of the cow. Such milk is certainly a dangerous food. If animals are kept clean, milked in a cleanly manner, and the milk immediately chilled to a temperature of 50° or under, and kept there, it ought to develop no undesirable odor, and should remain in good condition for twenty-four to thirty-six hours. If, however, it is confined in an ice-chest with other foods, such as vegetables, fish, and the like, it will absorb unpleasant flavors. Milk otherwise good may acquire a disagreeable flavor from the food of the cow. In some pastures there may be enough wild garlic growing to make the milk almost undrinkable.

The most important consideration regarding milk, especially when used as a food for infants and young children, is the facility with which it transmits disease. The infection may come from a sick cow, or from a diseased milker, transmitter, or seller of the milk; the water with which the vessels are washed may be polluted, or flies from some polluted source may gain access to the milk. Though milk is a most important source of nutrition for man, it is unquestionable that diseased and unclean milk is responsible for more disease, especially among infants and young children, than any other one cause.

Milk is an excellent culture medium for bacteria or germs. Many of these germs are comparatively harmless, especially the lactic-acid producers; but nearly always milk contains barnyard germs of the "colon" type, which are not by any means so harmless, and not infrequently it contains germs of tuberculosis, typhoid, and other serious and fatal diseases.

It is still an open question to what extent tuberculosis is communicable from cattle to man; but perhaps no one questions that infants using milk containing tubercle bacilli may be infected in that way, and there is no reasonable chance to doubt that a very considerable proportion of children contract tuberculosis in this manner. Not only may the disease reach the milk through the udder of the cow,— and this has been proved to occur,— but the tubercle bacilli are known to pass out of the animal by means of the discharges, and form part of the barnyard filth, some of which finds its way into the bucket of the not overclean milker.

Another source of infection, which is a more real danger, if present, is the handling of the milk by tuberculous individuals. Even in the home of the baby, the nurse, if tuberculous, may contaminate the nipple by putting it to her mouth. These are not hypothetical cases, but cases that have actually occurred, and may occur again.

Unprotected milk is sure to become a source of danger. The bacteria which gain entrance to it through dust and filth multiply with such rapidity that in

a few hours they may number many millions.

Veterinarians are viewing with some alarm the extent to which our herds are infected with tuberculosis. The reports of the per cent of infection, where the test has been systematically applied, is astounding. For instance, more than four fifths of the dairies supplying one of our largest cities had tuberculous herds. As the milk is mixed, if part of the cows of a herd are infected, the entire output of milk is infected.

For two reasons infants are in especial danger. Their food is almost entirely milk; and in common with the young of other animals, they have less power of resistance than older people.

Dr. von Behring and his followers assert that tuberculosis infection always takes place in childhood from milk, the germs remaining latent in the system because of the active, outdoor life of the child, and that during school-days the indoor life and impure air lower the vitality of the child, and thus favor the growth of the tuberculosis germs. This, it is thought, is the reason why many deaths occur from this disease in the later years of school life, and afterward when the school desk is exchanged for the office desk. While it is only fair to state that many physicians do not accept Von Behring's teachings, we must admit that he has some very convincing arguments in favor of his position.

A large number of typhoid-fever epidemics have been clearly traced to milk. In some cases the milkman or a member of his family, or a man on the delivery wagon, was found to have had typhoid, and afterward the disease spread among the customers on the route supplied by that dairy. Sometimes the dairy house is found to have been visited by flies which have had access to discharges from some typhoid patient. In fact, there are very numerous ways in which milk may be contaminated, and it may be said *only one way* in which contamination may be avoided, that is, *eternal vigilance* and a habit of scrupulous cleanliness.

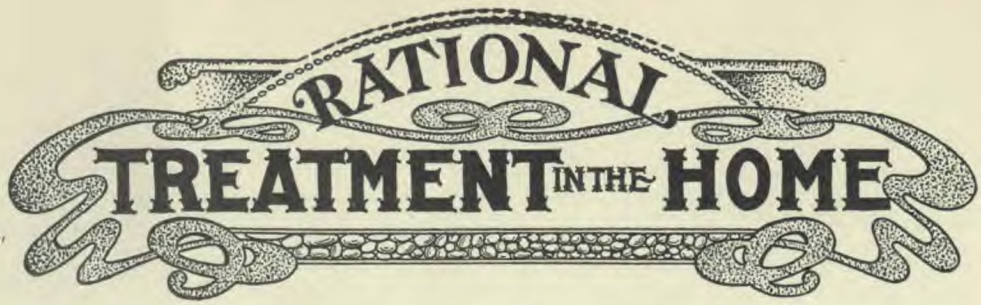
To produce such milk one must, in the first place, be cleanly by nature, and conscientious; and in the second place, must have an intelligent knowledge of the danger arising from contaminated milk, and the modern methods of preventing contamination. There must be more sanitary stables, necessitating a heavier investment of capital, and more must be paid out in wages for intelligent and conscientious milkmen. Hence, it necessarily costs more to produce clean milk than dirty milk; and one who attempts to produce clean milk, and sell it at the same price as dirty milk is sold, must do so at a loss. The fact is, pure milk costs more, is worth more, and ought to bring more. But as long as people are willing to pay the smaller price and take dirty milk, there is little encouragement for dairymen of the better sort to enter the field. For this reason it is rather difficult now to find good, clean milk.

In some cities, physicians, realizing the necessity of having a clean milk supply for the infants under their charge, have arranged with certain dairies to produce milk under inspection, the milk being "certified." Perhaps the county medical society appoints a milk commission, whose business it is to inspect the dairies, test the cows, investigate the methods of handling milk, etc. A legal contract is made with certain responsible dairymen to comply with the sanitary conditions outlined by the commission, and after that the milk is produced under the supervision of this commission. The provisions upon which milk is certified in California are as follows: —

"The certified dairies are required to conform to the rules of the commission in re-

gard to the health of cows, and general sanitary conditions and cleanliness of methods. The cows must be free from tuberculosis as shown by the tuberculin test, and must show no signs of any disease, being examined by a competent veterinarian. The general sanitary conditions must be good, the water-supply pure and abundant, and the drainage adequate. Every effort must be made to prevent contamination of the milk. The cows are brushed carefully before each milking, and their udders are washed and dried. The milkers wash their hands and put on white laundered suits. Everything that comes in contact with the milk has been previously sterilized, and as rapidly as may be, it is bottled and cooled. The output as it reaches the customers is under constant supervision of the commission. Samples are taken without previous warning at irregular intervals, and examined for bacterial content and chemical composition by the experts of the commission."

Intelligent persons, especially those who are feeding infants with cow's milk, appreciate the importance, where it is possible, of obtaining certified milk. Where certified milk is unobtainable, the next best procedure is Pasteurization; though it should always be remembered that this is a makeshift. While it may kill the disease germs, and thus render milk less dangerous, it can not make clean milk out of dirty milk.



Therapeutic Suggestions

The Editor

Whooping-Cough

DURING the first year of life, whooping-cough is more fatal than diphtheria or scarlet fever; and for this reason the important measure is prevention. As the disease is transmitted by direct contact, this ought to be easy, were it not for the fact that parents having children with whooping-cough, if not under medical control, are apt to let such children run loose before it is safe to permit it. Children with whooping-cough should be excluded from schools, playgrounds, and places where other children assemble, until a competent physician has pronounced them no longer capable of transmitting the disease.

Medical treatment offers little promise. The most important treatment measures are hygienic. Fresh air is a very important item, yet one which is almost sure to be neglected. There should be thorough ventilation; and during convalescence the child should if possible be in the country, where it can live in the open air without endangering other children.

For the spasm, it has been recommended that the attendant get behind the child, and with the thumbs behind the angles of the jaws and the fingers clasping the chin, push the jaw forcibly forward and downward. The object is to check the nervous action which causes the spasm. If the spasms can be checked, it may do much to lessen the length, not only of the paroxysm, but of the entire disease.

Abortive Treatment of Boils

The inflamed part should be thoroughly rubbed with soap and water, then washed off with fifty-per-cent alcohol, then an alcohol compress should be applied on the part and allowed to remain until the alcohol has evaporated. The region is then again washed with soap and water and the suds allowed to dry on, no other dressing being applied. If there is no pus, a single treatment is said to abort the furuncle.

Boils may be aborted before they have come to a head by touching the raised surface with 95% carbolic acid and covering the surface and surrounding skin with a 5 to 10% salicylic acid ointment. Boils may also be aborted by dipping a toothpick into 95% carbolic acid and pressing it down into the hair follicle where the trouble originates. Paint the whole with three or four coats of flexible collodion. If the boil has already "pointed," a small bit of cotton wound round a toothpick and dipped into 95% carbolic acid may be bored into the boil. As the carbolic acid has an anesthetic effect, this is not very painful. The pus escapes, and the opening is disinfected. Wash the adjacent skin with peroxid or with 1 to 1000 bichlorid, and

apply a 5 to 10% salicylic acid ointment spread on cloth.

Anemia

Various preparations are given for this condition, usually containing iron or arsenic; but after all, as admitted by the foremost medical magazine of America, "perhaps the most important of all treatments of anemia is fresh air and sunlight, in the best possible hygienic and climatic surroundings. Some anemic patients do best in the country, others at the seashore, others best in the mountains. The next important element in the blood improvement is diet." Of course, as might be expected, the writer of the foregoing quotation believes meat to be a necessary food for anemic patients. But an extended experience at a properly conducted sanitarium where meat does not form a part of the menu, would convince one that this is not the case. A dietary of milk and eggs, with the green vegetables, especially spinach, and fruits, particularly strawberries, together with potatoes, bread, and butter, in accordance with the digestive capacity of the patient, will furnish a diet fully capable of enriching the blood. In addition to fresh air, sunlight, and diet a most important measure to be applied in anemia is a course of tonic hydrotherapy, given by a trained nurse in the home, or preferably in a properly equipped institution.

Eczema in Children

This trouble is caused in infants and young children by exposure to cold or irritants, among which may be named uncleanliness, strong soap, hard water, or some parasitic trouble.

The treatment consists in keeping the parts scrupulously clean, avoiding chafing, the accumulation of moisture, overheating, and other irritants. The arms should be secured, if necessary, in order to prevent scratching, else there is little use attempting a cure.

Careful attention should be given to the diet, which should not be either excessive or unduly restricted. It should be remembered that proprietary foods sometimes cause eczema. Water should be freely given.

In bathing the child, use tepid or warm water, and avoid strong alkaline soaps and the use of hard water.

Especial importance should be attached to general hygienic measures, such as fresh air, quiet, and avoidance of excitement. When possible, take the little one to the country or seashore.

The Preparation of Cereals

Geo. E. Cornforth

Last month Mr. Cornforth gave some general directions for the preparation of cereals. This paper gives specific directions for the preparation of corn, rice, and macaroni.

Corn

HULLED corn is an excellent cereal food, and it makes a good supper dish. The same may be said of pop-corn. In fact, an authority on foods says, "Maize must undoubtedly be regarded as a food of great nutritive value," and, "It is also an economical food." This does not mean that corn is especially more nutritious or more economical than other cereals, but he wishes to call attention to it as a cereal which has been neglected. A pleasing variety of baked mush is —

Baked Mush Bars

Make one pint of corn-meal mush, using the proportion of one part corn-meal to four parts water. Cook one hour in a double boiler. Pour it into a bread tin. When cold, cut it into one-half-inch bars as long as the bread tin is wide. Dip the bars into beaten egg, then roll them in zwieback crumbs. Put them on an oiled pan, and bake them for a few minutes, in a hot oven. Serve with maple sirup or honey.

Rice

Rice makes an especially good supper dish, because it is so easily digested. It is said by some to promote sleep. It is a valuable food for all meals, as is proved by the hardiness of the races which live largely upon it. Being low in the proteid element, it should be accompanied by other foods which contain a larger amount of the nitrogenous element. And this we find the nations do which make so large a use of it. It is combined with fish, with beans and lentils, with milk, and with eggs.

In preparing it for cooking, it should be very thoroughly washed. A good way to do this is to put the rice into a deep dish, pour hot water over it, and whip it vigorously with a batter-whip. Pour the water off, and repeat the process. Do this till the rice is snowy white. To cook it so that the kernels will be separate, put it to cook in eight times its bulk of *rapidly boiling* salted water. Boil it continuously for fifteen minutes, or possibly twenty, if the kernels are large and whole, but not longer than that — just until the kernels are tender. Turn the whole through a colander to drain off the water, which may be saved for soup stock. Run cold water through the rice. This plays an important part in keeping the kernels separate. Then put it into a shallow dish and set it in the edge of the oven, or in the oven if the oven is only moderately hot, to dry; or place it in a steamer for half an hour. This is the manner in which the natives of India prepare rice.

Macaroni

The best macaroni is rough, hard, and elastic. It bends slightly without breaking, and when it breaks, it breaks off square, and does not split. Do not wash

or soak macaroni, because the result to be attained in the cooking of it is to have the tubes entirely separate and not stuck together in a pasty mass. The soaking or washing of macaroni would dissolve the outside of it, making it sticky and pasty, while the cooking of it in boiling water will harden the outside of it and cause it to keep its shape. If necessary, wipe the macaroni with a clean cloth. Put it to cook in eight times its bulk of boiling, salted water, and keep it boiling till the macaroni is tender, which will be from twenty minutes to one hour, according to the size and age of the macaroni. When it is done, drain off the water by pouring it into a colander. Run cold water through it to prevent its sticking together.

Macaroni au Gratin

½ lb. macaroni broken into inch-length pieces
1 pt. slightly sour cream or milk
½ teaspoonful salt
1 egg (1 egg would be sufficient for twice this quantity)

Cook the macaroni according to the directions given above, then put it into a baking pan. Beat the egg. Add it and the salt to the cream, and pour it over the macaroni. Sprinkle zwieback crumbs over the top, and bake till set.

This may be made by using sweet cream or milk, and putting one-half pound of cottage cheese in layers with the macaroni before pouring the cream and egg mixture over it.

Rice may be used in the same way. Chopped onion may then be sprinkled in the bottom of the pan.

Macaroni and Kornlet

Pass sweet corn through a colander. Add to it one-half as much milk, and salt in the proportion of one teaspoonful to one and one-half quarts. Pour this over the macaroni and bake.

Escalloped Beans and Macaroni

Arrange alternate layers of cooked macaroni and stewed beans, baked beans, or bean puree, in a baking-dish. Pour over it sufficient salted strained tomato, to which a little grated onion has been added, if desired, to nearly cover the macaroni. Sprinkle fine bread or zwieback crumbs over the top, and bake.

Apple Macaroni

Add to cooked macaroni enough apple sauce to make a sufficient dressing.

Macaroni, with Nut Gravy

Make a nut gravy by dissolving one large tablespoonful of peanut butter in one pint of hot water, heating it to boiling, and thicken it with one and one-half tablespoonfuls of flour stirred smooth with a little cold water. Add one-third teaspoonful of salt, and one-half teaspoonful of sage. Put the cooked macaroni into this gravy.

Macaroni, with Brown Gravy

Use a gravy similar to the above, using one-half tablespoonful of brown flour with the white flour for thickening, omitting the sage, if desired. Or, make a brown milk gravy by heating one pint of milk in a double boiler and thickening it with one and one-half tablespoonfuls of white flour and one-half tablespoonful of brown flour stirred smooth with a little cold milk. Add one-third teaspoonful of salt.

Macaroni and Peas

Heat one pint of milk (part cream may be used if desired) in a double boiler. Thicken it with one and one-half tablespoonfuls of flour stirred smooth with a little cold milk. Add one-third teaspoonful of salt, one-half can of peas, and one-half pound or a little less of cooked macaroni.

Macaroni and Tomatoes

Cooked macaroni may be added to stewed tomatoes, or a tomato sauce may be made by thickening one pint of hot strained tomato with two tablespoonfuls of flour stirred smooth with a little cold water. One-half tablespoonful of brown flour may be used with the white flour, or one large tablespoonful of peanut butter may be dissolved in the tomato juice before it is thickened, then one-half tablespoonful less of white flour will be needed, or the flour may be stirred smooth with cold cream. Chopped onion may be added; or an olive sauce may be used, such as was given in the January number of LIFE AND HEALTH.

The Termination of Another Fad

THE disappearing fad of woolen underclothing is another of those curious reversals of professional opinion which have been the history of medicine and hygiene. Man has always used an absorbent vegetable fiber next to his skin, except in very cold climates, where he had neither cotton nor flannel, and has depended upon the skins of wild animals. Two or three generations ago a veritable mania possessed hygienists to reverse the habits of mankind, and the dogma went forth that health was impossible without woolen undergarments summer and winter. . . .

Animals clothed in wool do not perspire, and that is the point to remember in deciding upon the uses of underclothing. The woolen coats of the lower animals, besides their protection from cold, are apparently evolved to prevent external moisture from reaching the skin, which is dry, even if the animal is immersed in water. Our outer garments in winter or damp weather, therefore, should be of wool to protect from external moisture. All fur-bearing animals, in lieu of perspiration, have special arrangements for cooling off when overheated; but all those which, like man, depend upon the evaporation of perspiration are so built that the hair lies flat, and the moisture evaporates at once; but when chilling takes place, the erector pili muscles arrange the hair on end, constituting a thick coat which does not transmit heat. Man's underclothing must similarly be capable of quickly absorbing his perspiration when overheated, and allowing it to evaporate at once to dry the skin. Only the fat-free vegetable fibers will do this; for the wool is not only reluctant to take up the moisture, but, when soaked, it dries off too slowly to be of use. After the period of activity the man is clothed in water-logged garments whose slow drying chills him when he does not need cooling. He is like a cat which has fallen into the water.

The advantages of cotton underclothing are now being appreciated, and we can expect the usual swing of the pendulum of opinion in that direction. Every now and then some tropical expert calls attention to the evil effects of wool, and strongly advises cotton for its quick absorption and evaporation, thus keeping the body dry and cool but not chilled. In colder climates we find the same arguments being put forth; for, say its advocates, the cotton absorbs perspiration, delivers it as vapor at once to the air between the outer and inner garments, keeps the skin dry, and prevents chilling due to a wet skin, while the woolen outer garments prevent the escape of body heat, and protect from external moisture in cold, foggy weather. If one is bathed in perspiration from extraordinary exertion in cold weather, and must then stand idle awhile, he of course puts on an extra garment in the short time his underclothing is drying; but he does not need to change his garments as he would if his underclothes were woolen, requiring some hours to dry off. This quick drying is found essential by horsemen, who

are compelled to use their animals intermittently at high speed. If closely clipped, the moisture evaporates when needed to cool the body, and after the exertion is over, a blanket protects from cold; but if the long-haired coat becomes water-logged, it takes so long to dry that the horse is chilled, and a blanket is too warm, and prevents evaporation. Clipped horses thus are saved from colds for the same reason as are men who wear cotton underclothing. But a horse which never is put to such exertion as produces excessive perspiration need not be clipped, of course; and a man who never exerts himself unduly may not experience the danger of water-logged woolen underclothing. All this seems logical, at least.

The vast majority of people do very well with cotton underclothing, while those who are so careful as to keep themselves constantly steamed in wool are often disappointed by their frequent colds. We commend the matter to the profession for more observations; for it may turn out that the poor are really better clothed than the rich — except of course the rich women, who persist in remaining healthy though clothed in flimsy cotton garments in defiance of doctors and male relatives. A dry skin can certainly stand an enormous amount of chilling, as with naked Indians; and though we do not approve the cult of the unclothed, it does seem that we are often overclothed, particularly those who must run in and out of the hot rooms of our dreadfully overheated houses, stores, and offices. We certainly are occasionally amazed at the health of men who wear the thinnest kind of cotton underclothing all winter, but perhaps they are sensible after all. At any rate the fad of woolen underclothing seems dying a natural death, but it should not be replaced by any other fad equally expensive. Cheap cotton seems as good and wholesome as the fancy fabrics.— *Editorial, American Medicine, July, 1909.*

The Dangerous Common Drinking Cup

THE possible spread of disease by the use in common of drinking cups is a fact that must be borne in mind at all times, and with the recent invention of paper cups and suitable holders for the same, there is less and less excuse for the common cup. It will not be long before public opinion demands legislation requiring the banishment of this menace to public safety. Indeed, action looking to this end has already been taken in some communities. A resolution referring to the use of common drinking cups was adopted by the Kansas State board of health in March. Pending a decision as to the legality of such regulation as contemplated by the resolution, the promulgation of the same was delayed. A decision was recently given to the effect that the board had the power and authority to make such a regulation, and that it was its duty so to do, if the public drinking cup was found to be a medium for the dissemination of infectious diseases. The resolution has, therefore, been regularly published in the official State paper, and copies of the same have been sent by registered mail to every railroad company operating in the State, to the State superintendent of instruction, and to the heads of State and private educational institutions. The resolution is as follows: —

"*Whereas,* It has been repeatedly demonstrated that the use of what is usually known as the common drinking

cup is dangerous, and is an undoubted source of communication of infectious diseases; now, therefore, in the interest of the public health,—

"*Be it ruled by the Kansas State board of health,* That the use of the common drinking cup on railroad trains, in railroad stations, in the public and private schools, and the State educational institutions of the State of Kansas, is hereby prohibited, from and after Sept. 1, 1909.

"No person or corporation in charge of, or control of, any railroad train, or station, or public or private school, or state educational institution, shall furnish any drinking cup for public use; and no such person or corporation shall permit on said railroad train, or station, or at said public or private school or State educational institution, the common use of the drinking cup."

Some railroads in this section of the country are abolishing the common drinking cup of their own accord. We believe this is true of the Boston and Maine and the Delaware, Lackawanna, and Western.

The California State board of health on July 1 ordered all railway companies doing business in that State regularly to clean the drinking-water tanks in all cars, and to substitute at once sanitary closets for the unflushed "cans."

Railway mail clerks have made complaint regarding the water tanks and sanitary conveniences on mail-cars, and have demanded the installation in all mail-cars of sanitary drinking-water coolers, in which ice is kept separate from the water, and a regulation requiring the companies to clean them daily. They have also asked for the installation of sanitary bowls with flushing devices, the same to be enclosed in small closets, so that they can not be used to pile mail upon, as, it is said, is now often done, because of lack of car space.—*Monthly Bulletin New York State Department of Health, August, 1909.*

Twelfth International Congress on Alcoholism

A GREAT variety of subjects was discussed at these meetings. Thus in the scientific sessions the effect of alcohol upon immunity, heredity, muscular and mental energy, its relation to tuberculosis, insanity, and nervous diseases, and its use in the treatment of pneumonia and enteric fever were discussed in a conservative and scientific manner. The consensus of opinion of the speakers seemed to be that alcohol, in any form, is seldom of distinct value in the treatment of disease, and some evidence was brought forward to show that alcohol, even in moderate amounts, has an unfavorable effect upon offspring, and has a tendency to lower resistance to infection. The dangers of alcohol to those with any tendency to nervous or mental diseases was especially emphasized by Dr. F. W. Mott, and the effects upon children by Professor Clouston. The statements frequently made that alcohol is, *per se,* a predisposing factor to tuberculosis received some but not marked support from an elaborate statistical study by Henschen, of Sweden. The statement that alcohol in very moderate amounts has a marked injurious action upon certain mental processes was not confirmed in a series of very careful experiments by Professor Rivers, of Cambridge.

Figures were shown illustrating how marked has been the decrease of the use of alcohol in the hospitals of various

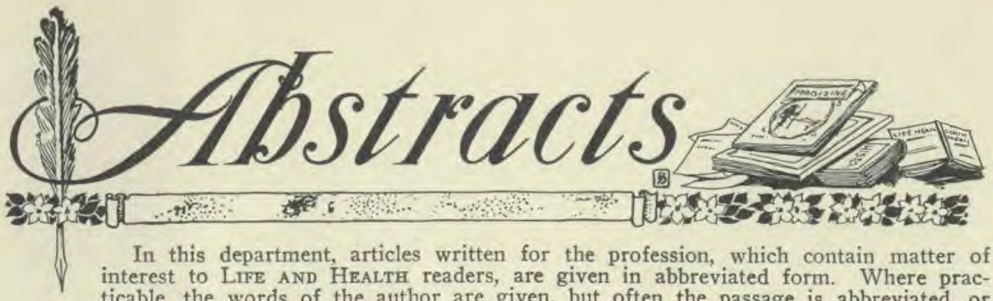
countries. In connection with the discussion of the medicinal use of alcohol I presented a paper prepared by Mr. Wilbert on the alcoholic beverages in the different pharmacopeias and on the use of wine in the preparation of drugs. I called attention to the fact that only the United States and Greek pharmacopeias include whisky, and suggested that its recognition by these pharmacopeias gave it an undue prominence as a medicinal agent; also that wine is very undesirable as a pharmaceutical agent, and that the preparations made with it should be discarded from the pharmacopeia. The paper was well received by the medical members of the congress.

A very great variety of subjects was discussed at the general meetings. Among the speakers were a number of members of Parliament, prominent lawyers (including the lord chief justice), railway officials, officers of the navy and army (including the surgeon-general), teachers, clergymen, and others. Much attention was given to temperance teaching in the public schools, the relation of temperance to life insurance, the treatment of the inebriate, and the economic and legal aspects of the alcohol problem. One of the most important of the general meetings was devoted to "Alcohol and the Efficiency of the National Services," at which representatives of the naval, military, postal, railway, and legal professions spoke. The extraordinary growth of total abstinence in the British army and navy was especially emphasized; forty per cent of the army in India are total abstainers.— *Reid Hunt, M. D., Chief of the Division of Pharmacology, Hygienic Laboratory, United States Public Health and Marine Hospital Service, in Public Health Reports, October, 1909.*

Christmas Cheer

WHEN persons determine to make a season festive, they as a rule pay little heed to the teachings of physiology about the evils of excess, or to what chemistry may have to say regarding the composition of the things which they mean to enjoy. Undue indulgence, however, brings at length a convincing proof of the physiological machine having been overtaxed. . . . If, in short, the body can not deal with the amount of food administered to it, part of that food becomes more or less a poison.

Nevertheless, there can be no doubt that when a person is situated in circumstances which tend to make him happy, his digestive powers are stimulated and increased. . . . The meal taken in the house of mourning has much less chance of actually administering to the needs of the body than a meal partaken in the house of joy. . . . To partake of food under the influences of pleasurable refinements is an excellent physiological proceeding. . . . It is not a sin to enjoy food or to secure the partaking of it under agreeable surroundings.— *London Lancet.*



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.

Mental Hygiene

REALIZING that insanity is on the increase, and that it is usually difficult or impossible to effect a recovery, it becomes of the greatest import to spread knowledge of how insanity may be prevented.

It is education that develops a power of self-control such as will be an efficient preventive of insanity; for upon education as much as upon heredity, the mental stability depends. But there is no country where the problem of education is so complicated as it is here in America, owing to the extreme variation in the mentality of its component races. Even two members of the same family are not born with an equal amount of brain power; and this difference in mental capacity increases between members of different families in the same race, and increases in greater measure between members of different races.

It is impossible to educate a feeble-minded child and a gifted one at the same rate of speed and with similar methods, and have the same good results in both cases.

It is impracticable to apply to children just emerging from semibarbarism (as is the case with some of our immigrants) the methods which succeed with our brighter pupils. Where this coeducation of mixed capacities has been tried, the result has been, on the one hand, nervous disease and insanity from overcrowding, and on the other hand, lack of adequate stimulus. This difference in mental capacity explains why so many private schools are successful in such cities as New York. They take time to give more attention to the individual pupil.

The sexes after puberty develop very unequally, and competitive examinations for promotion should be abolished. The girls naturally excel in their studies, but their physical condition is such that the tension of examinations is a heavy strain, and they are liable to breakdown, followed by chorea, hysteria, epilepsy, migraine, neurasthenia, or dementia. The comparative failure of the boys causes moroseness, morbid introspection, and even insanity. Too often the girls are herded, at an immature age, into business or factory life, and many to escape this thraldom marry without any conception of the duties they are assuming. Too often, the sequel is estrangement, divorce, and the asylum.

Let those who desire it have a classical education if they will, but for the masses, let us have more trade-schools for the boys, and for the girls more practical instruction in the duties pertaining to the wife and mother. Such education would bring in infinitely more happiness than all the study of poets and dead languages.

The schools also fall short in not providing for the needs of the backward child. These unfortunates are now forced in most instances (less than six per cent of feeble-minded children are provided for in special schools) to attend classes of much younger pupils, and the ridicule and mortification to which they are subjected more than counterbalances the good they receive from their studies; and with the ill-adapted course of study they are unable to reach so high a standard as they would if they received individual attention.

Not infrequently the cause of backwardness is some easily remedied physical difficulty such as adenoids, large tonsils, poor nutrition, or defective eyesight, which in properly supervised schools, should be detected and remedied. When the backwardness is due to some deficiency in brain power, the child should be placed in an institution where he can have careful individual instruction. Less than six per cent of feeble-minded children receive appropriate institutional instruction. The other ninety-four per cent must, as a result, suffer through life the lack of adequate development.

Heredity plays an important part in nervous and mental diseases. Alcoholism in one generation may be followed by nervous disorder in the next, and insanity in the third generation. Many cross the line from sanity to insanity: few ever cross the line the other way. The point for us to realize is that the road leading up to this line is one which might often be avoided, and there are many warning signs, indicating the approach to the line. Quite frequently an adequate rest on the part of a neurasthenic would be the means of preventing a breakdown which might develop into a melancholia in the succeeding generation.

The conditions of city life are such that a child grows up, perhaps, in an apartment house with few desirable playmates and with only the street for a playground. Ventilation is often poor, and often the child becomes nervous and incapable of study. Such children, who under more favorable surroundings would make valuable citizens, become self-centered, and of no value to the nation. Many become dissipated, and some find their way to the asylum.

Nervousness and insanity are very prevalent among upper-class women who live in luxury and idleness. Tiring of the ordinary amusements, they take to excesses, are attacked with the most stubborn functional disorders, and often it is difficult to prevent insanity. The greatest number of victims of insanity come from the laboring men, probably because of the exposure, anxiety, etc. The majority of these are foreigners with little or no education.

There are certain preventable diseases and conditions which favor insanity, such as tuberculosis, syphilis, disorders of nutrition and circulation, alcoholism, etc. In all such cases avoidance of excitement, fatigue, and mental effort is advisable in order to prevent a mental crisis. Among the suggestions for preventing insanity and nervous disorders are: —

1. More schools for feeble-minded. 2. Separate schools for separate races. 3. No competitive examinations for promotion in mixed school. 4. Separation of girls and boys during period of most rapid development. 5. More trade-schools for girls and boys. 6. More domestic science in public schools. 7. Extension of parks and playgrounds. 8. Improvement in marriage laws. 9. Compulsory education of the illiterate, particularly immigrants, irrespective of age. 10. Compulsory vacation laws.— *C. E. Wood, M. D., of the United States Public Health and Marine Hospital Service, in New York Medical Journal.*

What Parents Should Know Regarding the Care of the Infant

WHEN we consider that nearly all children come into the world strong and healthy, that a large proportion die before the third year, and that lack of knowledge is responsible for this great loss of life, the necessity for common-sense teaching of parents, nurses, and growing young women becomes apparent.

Teach regularity; cultivate accurate habits in the baby; make a machine of the little one; teach it to employ its various functions at fixed and convenient times.

Teach that a child should be fed at precise intervals. Gastric juice is not present at all times in the stomach in sufficient quantity; but when a stomach is led to expect food at given intervals, there *will* be gastric juice there, or ready to be put there. If food is taken when the stomach is not properly supplied with gastric juice, harm may result.

Shall the child be awakened for food? The grandmothers say, No. Scientific physicians say, Yes. However, this is not usually necessary, for the stomach of the child, after a training in regular meals, wakes at the right time for a feeding. In prescribing the meals, the hours for feeding should be written out, and the mother impressed with the fact that ten o'clock means ten — not 9:30 or 10:15.

It is very easy to teach a very young baby what is expected of it in the way of regular movements; and often the feeling of the "potty" under it, and the upright position will be all the hint it needs, and the result will be a very desirable economy in laundry work.

The bath should come at a fixed hour, followed by a meal and a nap. Children can be taught to sleep. At the sleep hour, *prepare* the child for sleep, just as yesterday, put it in its bed, darken the room, leave it alone. The modern version is, "The hand that rocks the cradle *spoils* the world." It is pernicious to train a child to depend on rocking, patting, singing, etc., to induce sleep.

With all man's ingenuity he has not made an artificial food that can equal breast milk as an infant food. No patented food can so nearly supply the place of mother's milk as properly modified, clean and uncooked milk, from a healthy cow. It is not safe to use "average" formulas for modification of milk. Every baby is a law unto itself, and if it is necessary to use cow's milk, this should be modified under the supervision of a skilful physician.

The modern infant dress, while artistic, is conceived on a wrong basis. Baby must be rolled over from six to twelve times while being dressed or undressed. Why should its clothes not all button up the back or up the front [or side]? The less the baby is handled, the better. Infants should be dressed to conserve the body heat and to lessen the effects of the great temperature changes common to our climate. They should be dressed by the thermometer and not by the calendar!

The growing child needs much oxygen, and should be much in the open air. It does not harm babies to be in cold air if they are properly protected; but to be shut up in stuffy air means certain deterioration. After the first few days, the infant should be in the open air daily, when the weather permits, and should sleep at night in a room having an abundance of outside air. Most of the illnesses, even pneumonia, can best be treated in the open air.

Many a child is ruined because of the anxiety of relatives that it should eat solid food. Avoid food that needs chewing until teeth are developed capable

of grinding. When teething is normal, no interference is necessary; but when the gums are tough, or when the teeth are forced along rapidly, the pain is great, — often great enough to alter the character of the saliva and interfere with digestion.

The lancing of inflamed gums has, with no other treatment, caused the cessation of convulsions in some cases. In *some cases* there is nothing equal to the gum lancet to sweeten the child's disposition.— *P. J. Eaton, M. D., Pittsburg, read before twenty-first annual meeting of American Pediatric Society; Archives of Pediatrics, September, 1900.*

Nutrition in Its Application to Health

IN considering the subject of nutrition, one must avoid the great blunder of modern schemes, of forcing all human beings through the same mold, either in the matter of feeding or of exercise.

It can not be too strongly emphasized that proteids are responsible for many ills. Chittenden warns us to beware of an excess of proteid at all times, and advises as low as forty or fifty grams daily. When taken in excess, there should at least be an effort to accelerate the process of digestion. Elimination should be rapid, for it is the half broken-down products ("intermediate calabolic products") that are decidedly injurious to the tissues, and they should be quickly converted to the more simple substances and cast out.

For good digestion there must be abundant oxygen, hence good air, with active healthy lungs and active bowel action. The individual fulfilling these requirements may not find so much harm from a liberal amount of proteids, but with a sedentary mode of life, the same dietary will be followed by "inconveniences" in health. Indoor life reduces waste, so there is less need for tissue food, and, if one continues to take it liberally, there must be a storage of waste products, with impaired nutrition. Some who through overwork are reduced in weight, and forced to rest, may indulge in protein foods with advantage, but they should be careful not to continue this ration for too long a period, or they will surely come to grief.

While it is impossible to say how much proteid is necessary, we can best follow Chittenden's advice, and say, "Beware of excessive proteid at all times."

Proteids are necessary in wasting diseases, but they are of little value if there is not sufficient energy to digest them, hence the importance of the carbohydrates as a preparation for the utilization of proteid.

To illustrate: a man has undergone extreme fatigue in running. We do not attempt to give him a beefsteak, but vitalize him by some energy-giving beverage. American people are in much need of a simpler life, a simpler diet, and a greater knowledge of nutrition and exercise.

Defective nutrition, due in great part to excessive proteids and faulty excretion, accounts for the present type of Englishman — a nervo-bilious man differing from his grandfather in being compelled to live a more abstemious life. Little errors in diet cause him discomfort. He may not be inferior to his ancestors, but he is less buoyant and optimistic — an example of the influence of the diet of his forefathers.— *R. Shawe Tyrell, M. D., L. R. C. P. (London), Toronto, Canada, in Therapeutic Gazette.*

THE MEDICAL FORVM

Pellagra

THIS disease continues to call for comment from the medical journals. The Boston *Medical and Surgical Journal* says, editorially: —

"The recent appearance and continued spread of pellagra in some of the Southern States have brought into considerable prominence this disease hitherto [supposed to be] rare in this country. Doubtless the newspaper reports of its extent are exaggerated, but the fact that the Public Health and Marine Hospital Service has begun the issue of a weekly bulletin dealing with its progress and efforts at its control shows that it is a legitimate matter of medical as well as of popular interest."

Regarding the incidence of the disease, and its apparent causation, this statement is made: —

"In this country it has principally affected Negroes and asylum inmates. It has usually been supposed to be due to poisoning from eating maize, diseased or fermented by the action of *bacterium maidis*, the toxins being absorbed from the intestine; but cases have been reported among those who never use this food. Predisposing causes are apparently of considerable importance, especially alcoholism, insufficient nutrition, poor hygiene, and excessive exposure to the sun's heat."

The editor, basing his opinion on European experience, expresses rather a hopeful view regarding the mortality: —

"Of the cases thus far observed in this country the mortality is said to be sixty-seven per cent. This is undoubtedly because relatively few cases, and those the most severe, have been recognized. In Italy, Lombroso sets the mortality at thirteen per cent, and Woolenberg at only four per cent. The outlook is much brighter when the disease is diagnosed and treated early in its course."

For treatment the writer urges the removal of the patient from the affected locality, and his establishment in good, hygienic surroundings, with a liberal, nutritious, corn-free diet. It is suggested that, for the present, corn should be sparingly used as a food, especially by the debilitated, in asylums, and in districts where the disease is prevalent. The editorial concludes: —

"Pellagra, then, offers definite problems for medical study. Its etiology [cause] is not surely known, and should be investigated by experimental research into the nature and action of the toxins of the diseased maize, and by further pathologic examination of organs from autopsy."

Regarding the incidence of the disease, the *Journal of the American Medical Association* says: —

"Although it is hardly more than two years since the presence of pellagra in the Southern States was recognized, it has been found that the disease is a wide-spread one, and new cases and localities of its occurrence are being constantly reported. It is, moreover, not confined to any one section of the country, and is being discovered in such widely separated localities as Massachusetts and Arkansas, and possibly even farther west. It has appeared in at least three State hospitals for the insane in Illinois, and in one or two of them in such numbers as to assume the proportions of a small epidemic. It has not been reported as yet from any large number of northern localities, and its distribution seems somewhat local. Probably, as in the case of some other new disorders to which attention has been suddenly called, the apparent

sudden prevalence is due, partly at least, to faults of previous observation. . . . The late accounts, however, would indicate a much greater prevalence than ever before, and it is hardly probable that such local outbreaks of the disease could have occurred in any locality without being observed and properly diagnosed."

Comment is made on the Dartonville Hospital, where careful investigation failed to reveal any local cause for the disease in the Bartonville epidemic, and the statement is made: —

"The facts that practically all of the cases of pellagra in this country have been found in institutions for the insane, and that they present the severe type of the disease usually seen in a late stage, suggest that these cases are old ones which have gravitated to the asylums because of the dementia [mind failure] characteristic of the disease. In at least one case of pellagra in an advanced stage, this had presumably occurred, for the patient had within six months arrived in this country from a pellagrous district of Europe."

The symptom-complex characteristic of pellagra is thus given by the *Journal:* —

"While pellagra is insidious [not appearing to be as bad as it really is] in its course, the symptom-complex is fairly characteristic even in its early stage. This complex consists of gastro-intestinal ["dyspeptic"] disturbances, with 'bald' red tongue, erythema [redness of the skin] of the exposed extremities and center of cheeks, spinal irritation, with probable pain in back and disturbance of the knee-jerks, and mental depression of varying degree. The skin symptoms, in themselves unimportant, give a very significant clue to the diagnosis; for, in the first place, there is no other disease with cutaneous lesions [that is, skin eruptions] presenting a closely similar group of constitutional symptoms, and in the second place the cutaneous lesions themselves, after they have become well developed, are unlike those of any other cutaneous disease."

In another article on the "Treatment of Pellagra," the *Journal* gives the following suggestions: —

"Predisposition is believed to be an important factor in this disease. Lowered physical resistance, worry, insufficient food, bad housing, and alcoholism are supposed to render an individual more susceptible. In Italy, laws have been passed regulating the use and storing of corn and its derivatives, institutions have been established for the care and treatment of pellagrins, improved agricultural methods are encouraged, and assistance is given to the sick in many ways by the government. In the treatment of patients, Lombroso recommends a liberal diet; in some cases he uses baths and cold douches, believing them to be of benefit in certain cases with nerve and skin manifestations."

From the fact that the prospect of cure is much more hopeful in the early stages, practitioners are urged to be alive to the probability of its occurrence: —

"In doubtful early cases it would seem to be the part of wisdom to make a provisional diagnosis of pellagra, for nothing will be lost by removing corn products from the diet, and giving the patient the hygienic treatment indicated."

Opinion Changing in Reference to Diet

NEW ideas always advance slowly at first. Even when propagated by influential and brilliant men, the seed seems to fall for a time on barren soil. But it is not entirely barren; the seed is germinating, and will gradually come to fruitage. For many years the high-protein idea has had such a hold on the scientific mind that even the most advanced of physiologists conducting one series of experiments after another, seem to affect public opinion not at all.

Recently, however, there are omens of a breaking away from old tradition. Here, for instance, is a statement written by Prof. G. B. Affleck, instructor Y. M. C. A. Training School, Springfield, Mass., in an article entitled "Essential Elements in the Training of Teachers of Athletics," which appears

in the August issue of *Hygiene and Physical Education*. This man is writing not to uphold any particular theory, but to help men to train efficiently. On the subject of "Diet" he says: —

"This aspect of training has received several unsettling shocks during the past few years. The chief change which seems advisable is about a fifty-per-cent decrease in the amount of proteids as proposed by the standard dietaries, for example, that of Voit. Usually the nitrogenous elements of diet have been freely supplied at training tables in the forms of meats, especially beefsteaks, but definite experiments have shown the disadvantage of this and the great benefits of a low proteid diet, especially in such results as increased explosive strength and improved endurance as well as comparative freedom from muscle soreness.

"From the tests of nitrogen elimination it now appears that the daily amount of one hundred eighteen grams of proteids is more than double what is required for active work, and that the excess in this amount is neither built into tissue nor stored in the body, but eliminated, since the amount of urea excreted is proportional to the quantity of proteids ingested. Since such elimination throws much work on the liver and kidney and produces a condition favorable to rheumatism and kidney trouble, especially Bright's disease, the folly of continuing the meat stuffing of the training table is obvious.

"In fact, it may be that, as Berry has suggested, the liver is unable to cope with the tremendous supply of ammonia compounds rushing to it through the portal vein, and they pass on into the general circulation without being changed to urea as they normally are, thus giving the neural effects which so often accompany staleness.

"The training-table diet may thus be an important factor in the direct causation of the very condition which it is intended to prevent. On the other hand, the prevailing idea that fats cause digestive disturbances is losing ground, and this type of food, especially in the form of butter, has recently been used as a rich source of energy without resulting in any disadvantages as are commonly supposed to be traceable to such a dietary."

Gradually the fact that we are not necessarily carnivorous will engage the mind of man until all intelligent people have accepted it as a truism.

Mental Healing and the Medical Science

AN editorial article in *Practical Therapeutics* for August, attempted to answer the question, "Why Do Mental Healing Cults Gain Ground?" The writer sees in the movement a reaction against the materialistic tendency of the medical profession to reduce all disease to the terms of bacillus and bile; that is, to infection, disordered secretion, and the like.

"For many years medical science has been madly, hopelessly materialistic. She has reduced, or pretended to reduce, all conditions of body and mind to terms of the laboratory and the microscope. Every factor that could not be so reduced has been pooh-poohed and discounted. . . . This is the extreme state of affairs from which so-called mental healing is the exaggerated recoil."

He does not believe that the public at large accepts all the extreme positions of the healing cults; but though they are aware of the absurdities, they feel that there is a "good deal of truth" in the doctrines.

"Without being able to give any very definite or orderly reasons for its attitude, the public 'feels in its bones' that health and disease are not, and can not in the nature of things be, altogether a matter of germs and toxins and cells. Without the faculty to analyze and formulate its position, the public instinctively feels that these lower elements of human life are, in the main, its servants, not its masters; that they should have no power in themselves to harm the individual whose functional relations with his environment are properly and naturally maintained. And it is not surprising that the public should welcome a system of hygiene which overrates (?) this supremacy of functional influence in preference to a science which appears to disregard it altogether."

"When the medical man has exhausted his technical erudition in accounting for a diseased condition by molecular changes, the patient still feels that the real causal factor in his condition is 'something he did,' and some 'wrong attitude of mind' toward one or other of the relations of life, some lack of proper adjustment between himself, as a man, and the complex environment that makes up his daily life."

The writer believes that the medical scientist should, "instead of driving the public to still further extremes by his sneering attitude, set himself seriously to purge medical science of those materialistic obsessions (equally childish) which have given these spiritual cults their impetus."

Whether the wave of mental healing is due entirely to this cause may be a question, for there have been such epidemics in past ages; but from the testimony of many physicians, especially neurologists, the profession as a body is yet in an embryonic stage as regards mental therapeutics, — the treatment of disease through the mind, — and should learn a lesson from its failure. The work must, of course, begin in the medical schools, which, according to accepted authorities, are wofully deficient in their facilities for giving instruction along the line of mental treatment.

This is not to say that the mental healers, and the "irregulars," and the "empyrics," are better fitted for the work. The fact is, their successes are blazoned far and wide, while their failures (and they are not a few) are forgotten.

Shall We Educate at the Expense of Health?

THE public-school system, no one can deny, has been of untold value in increasing the average intelligence and efficiency of the community. One has but to compare a district having an efficient school system with one having no schools, to be fully convinced as to the civilizing and uplifting influence of the schools. But are they accomplishing all that they ought? Are they improving the children physically as well as mentally? There may be serious doubt on this point. Massachusetts has perhaps as efficient a system of medical school inspection as any State in the Union (very few have any attempt at such a system); yet the Boston *Medical and Surgical Journal,* in an editorial article on medical inspection (Sept. 16, 1909), has this to say regarding the influence of the schools upon the general health: —

"It appears from what has been determined thus far that in many cases our public schools do considerable damage to the health of the pupils attending them. Those who begin late, or attend for half time, are found frequently to surpass the rest mentally and physically.

"Of course, other factors may enter into this difference; but it remains a grave question whether our present school system, with its pregnant possibilities of ill ventilation, contagion, nervous overstimulation, and eye-strain, be not radically at fault."

This much is apparent, partly through the work of the medical inspectors, partly as a matter of common observation. It is to be hoped that medical inspectors will, as a result of their observations, be in the forefront of a crusade for a more efficient school hygiene, so that the body of the student, no less than the mind, shall receive the attention it deserves.

The Medical Missionary At Work

Experiences in China

A. C. Selmon, M. D.

THE nature of the common remedies of the Chinese 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 containing various medicines.

The plaster imprisons the pus, and makes it burrow under the skin and deep down into the flesh. Often a trivial scratch becomes, under such treatment, a large running ulcer, that may lead to blood-poisoning.

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 indicates the state of the large intestines; pressing heavily indicates the state of the lungs.

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 on the eye a growth that 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.

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.

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 the child, and thus the poor sufferer will escape the disease.

KOREAN BURDEN-BEARERS

Among the Koreans

Ella Camp Russell

WE have been in Korea almost a year, and many things that at first looked so queer have become commonplace, and some things that at first we were rather inclined to criticize, and look upon as absurd, do not seem so now at all; in fact, we are discovering we have much to learn yet!

The Korean lives the simple life, his wife the simpler life, and his child the simplest — if it lives at all; but the children certainly look comfortable this hot weather, all in birthday attire. Most of them wear coats of grime and mud, which they frequently remove and renew in the ditch that acts as sewer in the village. In this same ditch I have seen women washing clothing and dishes.

Just now Dr. Russell is away among the native churches, recruiting students for the school, which opens next month; and, as he has taken his interpreter along, I have to do the best I can with the patients, with my imperfect knowledge of Korean. But I open the dispensary at twelve o'clock, just as the doctor does, and what I do not understand, I hope is not important. Yesterday I had a number of patients, and you might be interested to hear about them.

First, a woman with sore eyes came. As this is a common condition, I long ago learned what to do. Then a man with an abscess in his ear. Then a boy with a tooth to be pulled, but this I did not try, as the doctor will be back in a few days, and I feared the tooth would break. Next a man with an abscess on his knee; two women with abscess of the breast; a blind man; an old man with sore eyes; a case of dysentery; a case of malaria; and one of indigestion.

Dysentery and roundworms are the most common. In almost every case, the first thing to do is to give a good dose of santonin and calomel and castor-oil, and it is rarely without result.

Our patients nearly always ask us in just how many days they will be well, and think it strange we can not tell them. It would not be so difficult if one were sure they would do as one has told them. Sometimes, when questioned as to why they have not followed instructions, they will say, "Yes, I understood you well, but I used my own mind."

From some of our patients we get very strange histories. Here is one as it came out in English by the interpreter: "This man wants medicine for a woman

in his village. Twenty days ago this woman bore a son. When her son was fifteen days old, she did eat a dog. Now she have much stomach-ache, and will not digest. All the body is hot, and she feel very sick. He want medicine to take the dog out of her stomach." (You ought to see a Korean dog! — sore-eyed, mangy, living wholly on filth.)

But these people need help. It is wonderful what a change takes place in them when they are converted. After generations of ignorance and degradation, a native learns to read a few chapters from the native New Testament. He believes it, and accepts Christ. He cleans up, he stands up, his face shines with hope and love, and he is happy. He can sing and pray. The ugly features of ignorance, sin, superstition, and fear are gone. I wish you could look in the window some Sabbath at our little mud church. You would see two rooms covered with straw mats. In one room are the women, dressed in clean white homespun, sitting on the floor. They have their Bibles, song-books, and Sabbath-school lesson-books spread out before them. In the other room are our native brethren. They also have on their best clothes, freshly ironed, and their high hats which they do not take off in the house.

The first time you heard a native congregation sing, I fear you would feel like laughing. They have strong voices, and love to sing, but each is a law unto himself. I do not know where it would be possible to get a similar sound. But you would not laugh after the first moment; for you would see in their faces much earnestness and reverence, and would be filled with a spirit of worship in spirit and in truth.

The Koreans have taught us much. They have taught us to look upon them as our brothers, and to love them as such. We like Korea, and are ready to put all we have and are into our work. Pray for us, and sometime write to us. Letters from our friends are very dear to us.

"The ditch that acts as sewer in the city," the water-supply, and general washing place for children, clothes, and dishes.

Overcoming Heat in Tropical Regions

Emma A. Laird, M. D.

THOSE used to the sudden climatic changes of a temperate clime experience no small difficulty in getting accustomed to the more or less constant heat of tropical or subtropical places.

A simple plan, which proved very beneficial to us in Central China, may prove useful to others. We can usually count on about two months of intense heat, with about a month before, and a month after, this period, of ordinary summer, such as that to which one has been accustomed.

We are very fortunate in having a deep well within our compound. During the dry season the surface of the water is a long way down from the well's mouth, thus making it quite cold. Our bath-room, which is on the ground floor, has been cemented with a slope toward one corner of the room; here an opening has been made in the wall for the water to drain off quickly, thus preventing the mosquitoes from hatching out in it. A pole was fastened across the center of the room about seven and one-half feet from the ground, to which was fastened a flat iron band bent to the shape of the letter S.

An ordinary three-quart garden watering-pot, with a nozzle, was procured to serve the purpose of a spray apparatus. Our servant carried in two large buckets of well-water. Early in the season we began the short, cold morning spray, hanging the pot on the hook and using a dash of cold water. This, with a dry towel rub and the exercise of taking it, produced a tonic effect, bracing our bodies for a good start in the long day's work. When the very hot days came, we still used the short, vigorous spray in the early morning. During the day our clothing was as simple, comfortable, and light as possible, and easily removed. Then we would take a spray about midday, at four o'clock, and again before retiring. These treatments were taken so as to avoid as much as possible the reaction which follows the use of cold water. Our spray nozzle has many small holes, which are far enough apart to secure for each hole its distinct stream, thus making a fine, misty spray. To use the can once filled only, would cause a good reaction, and bring the blood to the surface, making one feel warmer than before. A second filling overcomes this reaction sufficiently to make one feel about as warm as when commencing the operation. A third or perhaps a fourth filling almost makes one's teeth chatter; but after getting out and dressing, the whole surface of the body feels delightfully cool for about two hours, unless too vigorous exercise is taken. The brain feels clearer, and ambition is revived, enabling one to do rapid work for some time. This is an inexpensive yet very effectual method of keeping the body refreshed during the extreme heat. It will surely pay our missionaries who have to live in such a climate to use some such device.

During the time this treatment is necessary, the mosquitoes are busy seeking their victims. If water is used in this rational manner, the body is better able to resist the attack of the malarial parasite. The use of cold water, though not a certain preventive against malaria, is a valuable help which is well worth the trial.

The small amount of time expended in such treatment will be more than repaid by the freshness and rapidity with which one can go on with his labor; and the Lord will amply reward by giving an added blessing in the work for souls.

EDITORIAL

Unsigned articles are by the editor

A Martyr Honored

THE American Medical Society for the Study of Alcohol and Other Narcotics unveiled a monument erected to the memory of Dr. J. Edward Turner, who died at Wilton, Conn., some ten years ago.

The dedicatory services were held at the cemetery, Oct. 27, 1909, in the presence of a large audience of professional men and laymen.

Dr. L. D. Mason, of Brooklyn, N. Y., president of the society, in an address said that this monument was given by the institutions of this country, as a tribute to the memory of a man who spent forty years of his life and his entire fortune in teaching and promoting the fact that inebriety is a disease, and curable in institutions.

He planned and built the asylum at Binghamton, and was the first to materialize and make practical the great truths of inebriety now so widely known and understood.

He was persecuted, condemned, and driven out of the institution, a martyr to the scientific truth of the cause and character of inebriety, a half century ahead of his day and generation; and we are just now beginning to recognize the value of his efforts.

A historic address on "Heroes and Martyrs in Medical Science," was delivered by Dr. H. O. Marcy, of Boston, Mass., ex-president of the American Medical Association. He brought out the startling fact that every advance of science and every advocate of a great new truth has had to pass through a martyrdom of scorn, derision, and condemnation.

Nearly all the great promoters of truth and the leaders of scientific advance have been opposed, and regarded as quacks and charlatans until another generation, higher up, has realized the nature of their work.

In the memorial address on "Dr. Turner, His Life and Work," T. D. Crothers, M. D., superintendent of Walnut Lodge Hospital, Hartford, Conn., said that Dr. Turner was a medical martyr, whose whole life and estate had been consecrated and used for the promotion of the idea that drunkenness is a disease.

He was born in Maine in 1822, and in 1844 started out without money or reputation, and continued for forty-six years teaching that the inebriate is diseased, and should be cured in hospitals.

During this time he built the first inebriate asylum at Binghamton, N. Y., and made popular the idea that the inebriate can be cured. He was superintendent from 1864 to 1867, then was driven

out by the trustees, who obtained control of the institution.

Later he projected another institution at Wilton, Conn., and was on the point of beginning the building, when his enemies caused the repeal of the charter.

Other plans were laid for the institution, but he died before they were consummated. The result of his efforts brought the subject of inebriety into prominence, and opened up a new field of medicine.

Now there are some two hundred institutions in the world, carrying out the very principles laid down by Dr. Turner at Binghamton.

Regarding Cancer

BEFORE the International Medical Congress held at Budapest, E. B. Bashford, M. D., of London, director of the Imperial Cancer Research Fund, delivered an address on "Cancer in Man and Animals," covering, in brief, the changes that have taken place in the scientific mind regarding cancer during the last seven years. He corrects a number of misconceptions regarding the disease.

For instance, it is now known that the disease is not confined to civilized man and the domestic animals, but is frequently present also among native races and wild animals. At one time it was supposed that races largely vegetarian were practically free from cancer. Now it is shown that in Japan there are more than twenty-five thousand deaths from cancer every year, so that the disease is perhaps as common among the Japanese as among Europeans.

Dr. Bashford also cites some striking figures from hospitals in Hindustan, showing that cancer is at least as prevalent in their hospital service as it is in England. In fact, cancer of the lip, tongue, cheek, etc., is "more than six times as frequent in female Indian hospital patients as in a corresponding English group."

It would seem that in India, at least, a flesh diet is not an important cause of cancer; for "exceptional opportunities are afforded in India for the study of the incidence of cancer in vegetarians and flesh-eaters, since the diet is strictly ordained by the customs of the different native castes. In India the disease occurs irrespective of vegetarian or meat diet, just as it occurs in herbivorous and carnivorous mammals."

Dr. Bashford evidently does not believe in the parasite theory; for, as he says, "It is now agreed that infection plays no part in the experimental transference of cancer, which is a true transplantation of living cells."

Dr. Bashford also very strongly questions the somewhat prevalent opinion that cancer is on the increase. He attributes the supposed increase to better methods of diagnosis and more perfect records. He asserts that as each race becomes more civilized and methodical in its records, it goes through the same period of apparent increase of cancer. "By the time the natives of Central America have so organized their communal life that reliable vital statistics are forthcoming, the conditions of life among them will no longer be what they are today, and no doubt they will be interested in what to them may be a new problem, 'the alleged increase of cancer.' We have seen this stage reached at successive intervals in different countries with the progressive improvement of their vital statistics."

While recognizing the agency of irritation in the development of cancer (as in the Kashmiris, who wear a charcoal oven over the stomach, and frequently have cancer in that region, the Ceylon women who chew the betel-nut, leaving it in the mouth overnight, and have as a result cancer of the roof of the mouth), he does not feel justified in assigning more than an indirect influence to such irritation. For not by any means do all who are subject to such irritation develop cancer.

Dr. Bashford states his belief that "the question of hereditary transmission of cancer has not been settled one way or the other for man;" and "the absence of any evidence of hereditary influence detracts much from hypotheses asserting a congenital origin for cancer." He asserts that other facts even more emphatically oppose such hypotheses, and refers to the great frequency with which cancer is connected directly with certain forms of local irritation.

Regarding the theory that cancer is an infection, Dr. Bashford says: "The comparative and experimental work of the past seven years has demonstrated that cancer has no analogy with *any known form* of infectious disease."

In the laboratories where some two hundred thousand mice have been inoculated, and in rooms where as many as ten thousand such mice and rats are housed at one time, there is no record of any spontaneous transmission of the disease. Though they were frequently handling these thousands of cancerous animals, not one of the laboratory attendants has ever developed cancer.

The Cause of Uric Acid

THREE investigators (Plimmer, Dick, and Lieb) in the Physiological Laboratory, University College, London, have conducted a series of metabolism experiments, having reference to the origin of uric acid in the body, which they have reported in the *Journal of Physiology* (London), Aug. 26, 1909.

Three selected diets, each yielding a quantity of nutriment equal to Voit's standard, were selected, consisting of potato and butter, with (1) beefsteak, (2) egg-white, or (3) herring roe for the proteid, the herring roe being chosen partly because of its high purin content. Extensive feeding experiments were conducted on an individual aged thirty-nine. Meat and herring roe were used for a few days each. Egg-white (plus potato and butter) was used for more than four weeks, either alone or in combination with purin substance and other bodies. The conclusions (abbreviated) follow:—

Though the output of uric acid was greater on a meat or a mixed diet than on a purin-free diet, the results of these experiments do not support the views generally held regarding the origin of uric acid in the urine; that is, that practically all the purins are converted into uric acid, one half being destroyed by oxidation, the other half appearing as uric acid.

These experiments favored the view that purin substances undergo complete conversion, but not the view that half of this is excreted as uric acid. There was, in fact, scarcely any relation between the purins eaten and the uric acid discharged. There was, however, a very distinct relationship between the number of leucocytes and the discharge of uric acid.

The theory is suggested that uric acid,

the normal end-product of nitrogen metabolism in birds, fishes, and many invertebrates, is also the end-product of such metabolism in unicellular organisms, including leucocytes, and that the uric acid in the urine is an expression of the internal metabolism of the leucocytes.

In pneumonia the increased output of uric acid parallels the increased leucocytosis. After the crisis, though there is a very large destruction of leucocytes, in the resolution of lung tissue the increased output of uric acid comes to an end.

The poisons produced in this disease call forth a large additional force of leucocytes as scavengers. And this suggests the thought that the increase in uric acid after using Leibig's extract is not because of the high purin content, but because of an increased leucocytosis. "It may be that some poison in it requires removal, and a similar toxic state may be present in gout."

"Further work will be necessary before the view here put forth can be regarded as established, but our results certainly throw considerable doubt on the prevalent opinion that the purins of the food and of the tissues are the sole source of the uric acid in the urine."

In simple language, this means that there is some reason to believe that uric acid in the body is produced not from uric acid or its precursors in the food, but from the white blood-cells, an increase in these cells being caused, perhaps, by some poison in the food, or some poison produced during a diseased condition, as in pneumonia and gout.

Lactic-Acid Milk

AT the Chicago session of the American Medical Association, Dr. Charles Hunter Dunn read a paper on "The Treatment of Infantile Diarrheas Due to Intestinal Fermentation with Lactic-Acid Bacilli," in which he gave evidence to prove that the benefit derived from buttermilk therapy was not due to the acid, but to the live bacteria. Pasteurized buttermilk failed to produce the same results. . . .

He found, moreover, a great difference in the efficiency of different strains, or "breeds," of lactic-acid bacilli, one particular strain having been much more efficient with him than others.

Dr. Morse, of Boston, discussing the paper, testified that his experience had been that "the results from buttermilk and from milk mixtures 'ripened' with the lactic-acid bacillus, are no better than those obtained from other mixtures of the same chemical composition. The results are the same, whether the buttermilk is Pasteurized or not."

He admitted, however, that in some cases the effect is "striking." In these cases they are probably due to the change in the bacterial flora (that is, from "unfriendly" to "friendly" germs). If the lactic-acid bacilli have this favorable action in suitable cases, they should have just as unfavorable an action in unsuitable cases [which remains to be proved].

Some European specialists believe that buttermilk owes its efficiency to its chemical composition rather than to its bacterial content.

Dr. Dunn believes that the lactic-acid germs, if of the right strain, have a most marked beneficial effect in properly selected cases. He confines his treatment to babies having greenish, loose stools.

Short Talks With Young Mothers on the Management of Infants and Young Children, by Charles Gilmore Kerley, M. D. Second edition, revised and enlarged, 327 pages, illustrated; $1 net, or post-paid, $1.10. G. P. Putnam's Sons, 27 and 29 W. Twenty-third St., New York City.

We gladly commend to young mothers this book, which was prepared by a physician with wide experience in the care of infants and children, and which has had a recent revision.

Very properly the book does not attempt to encourage mothers to drug their babies. Careful details are given regarding baby's feeding, clothing, bathing, and airing, and sufficient is said to enable the mother to recognize the symptoms of disease and understand their serious import.

It would be difficult to enumerate in a brief notice the many valuable features which, when understood, may be the means of saving many baby lives. When we consider that a large proportion of the human race dies in helpless infancy, and almost always because the parents, and especially the mothers, have not known the danger points and how to avoid them, the value of such a book in the hands of a mother should be apparent.

In the summer months in New York City there are as many as fifty baby funerals a day from "summer diarrhea," which in practically every case might be prevented if mothers only "knew how."

Note a few of the subjects treated: Artificial Feeding, Malnutrition, Summer Diarrhea, Baths, Teething, Earache, Care of the Eyes, Adenoids, Appetite, Habits, Taking Cold, Croup, Pneumonia, Contagious Diseases, The Delicate Child.

Every mother should, of course, have the advice of a conscientious physician in the management of her children, but in addition to this, she should have in her home one or more works on the care of the child, and this little work by Dr. Kerley is one of the best for this purpose.

How's Your Health? A series of scientific lectures and exercises for the proper care of the body, by Louise L. Mc Intyre, Lecturer on Health Culture. Two hundred pages text, and about sixty full-page half-tone illustrations of exercises. Half cloth, $1.25. S. E. Tate Printing Company, Milwaukee, Wis.

Often one takes up a "health book" from a sense of duty, and with an air of martyrdom; but it was with real pleasure that the present writer examined this book, because of the evident good sense of the author, and the absense of fads and extravagant statements.

There are a few things that appear objectionable; for instance, it seems hardly necessary to suggest "chicken sandwich, cup custard, and sponge cake" as a lunch for children. To say, "A pound of bananas contains but little less nutritive value than a beefsteak," is to express only a part truth. The banana is not a sufficient substitute for the beefsteak, for one is nearly all carbohydrate, and the other largely proteid. The statement against cane-sugar may be stronger than is warranted by the facts.

But on the whole, the book is written with full recognition of the truth that there is a vast difference in individual requirements as to diet, treatment, etc., and this is one of the first requisites of a reliable health book. The enthusiast who imagines that what has cured him will cure everybody, or who teaches that some one system of diet or physical culture has universal application, has too often inflicted himself on a suffering public.

The author rightly views the question of health culture from an ethical or moral standpoint, and the book contains a strong message which should accomplish much good.

IN THE MAGAZINES

(Concluded from page 708)

frightful curse of the "white slave" traffic in girls now carried on with brazen defiance of law in most of our large cities.

The autumn number of *Liberty* (Washington; D. C.) has the first of a significant series of articles, "Undermining the Foundations of American Liberty." This and every other article in this important number should be read by every liberty-loving American.

The Journal of the American Medical Association gives, in its issue of September 25, a method of treatment for drug addiction, particularly cocain and morphin, which thus far has been attended with remarkably successful results. The entire article should be read by physicians who have drug cases to deal with.

Cigarettes to Be Barred From the Navy. — It is reported that cigarettes will not be allowed in the navy. Good; even better if the word *world* were in place of *navy*.

Sanitary Rules for Bakeries.— The secretary of the Kansas State board of health has recently sent out rules governing the sanitary condition of bakeries, which will be strictly enforced.

Coffee Condemned.— It has been confirmed by recent researches of a well-known scientist that part of the caffein and theobromin in coffee is liberated as uric acid; hence it is injurious to the diet.

The Cocain Evil Increasing.— It is stated that over half the cocain used in the United States during 1908 was supplied to "dope fiends," and that there is an alarming increase in the number of dens where this poison is used.

The Strauss Milk Stations.— The Nathan Strauss Pasteurized milk stations in New York City have been in existence for seventeen years, and have dispensed 26,288,772 bottles of milk. A new station has been recently added, making eight in all.

Hygiene of the Young.— One section of the Fifteenth International Congress on Hygiene and Demography, to meet in Washington next September, will be devoted to hygiene of infancy and childhood, including such topics as hygiene of the home, the schoolchild, the school buildings, physical defects, open air schools, out-of-school hygiene, and others.

Course in School Gardening.— The University of New York this summer gave a six-weeks' course in school gardening. Teachers who attended the course became proficient gardeners. The exhibit showed all sorts of plants raised under all kinds of conditions. The teachers even cooked and ate some of their own products. It were well if more teachers could absorb some of the enthusiasm of school gardening, for there is no textbook that can possibly teach a child so much or do so much to develop character as a few flower pots or boxes well tended.

Cholera and Intoxication.— Recent research by Dr. Adolph Emmerich, of St. Petersburg, gives rise to the theory that nitrous oxid, set free in the intestines by the bacteria, causes the poisoning which makes the disease so fatal.

Drinking Cups in Schools. — The Massachusetts State board of health is issuing a pamphlet explaining the danger of the common drinking cup, and urging all school authorities to require schoolchildren to provide private cups.

Cause of Pellagra.— The investigation of the pellagra outbreak at the Illinois State Hospital, in Peoria, developed the facts suggestive of the theory that pellagra is a water-borne disease, requiring precautions similar to those used in the prevention of the spread of typhoid.

The International Food Congress.— The purpose of the recent food congress (Paris, October 17-24) was to discuss methods for the repression of adulteration in foods, drugs, and other articles taken internally, such as mineral waters. It is a movement that deserves success.

An Important Document on Alcohol.— The proceedings of the semiannual meeting of the American Society for the Study of Alcohol and Other Drug Narcotics, held at Washington, D. C., March 17-19, 1909, have been published as Senate Document No. 48 of the Sixty-first Congress, First Session. It can be obtained by sending fifteen cents *coin* to the Superintendent of Documents, Washington, D. C. It contains 179 pages.

Further Investigation of Beriberi.— The investigators who recently reported favoring the theory that beriberi is caused by the use of white rice, have, as the result of further investigations, suggested the theory that the characteristic of the white rice which causes the disease is the absence of fatty matter, the fat being largely removed in the process of milling white rice. There appeared to be no difference between the white rice and the parboiled rice as to the availability of protein.

Ice-Cream Ptomain Poisoning.— Recently there was a sudden epidemic of ptomain poisoning in Fulton, Ky., caused by eating ice-cream at a certain restaurant.

Opium Hard to Obtain in San Francisco. — By reason of a prohibition on the part of the government of the importation of crude opium, and the vigilance of local authorities, it is about impossible to obtain either opium or morphin in San Francisco, except for legitimate purposes. The habitues are suffering from the deprivation, and are appealing for admission into insane asylums, to take the "cure."

Exercise as a Stimulant.— Prof. Hugo Münsterberg says that exercise, when taken in moderation, is a beneficial and valuable stimulus; but when taken in excess, it becomes a stimulant, forming a habit after the manner of alcohol or coffee. Many enthusiasts, according to the professor, become so addicted to physical exercise, and acquire such a craving for it, that they become unfit for anything else. I suspect that there are some people immune to the seductive influence of this habit. How is it with you, professor?

The Problem of Malthus Solving Itself.— It was Malthus who some years ago raised up the bugaboo of overpopulation. It would seem that civilization itself is its own defense from overpopulation. In the most civilized European countries the tendency is to a decrease rather than an increase in population. In France, for instance, the first six months of 1909 shows, as compared with the first six months of 1908, 6,201 fewer marriages, 543 more divorces, 12,692 fewer births, and 25,019 more deaths. Germany also, which has had an increasing birth-rate, has begun to decline in that particular; and measures intended to prevent this decline have not been very successful. In America the population is increasing, but it is not the progeny of the older families, but the later immigrants and their immediate descendants who contribute to the increase. Were immigration to cease, the increase in population would soon regulate itself. As to "race suicide," the more modern bugaboo, perhaps that is something that will regulate itself according to fixed laws, regardless of what sociologists may do to interfere with their operation.

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"I do not see how a better seller could be manufactured," writes Parker J. Townsend, Minn. "Called at twenty homes, made nineteen sales,"—E. A. Martin, Mich. "Most simple, practical, necessary household article I have ever seen" says E. W. Melvin, San Francisco. "Took six dozen orders in four days,"—W. R. Hill, Ill. "Went out first morning, took sixteen orders,"—N. H. Torrence, New York **"Started out 10 a. m., sold thirty-five by 4 o'clock,"**—J. R. Thomas, Colo. **"Sold 131 in two days."**—G. W. Handy, New York. "I have sold goods for years, but frankly, I have never had a seller like this,"—W. P. Spangenberg, N. J. **"Canvassed eleven families, took eleven orders,"**—E. Randall, Minn. **"SOLD EIGHTEEN FIRST 4½ HOURS.** Will start one man working for me today, another Saturday,"—Elmer Menn, Wis.

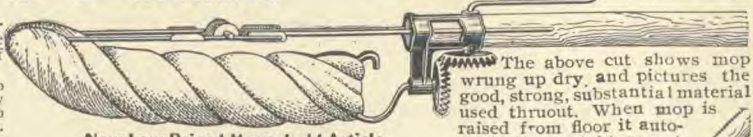
These words are real—they are honest. Every order was delivered, accepted and the money paid in cash. Every letter is right here in our office, and we will give the full postoffice address of any man or woman we have named if you doubt. This is a big, reliable, manufacturing company, incorporated under the laws of the State of Ohio, and every statement we make is **absolutely sincere and true. YOU CAN MAKE THIS MONEY:** You can make

$3000.00 in 3 Months

TURNCRANK TO WRING

THE NEW EASY WRINGER MOP

selling this great invention--**The Easy-Wringer Mop**--the biggest money maker of the age. Think of it! **A Self-Wringing Mop.** No putting hands into the dirty water. No aching backs. No slopping against woodwork. No soiled clothes. No contracting deadly disease from touching hands to filth and germs that come from floor. Can use scalding water containing strong lye. **Two turns of crank wrings out every drop of water.** Makes house-keeping a pleasure---Makes the day happy. Simple, practical, reliable, it lasts for years. Every woman is interested---and buys. **No talking necessary--it sells itself.** Simply show it and take the order. **Could you imagine an easier, quicker, better way to make money than supplying this demand alre day created.**



New Low Priced Household Article.

The above cut shows mop wrung up dry, and pictures the good, strong, substantial material used thruout. When mop is raised from floor it automatically straightens out ready for wringing

This smaller picture shows mop on floor. It spreads out and is held down to floor at all points.

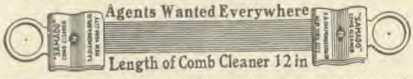
We want more **agents, salesmen, managers,** to fill orders, appoint, supply control sub-agents, **150 per cent profit.** No investment required. **We own patents and give you exclusive territory, protection, co-operation, assistance. You can't fail,** because you **risk nothing. HUNDREDS ARE GETTING RICH.** Act quick. Write for your county today. **WE WANT A THOUSAND MEN AND WOMEN.**

Send no Money: Only your name and address on a postal card for information, offer and valuable booklet **FREE** Tomorrow belongs to the one behind--**the opportunity is open TODAY.** Write your name and address clearly, giving name of county.

THE U. S. MOP COMPANY, 836 MAIN ST., LEIPSIC, OHIO.

Buy Direct from Manufacturers

"Samado" Comb Cleaner



The "SAMADO" Comb Cleaner is a household necessity. Saves your hair, prevents dandruff and baldness. Made of polished steel, the threads rake out every particle of dirt and dandruff in the comb, keeping it clean, sanitary, and germ-free. We will send one ***Sample outfit post-paid for 25 cents.*** Agents find it big seller. Write us for particulars and catalogue of our celebrated ***"Triplex" Ladies' Hand Bag*** (4 bags in one) and other new patented articles.

S. O. DIAMOND & BRO. CO., MFRS.
35 West 21st Street, - - New York, N. Y.

CONSTIPATED?

Constipation is curable. ***"Chronic Constipation,"*** a 23-page booklet by D. H. Kress, M. D., tells how it may be cured without drugs. Causes, diet, and treatment, all in a nutshell. ***Send five cents*** for a single copy by mail. Special rates in larger quantities.

REVIEW AND HERALD PUB. ASSN.
Takoma Park Station, Washington, D. C.

GUM GLUTEN FLOUR

GUARANTEED UNDER THE FOOD AND DRUGS ACT, JUNE 30TH 1906. SERIAL No. 5715
FOR SALE BY ONE LEADING GROCER IN EACH CITY - WRITE FOR HIS NAME AND BOOK OF RECIPES — MENTION PUBLICATION
THE PURE GLUTEN FOOD CO.
90 WEST BROADWAY, NEW YORK.

I Will Write Ads.

for any advertiser in LIFE AND HEALTH, for this or any other publication, free of charge. My ads. pay. I have seen them do it.

R. O. Eastman, Adv. Mgr.
Battle Creek, Michigan or *Washington, D. C.*

$45 TO $90 A WEEK TO AGENTS

EASIEST, QUICKEST SELLING INVENTION ON THE MARKET

First advertisement appeared in Literary Digest May 15, sold 514 besides starting **15 lawyers,** 19 preachers and 100 others as agents; **Making $45.00 to $90.00 Weekly.**

Cost $15,000 to perfect. Thousands and thousands made and destroyed in experimental work. Butit's right now. SHAVING MEN DELIGHTED; buy eagerly. **Recommended by bankers, merchants, railroad men.** Every man a customer, no matter what his position is in life. No agent so far has made **less than $25.00 a week, others as high as $102.50 a week.** Trimbal, Ohio, sold 148 in two weeks, Jamison, Penn., made **$72.00** first seven days. M. Quinn, Mich., cleared **$25.00** in three days. **You** may become a leader; may pass the present top notcher. **Anyway** send a postal. Write today. **Every man** can be a Successful Salesman. Read our offer to agents—then write: that's all, and we will return to you the best and most liberal proposition you ever had made to you.

Read these strong letters from men who have already bought of agents. B. Brown, Atlanta Mercantile Co., Atlanta, says: "Please accept many, many thanks for stropper." Karl Kalbe, Heyden Chemical Works, New York, N. Y., says, "It is a pleasure to shave with the Never Fail Stropper." W. E. Lawson, Fruit and Produce Merchant, Provo, Utah, says, "I would'nt take $50.00 for it." and W. A. Mayo, Treasurer Cass Co., N. D., "The Never Fail is the best ever: am now getting a clean, easy shave, before I only got a scrape," etc. Agents say the Never Fail is the easiest article ever sold and the same territory can be worked over and over again, for after **one** trial each customer praises it to his neighbor.

$100.00 OFFER FREE

A complete correspondence course **in** salesmanship. **One so** good, so thorough, **so** reliable, **that** success to **every** agent is guaranteed. Worth **$100,** but is absolutely **FREE** to earnest workers.

NOW BEFORE YOU DO ANOTHER THING SEND US A POSTAL CARD.

THE NEVER FAIL COMPANY, 118 NICHOLAS BLDG., TOLEDO, OHIO

TOBACCO KILLS!

Thousands die premature deaths as a result of the insidious habit of tobacco using. Read the pamphlet, "Tobacco Using," by Dr. G. H. Heald, a clear, convincing treatise, which compels consideration from the most inveterate user. Single copy, post-paid to any address, for 4 cts. in stamps; 10 for 15 cts.

Review and Herald Pub. Assn.
Takoma Park, Washington, D. C.

What Would You Do If the Baby Came Down With WHOOPING COUGH?

THE PRACTICAL GUIDE TO HEALTH tells what to do and when. See pages 269 and 270. One small doctor bill saved would pay for the book. The book contains 668 pages, filled with the most practical and helpful information regarding the care of the body and the home, besides many helpful recipes for the treatment of disease. Price, cloth binding, $3, sheep, $4, morocco, $5.

Review and Herald Pub. Assn., Takoma Park, Washington, D. C.

Our New Illustrated Folder

shows at a glance what the FARLIN VENTILATED WINDOW TENT is, and what it does.

There is no other window tent as good. In point of convenience and adjustability the FARLIN tent is away ahead of anything ever before invented. Original adjustments on which patents are now pending, make it entirely different from any other.

This tent is sold under a positive guaranty. Send it back any time within ten days after you begin using it, and your money will be refunded. *No tents returned yet.*

Send for the new illustrated folder. It's free.

Battle Creek Tent and Awning Works
2 Spring Street, - - - Battle Creek, Mich.

Big Money! Strange Invention!

"SEE IT ENERGIZE"
Sec. view Comb. Portable and Bathroom Outfit

"IT'S GREAT! LUCKY I ANSWERED YOUR AD."

Writes A. P. Lodewick, who continues: **"Showed it to 44 people—have 39 orders. Sold 17 one day—sells on sight."** **Agents' Profits almost 75 per cent.** Readers listen, see what others are doing, filling orders for **modern bathrooms at $6.00 each.** Could anything be more popular—easier to sell? Indeed it's irresistible. Hear the wonderful news! **J. B. Hart, an inexperienced agent,** has sold over **$5,000.00 worth,** and actually **"took 16 orders in 3 hours."** **Reese** "saw 60 people—sold 55." **McDaniels** "visited 20 farmers—sold 19: everybody wants one. **Fastest seller ever saw."** No wonder **Cashman says: "A man who can't sell your goods send 48 more," and Anderson, "7 orders today. Just like leading a thirsty horse to water," and Rogers, "Beats loaning money at 10 per cent a month," and Maroney, "Fastest seller I ever saw. Catches the eye. Don't want anything better. Sell 8 out of 10 houses." Schonauer,** "Been out **8 hours—have 15 orders." Weathers, "Sold 17 one day.** Send 60 more." **Aldrich,** "This evening, after day's work made 6 calls—sold 5 outfits." **King,** "Never saw anything take so well—Talk of the town. **Made $100.00 this week."**

Couldn't Sell Bread in a Famine,

Hundreds men and women tell of wonderful success equipping town and farm homes with **Allen's Portable Bath Apparatus.** Who knows what you could do with such an opportunity? **100,000 already sold.** Acknowledged best thing ever happened for humanity. Nothing like it. **Gives every home a modern bathroom for $6.00.** Think of it! Sounds too good to be true, yet absolutely true. Used wherever water in any form exists. So **energizes water** that one gallon does more than tub full old way. Gives cleansing, friction, massage, shower baths, altogether or separately. Makes bathing 10 minute operation. **Cleanses almost automatically.** Only clean, running, energized water touches body—no immersion—no using same water twice. No tubs, buckets, bowls, wash-rags or sponges; **no plumbing.** Insures cleanliness without drudgery—prolongs life—prevents disease. Small but mighty—carried in grip. Not a toy. **Endorsed by famous Battle Creek Sanitarium** and other celebrated authorities. Most popular, easiest, quickest, surest selling article going. Selling rights no longer controlled by a few. This wonderful money making opportunity now open to all.

Let Us Give You a High Grade Appointment — Fix You for Life

We want more agents, salesmen, managers, either sex, at home or traveling, all or spare time, to fill orders, appoint, supply and control sub-agents. **Experience unnecessary.** Enormous demand already made. Who doesn't want a bathroom at this price? Who couldn't sell it? **Think of millions waiting for this to happen and it has happened.** Every customer anxious to boost your business. Exciting times—big profits—popular goods, popular price, **everything guaranteed by an old reliable $50,000.00 house**—absolutely no competition—**exclusive territory**—co-operation and assistance.

Credit Given — Send No Money

only your address on a postal card today for **world's greatest agency offer, valuable booklets, credit plan, sworn to proofs of phenomenal success, reaching $1,200.00 monthly—personal trial offer—all free. Caution: This ad. may not appear again. Territory going fast. Costs nothing to investigate. Meet us that far anyhow.**

The Allen Manufacturing Company

1994 Allen Bldg., TOLEDO, OHIO

Stop that Cold

For it is the Forerunner of Consumption

The Perfection Pocket Inhaler is ever ready for use. It is effective in the treatment of Asthma, Hay Fever, and acute attacks of Colds, Coughs, Catarrh, both moist and dry, Bronchitis, soreness in the Chest, and affections of Nose, Throat, Lungs, and Ears.

Special formulas of medicine for treating the above-named maladies, 50 cts. per bottle, post-paid. Can be used in other inhalers, vaporizers, and nebulizers.

Enclose money-order for $1, and we will forward to you by mail, post-paid, one inhaler, with medicine for six weeks' treatment. When ordering medicine, specify the disease you want it for. (Mention Life and Health.)

If you are not satisfied with the Inhaler after ten days' trial, return it in good condition, and we will return your money.

BATTLE CREEK INHALER CO.

R. F. D. No. 6 Bellevue, Mich.

Midget Massage Vibrator

¶ On account of our time and attention being taken up entirely by other business, we have decided not to manufacture these machines any longer and have offered the patent for sale, and, having a number of the machines on hand, we will

Close Them Out at $1.25 Each,

postage paid, or will send three or more for $1.00 each. ¶ This is our regular $5.00 vibrator, and is guaranteed to last a life-time. Place your order at once, as the supply is limited. Should we be unable to fill your order when received, your money will be returned promptly.

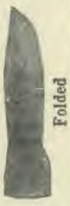
RADIODESCENT LAMP COMPANY
400 South, Kalamazoo, Mich.

$1

English Knockabout Hat

A Pleasing, Sensible Gift,
In a Beautiful Holiday Box

A stylish, serviceable Hat. Would sell for $2.00 in most Hat stores. Genuine English Felt, flexible sweat band, neat outside band. Suitable for dress and business. Folds into compact roll without damaging. Unequaled for traveling, motoring, golfing, yachting, etc. All sizes. Colors: **Black, Brown, Dark Green, Gray Mixture, Dark Blue,** and **White.** Weight, 4 ozs. Sent post-paid on receipt of **$1.00.**



State Size and Color Desired. **Satisfaction Guaranteed**

PANAMA HAT CO.
181 M William St., New York

"Picked Ripe—Canned Right"

Hawaiian Pineapple

Nature dedicated Hawaiian climate and soil to the culture of pineapple quality and deliciousness. Nowhere else in the world are horticultural conditions conducive to the highest degree of flavor and tenderness. The Hawaiian Pineapple stands in a class of its own. Every one picked ripe,—the flavor of natural ripeness goes into the can. Cuts with a spoon like a peach. "It's so different."

Always ask your dealer for Hawaiian-grown pineapple. Sliced, crushed, or grated.

Drop postal for booklet of Hawaiian facts, pictures, and tested recipes.

Hawaiian Pineapple Growers' Association
Tribune Building, New York City

HOTEL CUMBERLAND

NEW YORK

BROADWAY AT 54TH STREET

Near 50th St. Subway Station, 53d St. Elevated and all Surface Lines.

Near Depots, Shops and Central Park

New and Fireproof

Strictly First Class Rates Reasonable

$2.50 With Bath, and Up

All Hardwood Floors and Oriental Rugs.

Ten Minutes' Walk to 20 Theaters.

Excellent Restaurant; Prices Moderate.

Send for Booklet.

HARRY P. STIMSON, Formerly with Hotel Imperial
R. J. BINGHAM, Formerly with Hotel Woodward

Only New York Hotel window-screened throughout

BE ALIVE

All live people who are ruptured should read this ad. carefully. There is only one *really* scientific truss on the market. Other so-called "trusses" are mere clamps. Our *Huston Automatic Truss* applies slight pressure *to the hernia only*, allowing *perfect freedom* of motion to the body.

Farmers wear it successfully while working in the harvest-field; trapeze performers while giving exhibitions. Surely YOU also could wear it with comfort and satisfaction. You will do yourself an injustice unless you give a fair trial to our

Huston Automatic Truss

FRONT VIEW

Patented Sept. 7, 1897

Of course we can not convince you of the truthfulness of our claims unless you are willing to test them. Are you willing to give us a chance? Will you write to us to-day?

Easily adjusted. May be worn night and day. Weighs only a few ounces. *Sold on a positive guarantee. Price, $5.50.*

Send size around body in line with rupture. Once adjusted, this truss can not be displaced by *any motion of the body.* Correspondence solicited.

A Few Good Agents Wanted

HUSTON BROTHERS

Makers of Trusses, Abdominal Supporters, Deformity Apparatus, etc.
55 Randolph Street, CHICAGO, ILL.

SEND FOR MY BOOK **STRONG ARMS!** 10c. In Stamps or Coin

FOR MEN, WOMEN, AND CHILDREN

With 20 illustrated exercises for developing and beautifying **Shoulders, Arms, and Hands** without apparatus. **Regular price, 25c.**

In addition to the above, if you send for the *Strong Arm* book at once, will be pleased to *answer* any *questions* pertaining to the *development* of any *other part* of your *body*, without additional charge.

PROF. ANTHONY BARKER

622 Barker Building, 110 West 42d Street, New York, N. Y.

Individual instruction for health and strength at my select gymnasium or by mail. Particulars on request

AMONG THE MOUNTAINS
Of Tennessee

THE GRAYSVILLE SANITARIUM

Healthful climate, delightful surroundings the year round, bracing mountain air and pure spring water. Unusual natural advantages are combined with a thorough health régime under the oversight of experienced physicians and attendants.

Treatments include Electricity in all forms, Massage, Swedish Movements, Hydriatic treatments, and the general line of Sanitarium measures.

Surgery when required.

Regulated dietary. Send for catalogue.

Graysville Sanitarium, - Graysville, Tenn.

Sanitarium Health Foods

No Lard, No Soda, No Baking Powder

All readers of LIFE AND HEALTH are vitally interested in the matter of pure, wholesome hygienic food supplies. The following is a partial list of the products of old, established and thoroughly reliable firms whose specialty is supplying sanitariums, vegetarian restaurants, and individuals requiring a special dietary.

	PACKAGE		PACKAGE
Graham Crackers, sweetened	$ .10	Sanitarium Gluten Meal, about 20%	$ .20
White Crackers	.10	Sanitarium Gluten Meal, about 40%	.40
Ideal Soup Crackers	.10	Sanitarium Gluten Sticks, about 40%	.20
Oatmeal Crackers, 15 cents; 2 for	.25	Charcoal Tablets	.25
Fruit Crackers	.20		CAN
Zwieback or Toast	.15	Baked Beans, 15 cents; 2 for	.25
Caramel Cereal or Cereal Blend	.15	Peanut Butter	.25
Wheat Flakes (Toasted)	.10	Malted Nuts	.60
Wheat Flakes Biscuit (Toasted)	.10	Nut Cero, ½ lb. 15 cents; 1 lb.	.25
Fruit Nuts (Malted)	.10	Nut Loaf, ½ lb. 15; 1 lb.	.25

Price list, including Sanitarium Olive Oil, Sanitarium Grape Juice, and a full line of special products, and order blank mailed to any address upon request.

Special Offer

To introduce our goods an initial order amounting to $5 of the above will be shipped to any address for $4.50, cash with order.

Special Rates to the Trade

Order from the factory nearest you, addressing—

SANITARIUM FOOD COMPANY

Boulder, Colo. College Place, Wash. Portland, Oregon. College View, Neb. St. Helena, Cal. Des Moines, Iowa.

ST. HELENA
CALIFORNIA SANITARIUM

The largest and best-equipped institution west of the Rocky Mountains, making use of a rational system of physiological therapeutics

Every advantage of a thoroughly equipped medical institution combined with the conveniences of a modern hotel. Physicians of long experience in general practise and surgery. Well-trained nurses of both sexes; polite and agreeable attendants. Delightful climate the year round. Beautiful mountain scenery. No contagious or infectious diseases admitted.

Write for large illustrated descriptive booklet.

California Sanitarium

SANITARIUM, NAPA CO., CALIFORNIA

Washington S. D. A. Sanitarium

A most attractive health resort, beautiful for situation, located only seven miles from the nation's Capital at an elevation of over 300 feet. The climate is excellent the year round. No mosquitos or other pests. Open-air life may be enjoyed without molestation. The well-known sanitarium methods employed in restoring the sick to health. Baths, Massage, Electricity, Diets, etc.

Address

WASHINGTON SANITARIUM

Phone 127 Takoma **Takoma Park, Washington, D. C.**

The **Boulder-Colorado Sanitarium** is a well-equipped and well-regulated institution for the treatment of all chronic disorders. It is the only Sanitarium in the Rocky Mountain region intelligently employing the same system of rational treatment and conducted on the same general health principles as the Battle Creek (Mich.) Sanitarium.

The buildings are equipped with all modern conveniences, including **Steam Heating, Electric Lights, Elevators, Gymnasium;** Baths of every description, including the **Electric-Light Bath, Massage,** and **Manual Swedish Movements; Electricity in every form. Classified Dietary, Laboratory of Hygiene** for bacteriological, chemical, and microscopical investigations; experienced Physicians and **well-trained Nurses of both sexes.** No contagious or offensive diseases are received in the institution.

Write for catalogue and card of rates. Address—

Boulder-Colorado Sanitarium, Boulder, Colorado.