



GOOD HEALTH

EDITED BY J.H. KELLOGG M.D.

DECEMBER NUMBER



Q This box contains over half a billion disease-destroying germs.

Q In the box pictured are enclosed four dozen capsules, each of which contains, in a preparation called YOGURT, from ten to fifteen

millions of germs. These germs are of a harmless species, and their mission is to drive out of the system disease-producing bacteria, such as are always present in the intestinal tract in cases of *Intestinal Autointoxication*.

Q YOGURT is our name for a remarkable lactic-acid-forming ferment discovered in Oriental milk preparations by Masson, of Geneva, and later investigated by Metchnikoff, of the Pasteur Institute, and other European medical authorities. It has proven a positive remedy for Intestinal Auto-intoxication, and is therefore invaluable in a large number of chronic diseases, particularly in many cases of arteriosclerosis, Bright's disease, skin maladies, chronic rheumatism, rheumatoid arthritis, and chronic biliousness. It is of service in all cases in which stools are putrid, the tongue coated, and the breath bad. It is of great value in typhoid fever and other febrile disorders; also in the intestinal disorders of children, rickets, emaciation and malnutrition.

Q Hitherto this remedy has not been obtainable in this country. It may now be secured, freshly prepared and of superior quality.

Q We have succeeded in preparing this ferment in concentrated form, so that it may be administered in capsules.

Q Packages containing four dozen capsules, each postpaid, \$1.00.

Q Manufactured and sold only by

The Yogurt Company

8 College Hall & Battle Creek, Mich.

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"YOGURT BOOK"*

Just Off the Press

A BOOK of health rules to be followed by all persons suffering from intestinal autointoxication, or from any of the conditions for which it is responsible. It should be read by every one suffering from any of the maladies mentioned above, and by all users of YOGURT. The book will be sent free to any one on request, and upon receipt of a stamp to cover postage. Ask for our "Book of Instructions." Those who are not familiar with YOGURT should also ask for the "YOGURT Book."

Special "Scientific Progress Number"

THE January GOOD HEALTH is to be devoted wholly, or almost so, to the progress that science has made in the discovery and methods of discovering what makes people sick, and of how to get and keep them well. Dr. Kellogg leads out with a most instructive summary of what has been accomplished in the domain of dietetics. The decades of research that have culminated in the findings of scholars like Metchnikoff, Pawlow, and Chittenden, to mention no other names, form, probably, the most important period in the entire history of science, certainly so in the study of the human body, its limitations and its needs.

"The Government Bureau of Chemistry and the Pure Food Law" form the subject of an intensely interesting article by A. J. Read, M. D. Dr. Read is in personal touch with the work being carried on by Dr. W. H. Wiley and his bureau, and has prepared for the readers of GOOD HEALTH a valuable study.

C. E. Stewart, M. D., gives a paper on "The Oponic Treatment of Drunkenness." The article is especially pertinent, now that oponins are occupying so large a place in current medical study.

In "The Sinusoidal Current," C. C. Nicola, M. D., describes an electric current, with the apparatus which produces it, that has revolutionized the applica-

tion of electricity in local treatments.

David Paulson tells of the change that is being wrought in the physician's conception of his work,—that his duty is not so much to heal, as to keep well.

"Hunting in Bacteriology Land" is the title of a most interesting article by A. W. Nelson, M. D. The paper is a résumé of the results that have accompanied the researches of the leading European and American bacteriologists.

Of all the scientific romances of the nineteenth century, the story of the chemical laboratory is one of the most fascinating. E. H. Risley, M. D., in "A Century in Chemistry," will tell it in the January GOOD HEALTH.

"Skating," by Benton Colver, M. D., will be a timely article and instructive, as Dr. Colver's papers on exercise and physical culture always are.

Mrs. E. E. Kellogg begins an important series of studies in household economics. No housewife will fail to be interested and benefited by a careful study of this series.

Kate Lindsay, M. D., in "Why Sanitary Laws Often Fail," makes it plain why sanitary and hygienic regulations cannot operate successfully without the co-operation of the people themselves.

"Dr. H. W. Riley, the Man and His Work," is the subject of an interesting study by Charles James Fox, Ph. D.

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THE PUBLISHER'S PAGE on PERSONAL PAGE

WELL, this is the busy month for the magazine folks. It is in December that the vast majority of magazine readers lay their plans for their next year's literature. Literally millions of renewals and new subscriptions are being poured into the mails just at this time of the year. From the little boy who takes ten or a dozen subscriptions for some obscure paper to earn a watch or a pair of skates, to the business managers of the great publishing houses, where hundreds of clerks are working day and night, all are busy caring for the reading public's demand.

So it is just at this time that the friends of GOOD HEALTH—I hope you are one of them—have a special opportunity to turn their good wishes into material results. The greater part of the readers of GOOD HEALTH are people who believe in GOOD HEALTH and the idea back of it. These people, many of them, tell their friends and neighbors what GOOD HEALTH has been to them. This work costs them nothing, while it is worth more to the GOOD HEALTH movement than the services of an army of paid agents or solicitors.

If you like GOOD HEALTH, and if GOOD HEALTH has meant something to you, will you pass the word along for us? Or, if you will go a step farther and take the subscriptions of your interested friends, we will make it well worth your while in commissions or premiums, or if you prefer, you may have your own GOOD HEALTH subscription extended by sending us the order of two of your friends for one year. Write us and we will be glad to tell you more about this plan.

You could scarcely imagine a better or more appropriate Christmas present to any one interested in health than a year's subscription to GOOD HEALTH. The magazine is always an appropriate gift, for it is a constant remembrance of the giver, and to any one interested in healthful living, of genuine value. As a tangible evidence of the gift, we will send a neatly engraved gift card giving the donor's name when desired. These are mailed directly from this office. These cards are good at any time for birthdays, anniversaries, or other occasions.

By the way, you who have not renewed your subscription to GOOD HEALTH for next year, please bear this in mind: That in December and January every big periodical house in the country has more business than it can handle. This means that subscriptions cannot be taken care of within two weeks and sometimes a month from the time they are received, for it is impossible for these offices to add inexperienced help to take care of this extra volume of business. Therefore, when you hold up your subscription until the end of the month, it is bound to take some time to have the necessary entries made. Even in our own office, we are bound to be well behind in filling orders during the holiday season. For this reason we urge you to renew early and to send in new orders early, both for GOOD HEALTH and for other publications, for if you do so, there is every prospect that we will be able to give your requests prompt attention.

So long as our supply lasts, we will enter all new yearly subscriptions received in December to expire with the issue for December, 1908. This will give you thirteen months for a year's subscription. It will pay you to read the prospectus of GOOD HEALTH which appears on the following pages very carefully and note for yourself just what we are going to be able to offer you next year.

Perhaps it would not be a bad idea for you to send to us for a dozen copies of this prospectus and distribute them among your friends and enclose them among your letters. This would be mighty good missionary work for us and a good turn to do your friends. We have had the prospectus done up in a neat booklet form and would be glad to provide you with as many copies as you can conveniently use.

THE PUBLISHER.

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It will pay you to give careful attention to the alphabetical list of GOOD HEALTH CLUBBING OFFERS given on the next page.

Address, GOOD HEALTH, Battle Creek, Mich.

ALPHABETICAL LIST OF MAGAZINES

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Good Health Clubbing Offers

NOTE.—GOOD HEALTH will be furnished in connection with any magazine listed below at the price printed in the *second* column. The first column of figures shows the retail price. The difference between the two prices represents the saving through the GOOD HEALTH clubbing offers. Canadian subscribers should add 50 cents for each publication ordered to cover extra postage. Foreign subscribers should add \$1.00.

	Regular price with Good Health	Special Combination Price		Regular price with Good Health	Special Combination Price
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W					
Woman's Home Companion	2.00	1.65			
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World Today	2.50	1.65			
World's Events	2.00	1.25			
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Please say, "I saw the ad. in GOOD HEALTH"

1908

ANNOUNCEMENT

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NO YEAR has seen such great progress in health reform as has the year which is just drawing to a close. This statement has been made before. It will be made again. For each succeeding year there is ample warrant for averring with renewed emphasis that the doctrine of simple living has made better progress than ever before.

There was a time when GOOD HEALTH, standing as the avowed harbinger of a new health era, occupied a peculiar ground in the eyes of the thinking world. Its ideas were first branded as "fanatical theory." Then they were viewed as "weird fancies"; then as "peculiar notions." Finally, as the press, the pulpit, and the platform begin to echo almost daily the very utterances made by GOOD HEALTH a decade before, thinking men and women began to reckon seriously that the ground GOOD HEALTH stands upon is purely *rational*.

WHEN it was announced last December what GOOD HEALTH would have in store for its readers the ensuing year, the remark was made that a good many good things which could not be counted on in the beginning would be forthcoming within the year as appreciable surprises. This conjectural promise has been more than lived up to. Many of the best features in the 1907 magazine have come wholly as surprises to the readers, and in not a few instances were surprises to ourselves as well. It has been deeply gratifying to receive many words of appreciation and encouragement from the GOOD HEALTH readers. Complete satisfaction has been the rule. But this has not altered in any way the determination on the part of the GOOD HEALTH editors to make labors of the year 1908 so far outclass all previous efforts as to leave not even a basis for comparison.

There is every reason why this should be so. We are assured during the coming year of editorial co-operation on the part of such men as Prof. Irving Fisher, who occupies the chair of Political Economy at Yale, under whose direction numerous experiments along health of utmost importance have been conducted; of Horace Fletcher, the father of "Fletcherism"; Dr. Wilfred T. Grenfell, the famous Labrador medical missionary; Dr. W. H. Wiley, chief of the Bureau of Chemistry of the United States Department of Agriculture; Upton Sinclair, the celebrated author of that unusual book, "The Jungle." Besides

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the moral assistance which these and other able writers will give us, we are assured of articles from the pens of some of these men for several numbers of GOOD HEALTH during the coming year. It is a gratifying and noteworthy fact that so many able men of this and other lands are giving their attention to the mastery of problems of right living.



J. H. Kellogg, M. D.

DR. KELLOGG'S editorial pages and special articles the coming year will carry with them greater interest than ever before, for with each year there is an increasingly larger field to draw upon for information and illustration. Dr. David Paulson, Superintendent of the Hinsdale Sanitarium, whose able work in the social purity field and before the Chautauqua assemblies attracted much merited attention during the past year, will again be a frequent contributor to the magazine. Mrs. E. E. Kellogg will continue her interesting articles, especially in behalf of the housewife and along the lines of modern domestic science. No one has made a greater study of these and different subjects than Mrs. Kellogg, who for many years was in immediate charge of the domestic science department of the Battle Creek Sanitarium and who is well known as the authoress of two modern pure-food cook-books. Dr. Kate Lindsay's popular studies on prevention of common diseases will be continued and will be interwoven with other features of equal interest. Dr. Benton E. Colver, whose articles on physical culture have been among the most appreciated features of GOOD HEALTH the past year, will continue as a contributor.

Others from whom we undoubtedly will hear are Dr. Mary Wood-Allen, editor of *American Motherhood*; Rev. Charles C. Creegan, D. D., Secretary American Board Commissioners of Foreign Missions; Hon. Samuel Van Sant, ex-Governor of Minnesota; Charles James Fox, Ph. D.; Charles Michael Williams, a well-known magazine writer; Mabel Howe-Otis, M. D.; Alonzo Trevier Jones, George C. Tenney, Carolyn Geisel, M. D., Chautauqua lecturer on



David Paulson, M. D.

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hygiene and health; Dr. F. J. Otis, Mrs. M. J. Emmons, Emma Winner-Rogers, and others.

With such an excellent array of talent we feel perfectly justified in predicting an unusually successful year for GOOD HEALTH from the standpoint of the editorial contents of the magazine. Now for the consideration of another point.

It has been exceedingly pleasing to hear from the list of some of our prominent advertisers and advertising agencies,—men who are accustomed to exercising sharp criticism with regard to the typographical appearance of magazines which come under their observation,—it has been exceedingly gratifying, we say, to have these men tell us that GOOD HEALTH is one of the handsomest magazines that reaches their tables, and is indeed the handsomest *health* magazine ever published. We intend to live up to this reputation,—and to improve upon it.



Benton Colver, M. D.

Within the past few months, arrangements have been completed for such changes as will give GOOD HEALTH greatly increased facilities for turning out handsome work typographically. We can predict that during the coming year every number will be well worth preserving as a work of art. It is because we appreciate that a great many readers of GOOD HEALTH do preserve it, that we have given the time and attention to this point that we have, so that the magazine will be well worth binding at the end of each year and preserving in permanent form.



G. C. Tenney

FIVE SPECIAL NUMBERS are planned for 1908. The first will be the SCIENTIFIC PROGRESS NUMBER, which will be issued in January. At the introduction of this notice there was stated a sufficient reason for the establishment of this special number. Certainly in no previous year have such tremendous strides been taken in the matter of scientific progress along health lines as in 1907. In the January number an attempt will be made to summarize to some degree some of the important results of the year's scientific progress.

In April, as heretofore, a special HOUSEKEEPER'S NUMBER will be provided, filled with helpful hints for the home-maker gleaned carefully from every available source.

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The OUTDOOR LIFE NUMBER in June has been such a tremendous success the past two years that there is nothing else to do but repeat this special in June, 1908. We will not go over the same ground, however. Indeed, there are so many sources to draw upon for new material that the question will be what to select, rather than of where the necessary amount of matter for such a number as this shall be obtained.



Mabel Howe-Otts, M. D

The MOTHER'S NUMBER in August of 1907 proved to be so great a success that this, too, will be repeated in 1908 and will be rendered just as valuable to the mothers who will read it as the GOOD HEALTH staff of editors and contributors can make it.

In November a PURE FOOD NUMBER will be issued. This will follow some new and very interesting lines in its special articles, and it is to be hoped that the progress of the pure food movement during the coming twelve months will afford an abundance of new material.

A post-card canvass of a number of representative GOOD HEALTH readers conducted a few weeks ago, showed that the Question Box is one of the two most popular features of the magazine. Special arrangements have been made, therefore, to give this department the most careful attention. The Question Box is conducted personally by Dr. Kellogg, the editor, and efforts will be made the coming year to make it meet the approval of every reader even more satisfactorily than it has in the past.

Not one of the least interesting features will be a special series of articles by Lenna F. Cooper, Principal of the Battle Creek School of Health and Household Economics, dealing with settlement work. The movements which are being carried forward in all parts of the country for the uplifting of the poor and for the eradication of those conditions which make for uncleanliness and unhealthfulness render this subject one of more than ordinary importance. Miss Cooper brings to the task of writing these articles a valuable experience, and the series is bound to be one of unusual interest.



Miss Lenna Cooper

The publishers of GOOD HEALTH invite the co-operation of every reader toward the achievement of the high purpose that has been established, and cordially wish each one a year of prosperity and health.

Letters to a Health-Seeker from a Battle Creek Patient

II

AUGUST 10, 1907.

I believe I have told you nothing as yet about my blood examination and my strength test. Both were given me on my second day, and they were even more interesting than the other tests—unless you count in the delicacies of the “three-days’ ration.”

The blood test came at noon. As I waited in the anteroom, I wondered how they would get at my blood without committing assault. When my turn came,



A Temple of Health

however, it was all over before I knew what had happened. I sat down between a blood specialist on one hand and a nurse on the other. I felt a gentle prick in one of my right fingers; at the same moment something was attached to my left arm and the nurse jotted down figures, evidently my blood-pressure. Then I was released. I examined my finger, but there was no trace of the bloody operation.

Momentary and trivial as the whole thing seems, it is really one of the most important tests that can be taken, and the story of what it signifies is fascinating in every detail. This morning when I called on my physician he handed me the report of my blood test which had come in from the laboratory; and at my request the doctor kindly interpreted the little document.

I took in every word he said, like a child listening to a fairy tale. The doctor pointed out that according to the laboratory expert I had 4,900,000 red cells in a cubic millimeter of my blood. “That is 98 per cent of the normal number for a man. In a woman the same amount of blood would contain nine-tenths as many red cells. But it is a very small drop indeed that holds these millions of cells. In one’s whole body there are 20,000 times as many separate blood cells as there are people on the face of the earth.

Please say, “I saw the ad. in GOOD HEALTH”

"And every one of these cells is a living creature, though the average life of a cell is not more than six weeks. A dead cell is immediately replaced by a new one. That means that every second eight million cells die, and eight million more are created to take their places."

It was all as new to me as if I had been born yesterday. I imagine my blood reddened with pride as I found out the great things it was doing for me.

"The white cells, you notice," continued the good doctor, "are much less in number—only a few thousand in the same drop. There are six hundred times as many red cells as there are white ones. In your case the number of white cells is disproportionately large—which is better than having it the other way. For the white cells do a work of immense importance that has only recently been fully appreciated. They're the great standing army of the body, and their principal



The Greenhouse

business is to defend the body against parasites and bacteria. The way they fight the germs is intensely interesting and shows a marvelous intelligence."

Here the doctor took a slip of paper, and made a quick sketch of a blood vessel, showing the red cells marshaled close together along the center, while the white cells float around or creep along the inner surface of the vessel. Outside the blood vessel he indicated a number of bacteria just introduced into the body.

"Each of these cells is like a minute jelly drop. The moment they espy these germs, the white cells muster in force along the inner wall of the blood vessel here, just opposite the enemy. Then each cell pushes out part of itself, like a foot, right through the wall, and slowly squeezes itself through this aperture."

"Do you mean to say," I asked in astonishment, "that these white cells go out of the blood vessel?" "Most certainly; there is no doubt about it. The mystery of it all is that the aperture made by each cell is so tiny, and there is absolutely no trace of the aperture after the cell has gone through. Then the cells go after the bacteria. Each cell, as you see here, slowly engulfs one or more of these germs until it has swallowed and destroyed them."

"These cells really digest the bacteria, and without harm to themselves, unless the number of the enemy is overwhelming. In that case, the white cells sacrifice themselves in the effort to destroy the germs. Pus is composed simply of dead white cells that have given up their lives in the defense of the body against bacteria. So many of these little soldiers come running to the scene when an attack is on that a single ounce of pus may contain as many as fifteen billion or more of these dead cells."

"You can easily see, then, that if your standing army of white cells is not large enough and up to the mark in fighting efficiency, you are more exposed to

attack from infection of all kinds. These white cells assist in the clotting of blood after an accident, and in all repair processes. If a wound heals quickly, it proves that your blood is pure and strong."

The doctor asked me if I had taken notice of the fact that the blood test is given only at noon, before dinner. At my look of surprise, he explained that it makes a difference. After dinner the process of digestion requires a larger number of white cells, and they come out in great numbers. The cells get busy only when needed; otherwise they keep in retirement. A short cold bath forces the white cells out into the circulation again, and thus increases the resisting power of the body. The blood test is given to find out what the ordinary condition of the blood is, and hence a time is chosen when there is nothing to influence it.

My report also indicated the amount of red coloring matter that I had in my blood—91 per cent. "The popular notion about paleness," said the doctor, "is not always right. Pale people often have better blood than other persons with red lips and rosy cheeks. It's the coloring matter that makes the difference."

Finally the doctor explained the figures of my blood-pressure: 108 stood for the pressure during the heart-beat, and 90 while the heart was at rest. These figures were normal. An abnormal blood-pressure would signify a probable hardening of the arteries, which means the advance of old age—perhaps a premature old age. If the hardening has only begun, it is possible to arrest it and thus put off old age. And they do it, too. More than one elderly gentleman whom I have met here has assured me that his bright eye and elastic step were Sanitarium products—"got right here," said one of them, "from these baths

and massages and everything else. I came here on a cot, and now I walk several miles a day, and I am growing younger every minute."

I had my strength test taken in the afternoon, and again I had an interesting time of it. This Sanitarium is a factory of surprises; it beats the Palace of Wonders at an amusement resort. I had taken it for granted that the strength test would be similar to the one we had at college—a set of stunts, as you no doubt vividly remember, which leaves you sore for two or three days. But this proved to be nothing of the kind. They tested the strength of the various muscles of the body, some thirty groups in all, and the entire performance, strangest of all, is gone through on one machine—the dynamometer invented by the Superintendent. I fancy I paid less attention to my strength test than to the machine itself. It's a marvel of ingenuity and accuracy. A few shifts here and there enables you to test every important group of muscles in the human body. The man in charge told me that the machine had come into wide use among gymnasiums,



A Sanitarium Alley

and that it is in use by the United States Government at its military training schools.

Just before the strength test, my measurements were taken, and recorded, and a copy of these figures, together with the results of my strength test, was presented to me the next day on a large sheet entitled "Strength Graphic." This would be a pretty dull document to some one else, but to me it's a curiosity and a treasure. In addition to the actual figures of my dimensions and the strength of my muscles, it indicates precisely to what extent I vary from the average man in each and every point. I find that in many respects I am "different from the average;" and I am still at a loss to decide whether that is flattering or not. I suppose it isn't where you find yourself deficient.

It's comforting, I am sure, to find that I am not distorted—that so far as symmetrical development is concerned I'm pretty near the ideal man. But then there is a diagram here which shows by a crooked line across the page just how I differ from the average man of my height. If I were exactly like the "mean average," the line would be straight; but I'm not, and the line zigzags up and down like an elevation of a mountain range. The normal or 100 per cent line is sea level; and I have a good many valleys below it. Two are as low as 50 per cent, and in view of what they stand for I might be called the Thigh Notch and Trunk Valley. But I have also a dozen peaks which elevate me above the average man; one of these, Mt. Vital-efficiency, reaches a height of 130 per cent. That means simply that some of my thigh and trunk muscles, for instance, are deficient in strength, while in other points, such as in relative vitality, I am above the mark.

My total strength, obtained by adding up the strength of the various muscles, is 3,430 foot-pounds. It ought to be at least 4,150. But my physician tells me that my total is not bad at all for a sedentary brain-worker; and after getting Sanitarium-wise, and taking to their treatment and physical training for a few weeks, I ought to jump up to normal very easily. It's not uncommon, they say, for a patient to gain as much as a thousand foot-pounds in strength within two or three weeks. I have been given a prescription for physical exercise which will get rid of my weak points. Thigh Notch and Trunk Valley will be raised to 100 per cent level, and I shall become a strapping mountaineer all along the line.



Please say, "I saw the ad. in GOOD HEALTH"

MADONNA

by Hans Holbein

In the Dresden Gallery



GOOD HEALTH

HOME-HEALTH MAGAZINE

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"As a man eateth, so is he," says the old German proverb. Eating great dinners does not make one a great man, neither does eating rich food make a man rich. But what one eats today is walking about and talking tomorrow. Food is fuel; hence the walking and the talking are as much influenced by the food which generates the energy that is consumed in these activities and in the mental effort of which they are the expression, as is the performance of a locomotive influenced by the character of the fuel burned in its fire box. Pine shavings make a quick fire, but the heat is soon dissipated and little work is done. Good coal sustains a continuous high temperature, a good head of steam, and a corresponding output of energy.

Diet and Character

Food is more than fuel. The locomotive visits the repair shop at regular intervals, where lost or damaged metal parts are replaced. Food is to the body what fuel and metal repairs are to the locomotive. The locomotive requires both fuel supplies and repair supplies. So with the body. There are fuel foods and repair foods. The fats and carbohydrates (starch and sugar) are fuel foods, the proteids are the repair foods. Manifestly the actual character of a locomotive depends more upon its structure and repair supplies than upon the fuel burned in it. If the iron and brass parts which enter into the structure of the machine are deficient in quality, the character of the locomotive is correspondingly affected. A weak bolt may mean a breakdown. A flaw in a boiler plate may give rise to an explosion. An excess of repair supplies, that is, a surplus of bolts or boxes, springs, plates, cranks, wheels, or pinions, might clog the wheels, choke the fire grates, and seriously hinder the working of the mechanism.

The Human Body Like a Locomotive.

The human body is wonderfully like a locomotive. It is a complicated machine, delicately balanced and easily deranged. This is especially true of the brain and nervous system, upon the functions of which character immediately depends.

It must be evident that a close and intimate relation exists between the nature or character of the foods, especially of the proteid or repair elements, and that of the nerve structures. The starch and fat being merely fuel, is quickly burned and passes out of the body, thus influencing its character little, except as regards the energy output; but the proteids enter into the actual bodily structure, the vital

living parts, the parts which think and act. If the repair foods are taken in excess, the vital machinery will certainly be clogged, and evidently if the proteid is poor in quality, the bodily structure will be depreciated.

That there is a difference in proteids, modern scientific studies have clearly shown. The recent remarkable work of Prof. Osborne of the Connecticut Agricultural Experiment Station at New Haven, as well as similar observations of other chemists, have shown that almost every animal and every vegetable produces proteid bodies peculiar to itself; but the widest difference is between animal and vegetable proteids, which are clearly distinguished by at least three special characteristics:

Poisonous Extractives Peculiar to Animal Proteids.

1. Animal proteids (except eggs and milk) always contain a considerable amount of poisonous waste substances which are of no use in repairing the tissues, but are exciting and irritating, or depressing and paralyzing, according to the particular waste substance or substances which may happen to be present or dominant. These poisons are not found in vegetable proteids.

According to Gautier, a pound of meat contains from 5 to 8 drams of these poisons, commonly known as extractives, which are absolutely without food value and are capable of producing highly toxic effects.

Claude Bernard, the famous French physiologist, found that a dog fed on these extractives died sooner than a dog which had nothing at all, and it has been shown by various investigators, by experiments upon rabbits and other animals, that the long-continued use of these extractives gives rise to chronic disease of the liver and other viscera. These poisons are the essential ingredients of beef tea and of animal broths.

Dr. Austin Flint, more than a quarter of a century ago, showed that the composition of beef tea is practically the same as that of urine, and declared that thousands of fever patients have been starved to death by the use of bouillons and broths.

Too Much Proteid.

2. Flesh proteids are easily attacked by putrefactive bacteria which convert them into highly poisonous bodies. Vegetable proteids are much less easily changed by these organisms; that is, they much less readily undergo putrefaction.

Gautier, in his great work on diet, calls attention to the fact that a meat diet contains four times too much proteid. The standard established by the more recent experiments of Chittenden doubles this proportion. So when a person is living upon a meat diet he is actually utilizing only one-eighth of the proteid intake. The balance is converted into toxic substances which are not only a burden to the vital organs, but through their toxic effects are certain to produce sooner or later degenerative and other destructive changes.

Putrefactive Bacteria.

3. Flesh proteids, at least in the form of flesh foods, are always swarming with millions of putrefactive bacteria which readily set up putrefaction in undigested portions of the food remaining in the colon. This putrefactive process is

known to be the source of most virulent and active poisons which are capable of affecting the brain and nerves most profoundly. Headache, nausea, vertigo, nervousness, irritability, insomnia, drowsiness, dyspepsia, weakness, mental confusion and indecision, loss of memory, arterial degeneration, apoplexy, degeneration of liver and kidneys, brain and nerve degenerations,—these are a few of the symptoms and conditions which are known to result from the toxins and ptomains formed by the action of the putrefactive bacteria found in meats upon undigested portions of these foodstuffs.

Here, then, are abundant reasons for suspecting certain foods, especially those which abound in proteids from animal flesh, of exciting a deleterious influence upon mind and character. How could it be otherwise? A substance which generates in the body poisons capable of causing nausea, vomiting, mental and nervous depression or irritation, must under favorable conditions prove a potent influence for evil; and acting during a long period, must materially modify the character.

This is the argument. Now let us look at the facts. We will quote from one of the latest and highest scientific authorities on the subject of diet, Gautier, in his great work on "Diet and Dietetics":

Decided Influence of Diet on Character.

"Diet, by its poverty or excess, exercises an influence upon the general health; but it exercises perhaps a still more decided influence by its character. It is a fact of universal knowledge that the people who are the most active, the most rugged, the most aggressive, are great eaters of meat. I will cite only the English and the Germans. Granivorous or frugivorous people are nearly always pacific. This is true of most of the nations of central Asia, for whom rice and vegetables with a little pork and fish constitute the sole diet. One can scarcely avoid connecting with these facts the fact that carnivorous animals are generally violent and dangerous, while herbivorous animals, on the contrary, are easy to raise and to domesticate.

"A flesh diet, whether more or less exclusive, has an influence greater than that of race in the determination of the character of the individual, whether gentle or violent. We know that the white rats of our laboratories, as long as they are nourished on bread and grain are very easily handled, while they become vicious and bite when they are fed on flesh. The same observation has been made in relation to the horse, and even to the dog, which is omnivorous. Liebig related that a bear kept in the museum of Giessen was very gentle and quiet as long as he was nourished exclusively on bread and vegetables. After a few days of flesh regimen the animal was rendered violent and dangerous to its keeper. The animal's keepers amused themselves by thus periodically modifying the character of the animal. 'It is known,' Liebig added, 'that the irascibility of hogs may be increased by a meat regimen to the point at which they will attack man.'

"The meat regimen, then, certainly influences the personality. It renders us more aggressive, more wilful. I do not speak of its injurious influence upon the general health, as I shall later speak of exclusive regimens, my sole object here being to demonstrate its special effects upon the moral qualities of individuals.

"Reciprocally, it is certain that a dietary nearly exclusively vegetable lessens the violence of temperament and softens the manners. This has been well under-

stood by all founders of religious orders, both in Europe and in India, in eliminating or proscribing flesh foods. Change in diet alone is perhaps sufficient to transform the wolf and the savage cat, animals carnivorous and most dangerous, into the domestic cat and the dog.

"If the diet acts thus upon the development of the organs and the character, it is impossible to deny that it also acts upon races to modify them. Lamarach and Darwin have thought that the food which creates the interior medium was with the influence exercised by the exterior medium and selection the preponderant cause of the variations observed in animals and plants."

Again: "By this mode of diet tendencies to uric acid diathesis, gout, rheumatism, neurasthenia, etc., disappear and are diminished. The character is softened, the mind seems to be calmer, and perhaps more acute. I have shown elsewhere what is the influence of a flesh diet upon the character of animals. As to the action of the vegetarian regimen upon the intelligence, here are the opinions of two celebrated men who have made observations upon themselves. Addressing himself to his friend Firmus, who abandoned the Pythagorian doctrine and returned to the use of flesh, the philosopher Porphyry wrote as follows: 'It is not among the eaters of simple and vegetable food, but among eaters of flesh, that one encounters assassins, tyrants, and robbers. I cannot believe that your change of diet should be based upon reasons of health, for you yourself have constantly affirmed that a vegetarian regimen is much more suited than all others, not only to give perfect health, but also a philosophic and sound understanding of facts of which you have become convinced by long experience.' And Seneca, who from the same considerations had later adopted vegetarianism, wrote: 'Struck by such arguments, I myself quit the use of the flesh of animals, and at the end of a year my new habit had become not only easy but delightful, and it only seemed to me that my intellectual activities were increased thereby.'

"We conclude that the absolute vegetarian diet is not well adapted to the needs, interests, and the activities of our European races, but if modified by the addition of milk, cheese, butter, fat, and eggs, it has some advantages,—that is, it alkalizes the blood, accelerates oxidations, diminishes nitrogenous wastes and toxins; it conduces much less than the ordinary diet, especially if this is too rich in meats, to disorders of the skin, rheumatism, and congestion of the internal organs. The modified vegetarian diet tends to make us pacific and not aggressive and violent. It is practical and rational. It must be accepted *a priori* by those who have as their ideal the development and education of races of men which shall be gentle, intelligent, artistic, and at the same time prolific, vigorous, and active."

J. H. Kellogg

A Unique Nation of Vegetarians

BY KATHERINE LOUISE SMITH

A VISIT to a Doukhobor village is interesting in more senses than one. The people are exceedingly hospitable, always ready to assist a stranger, and seldom take remuneration for a kindness. On the other hand, long religious persecution has made them reticent as regards their religion, which in many respects

carelessness of a Canadian boy, they drew up a paper bemoaning the occurrence, but saying it was forgiven.

Naturally, the first thing that the Doukhobors did when they arrived in the land that had been allotted them in Canada, was to build homes. Everything was necessarily primitive, for they had



A Stalwart Group of Doukhobor Laborers

resembles that of the Quakers. They are led by the Spirit, and feel keenly that it "is the letter that killeth, but the Spirit giveth life." They have no written dogmas or creed, and their beliefs have been handed down by word of mouth for generations. They are strenuous regarding certain things that seem to them wrong, and are so imbued with the spirit of non-resistance that on one occasion when a Doukhobor child was killed through the

no money and were accustomed to self-denial in the Russian life. They constructed the same kind of log and mud houses that they had lived in before their migration. They laid out streets and built the houses on one side and the milk and storehouses on the opposite side. These houses resist the weather well and are constructed partially below ground for warmth. They are approached by steps of hard clay, which are kept scru-

pulously clean. Every home has a large stone fireplace, and a cozy inglenook where the aged people sit, and in which the babies are laid when they are not in the hammocks which are suspended from the ceiling.

One of the religious beliefs of the Doukhobors is that it is wicked to kill an ani-

mal for food. This naturally tends to make them careful of all animal life; and for this reason, and because they were accustomed to it in the old country, the stables are frequently under the same roof as the house, and a guest is often edified by the stamping of horses.

The Doukhobors believe that to eat meat or fish, or drink intoxicating liquor is a temptation of the devil, but they are particularly fond of soups made of beans and other vegetables. No meal passes without a large tureen occupying the center of the table, and men, women, and children sit around and dip into it with their individual wooden spoons. Their bread, like that eaten by most Russians, is of a dark color, and out of the same unrefined flour they make a hoe-cake much like those obtained in the South.

Pancakes are a favorite dish, and are always made large as a dinner plate, buttered and piled high as we do waffles.



Courtesy New Idea Woman's Magazine

Doukhor Women with a Philadelphia Nurse

mal for food. This naturally tends to make them careful of all animal life; and for this reason, and because they were accustomed to it in the old country, the stables are frequently under the same roof as the house, and a guest is often edified by the stamping of horses.

An important piece of furniture in every Doukhor home is the long table around which the family sit to eat, except when there are guests, when the "foreign visitors" dine before the family. The tablecloths are woven by the women, for the Doukhobors grow fine flax and cultivate sheep for domestic purposes. This enables them to do an excellent quality of weaving. Usually the tablecloth is of unbleached cotton, and it always has a wide piece of crocheted lace insertion down the middle. Instead of napkins, they use two long pieces of cotton cloth, one and one-half yards long by one yard wide, with another piece of crocheted lace at the ends. These are



Courtesy New Idea Woman's Magazine

Doukhor Carpenters

Often these pancakes are made by boiling beans soft and mixing them with an egg, and the variety of ways in which

beans appear on the table would please the most refined vegetarian. There is even a bean pie. The women make their own butter by a peculiar process in which they scald the milk first.

As it is desirable in community life that everything possible shall be done by the villagers, they have their own flour mills and stores, and buy at wholesale prices. Much has been said about the hard work the women did when they first came to this country. This grew out of the neces-

sity exchequer by gathering herbs and roots; the women help with the planting of crops and the harvesting, and the men work from five in the morning until eight at night. Every day is opened with the singing of hymns.

One reason these people have succeeded so well is that they are capable, have many practical trades, and are accustomed to hardships that would discourage the average person. Each village has a blacksmith and carpenter shop,



Courtesy New Idea
Woman's Magazine

"This Grew Out of the Necessity of the Land to be Cultivated"

sity for the land to be cultivated as soon as possible, and the customs that are prevalent in the old country. In reality the Doukhobor women are well cared for in many respects, and no woman works hard until her baby is a year old. As a rule these people marry young, and little marriage infelicity is known. Possibly this is due to certain strange marriage customs, and the fact that they look upon it as primarily a spiritual union. No one who has not visited them can imagine the thrift of these people. The children have added many thousand dollars to the com-

and they make excellent shoes, not of a fine quality, but heavy, and what they need for outdoor work. The women make all of the clothes and weave much of the cloth. The typical dress of the men consists of a shirt, jean pants, and a cloth coat made like a blouse, with a frill around it when it is belted in. In cold weather they wear large overcoats of sheepskin, and for rain a peculiar kind of rainproof coat, circular like a dolman, which they obtain from Russia.

The women dress as they did in Russia, and are slow to adopt modern cus-

toms. A white cotton garment, something like a nightgown, serves for chemise and petticoat, and over this they put a plaid skirt which is hand-woven. A black velveteen Eton jacket with white cotton front and sleeves, completes the picturesque toilet. If the skirt is dyed, it is colored after it is made up, and not in the warp. Usually wooden shoes are worn, and every garment is scrupulously

clean. This idea of neatness is carried out in the home-life, and the women wear calico caps over their hair, which is usually braided as tightly as its abundance will permit, and coiled around the head. Like most foreigners, they wear aprons of factory cotton, displaying much crocheted lace on the edge, and they always have some piece of this work in their hands.—*New Idea Woman's Magazine.*

Corn Exposition

BY RAY C. PEARSON

CORN has proved its right to be called "king." At the annual national exposition of the great American food product, which has just come to a close, this "staff of life" was crowned in a blaze of glory. For two weeks "King

standard and gained the prominence of a place in the highest ranks. Stacked on tables, hundreds of them, was shown field corn, sweet corn, pop corn; even the plebeian broom-corn was not forgotten. There was corn yellow, white,



A \$250 Ear.

Corn" ruled with a free hand, while close to a quarter of a million people, farmers of fourteen important producing States and staid city folk, mingled to discuss what the cereal is, how it is raised, and what it means to the health of the nation.

Corn was never shown to better advantage to the multitude. Corn of every kind was there, corn of every size and hue. There was prize cereal together with corn which had not yet reached the

red, orange red, and black and tan, with many varieties of these colors; corn from Illinois, Iowa, Indiana, North Dakota, and Texas, vying in rivalry with the product of nine other States.

In fact, the Coliseum was nothing but corn. From floor to roof the eye could gaze on nothing else. There was one ear of corn, for which \$250 was paid, an ear of "Boone County White," for which L. B. Clore, of Franklin, Indiana, who raised it, had the pleasure of making

the bid which establishes a new world's record. A bushel of this corn at the price would cost \$15,000. The ear was raised on a thirteen-acre farm.

In all the great throng of visitors to the exposition there were people of many types. There were those, like the farmer, who eat corn in large quantities, and there were the city people who eat it infre-

adequate for the demands made upon it by those who crowded into the 200 chairs to listen to Mrs. Hiller extol the virtues of corn. There probably is no greater authority in the country than Mrs. Hiller, and the spectators listened intently to the lectures given several times a day on how corn should be cooked to be eaten with healthful results. The kitchen made it



The Exposition.

quently. Then there were those who have taken to vegetarianism and found the cereal a great aid. One only had to visit the south end of the Coliseum, where a model kitchen in charge of Mrs. E. O. Hiller, former principal of the Chicago Domestic Science Training School was located, to understand how great has become the increase in converts to the vegetarian list.

This model kitchen, so attractive to visitors, was truly a model of its kind. If any fault could be found, it would lie in the fact that it was too small, too in-

possible for demonstrations to be conducted while the lectures were being given, and the course was complete in every detail.

The ruler of the kitchen talked about many different methods of using the cereal, and declared she was a thorough believer in the statement once made by James G. Blaine: "Corn will yet be the spinal column of the nation's agriculture."

The rapidly increasing use of syrup of corn on the table was another feature which was demonstrated at the exposi-

tion. The purity of the product is not questioned. It comes from the inner part of the corn's grain which is protected from coming into contact with impurities by the outer husk, which is hard. The many ways in which the syrup can be used are too many to mention. The process of manufacture has become so simple that this heart of the grain, from an almost tasteless solid, is quickly converted into a sweet syrup.

Many other things made from corn were shown at the Coliseum,—these being glucose, starch, breakfast foods of all kinds and descriptions, pone; in fact, everything with a corn foundation.

Great interest was manifested in the model farm, which was the centerpiece of the decorations. On a microscopic scale was produced in a twenty-foot square a facsimile of a farm owned by Eugene Funk, at Bloomington, Ill. The farm represented a mile-square tract of the real place, faithful attention being given to the most minute details.

Fields of corn in a high state of cultivation were shown on a rolling plain. On the brow of a hill was the farmhouse, a comfortable home, suggestive of all the comforts that make living close to the soil so attractive to the city man. Barns and other buildings descended the hill, forming a picturesque landscape. Cattle, horses, and other live stock, each no larger than a fly, and each carved faithfully by the artist, a native of Sweden, apparently roamed through the fields as if endowed with life. Figures of farm laborers were at work. Some were reaping, and the implements used, on close inspection, were found to be creations of the mechanism. A typical country road ran through the farm, as also a stream.

Another exhibit that attracted attention was the woman's hat made entirely

from corn husks of different colors. It was put together by adept fingers and never would be taken for anything but the creation of some milliner of the *Paree* mode.

Many other displays caught the eye, one of the most beautiful of which was a flag of vari-colored corn owned by George Dunseth. It was this flag, or, in fact, a combination of two American flags, that was awarded the prize of \$250 for the best display.

At the south end of the building there was another beautiful farm scene. It represented the sunset, with a farmhouse in the distance surrounded by fields of corn. Genuine shocks were used on the outer plain, and the effect produced was one of the prettiest imaginable. It all was symbolic of the plentitude and prosperity of the farmers of the United States.

This exposition which has come and gone is to become an annual event. The farmers who have prospered, and the list is great, have organized themselves as the Corn Growers' Association, and next year it is planned to make the exposition even greater than it was this year. In showing the great strides made by the farmers of the big producing States, Harlow N. Higginbotham, in his speech on the opening day of the exposition, said:

"Our corn crop is worth, roughly, one billion dollars each year. It is equal in value to two-thirds of all our exports. Its value is twice that of the world's yearly output of gold and silver. Eighty per cent of the world's corn crop is produced within an area of about one day's ride from Chicago."

Is corn "King"? Ask the farmer of the middle west.

A Unique Outdoor Sleeping-Room

BY J. E. WHITE.

THE physicians ordered out-of-door sleeping-rooms for my wife. At first I pitched a tent in the grove near my house, making the floor about eighteen inches from the ground. But the room seemed damp in the morning, and gave us a constant feeling of insecurity. So later I removed the tent, floor and all, to the rear of the house, and raised it to a level with the bedroom of our house, the floor of which is fourteen feet from the ground.

The floor of the room is of matched flooring. Around the sides is a wainscoting of matched lumber reaching three feet from the floor. This allows us to raise the eaves of the tent to the height of six feet above the floor. The corners of the tent are ripped up and the wall raised out like an awning.

A frame is made on which the tent is stretched, and to which it is firmly nailed. A strip of board is attached to the bottom of the wall, and to this braces are fixed to hold out the walls. These

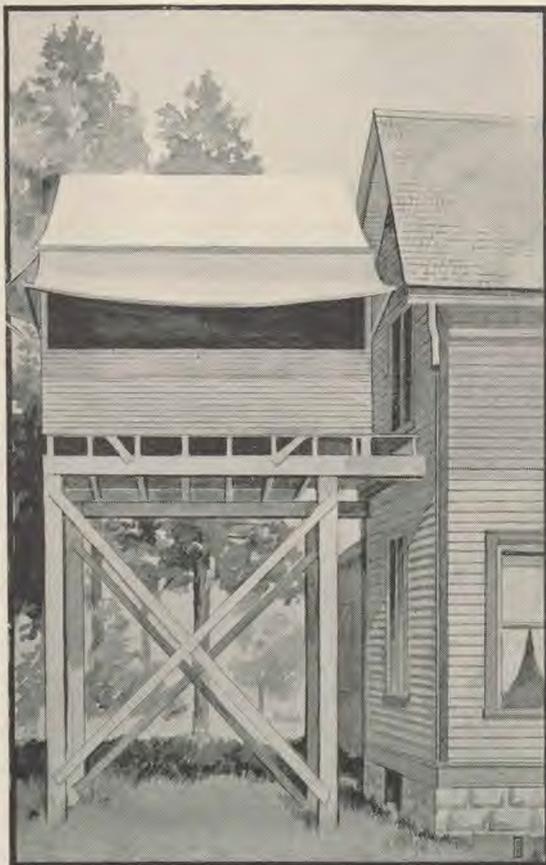
walls, used as awnings, may be swung out to about the pitch of the roof of the tent, or their pitch may be even less, to admit more air.

We have never been obliged to lower the awnings on account of storms. They

protect the interior from all driving winds. In order to protect fully, in case it is needed, however, we have made curtains for the inside of the tent, to extend from the eaves to the wainscoting. These curtains are made with rings fastened at top and bottom, the rings being attached to two wires, one along the eaves of the tent, and the other at the bottom of the curtain. This will keep out any storm.

We have never seen the

equal of this room for comfort. It is always dry in the morning. During the very severe hot weather of the past summer it was always comfortable and pleasantly cool as soon as the sun went down. Attached as it is to our bedroom, we pass freely from the one to the other through a window, from which the



Our Outdoor Bedroom

sash has been removed. In the morning we step from our sleeping-room in the tent to our bedroom in the house, where we can take our morning bath.

No matter what part of the country our home may be in hereafter, we shall

never attempt to pass a season without connecting with our house an out-of-door bedroom such as we now have. There is comfort, pleasure, and health in it. I bless the day when the plan of our outdoor sleeping-room came to my mind.

Scientific Cleanliness in the Kitchen

BY CHARLES JAMES FOX, PH. D.

THE dark, poorly ventilated, badly drained house of a few years ago is fast giving way to the well-lighted, well-aired, and well-drained residence furnished with steam heat or furnace, open plumbing, and tiled bath rooms. In spite of this general progress in sanitary

living room for the family. Visitors and members of the family seldom if ever enter the kitchen, and in many cases even the housekeeper seldom visits this room. The care which in former days was bestowed on the kitchen is today reserved for the drawing and dining rooms. The

kitchen occupies a small portion of the back or basement of the ordinary dwelling house.

Every housekeeper, of course, tries to have her kitchen kept neat and cleanly in appearance, though few realize that it is in the kitchen more than in any other part of the house that the laws of sanitation should be religiously observed.

And yet, in utter



Tiled Floor and Wainscoting in Kitchen

building, however, the kitchen has not kept pace with the rest of the house. In fact, in many cases instead of progress we find, so far as the kitchen is concerned, actual retrogression. This is due to several causes. The kitchen is no longer, as in days gone by, a kind of

disregard of this all-important fact, even the open plumbing which adds so much to the attractive appearance, as well as to the hygienic qualities of our modern bath room, is frequently lacking in the kitchen of our first-class residences.

There is a vast difference between a clean and a sanitary kitchen. Just as the clearest water may contain the most deadly disease germs, so the cleanest, brightest wooden floors and walls of the kitchen, which for years have absorbed foreign vegetable and animal matter spattered upon them, may propagate myriads of bacteria injurious to human life, and large numbers of insects which, though not so dangerous as germs, nevertheless make themselves intensely disagreeable.

For a truly sanitary kitchen four things are necessary: light, ventilation, open plumbing, and last, but most important, because most frequently lacking, non-absorbent, washable floors and walls. Many houses, in which anything but a tiled bath room would be regarded as quite out of place, still retain kitchens with wooden floors and walls which are thoroughly permeated with decaying vegetable

and animal substances, when from a sanitary standpoint, it is far more essential to tile the floors and walls of the kitchen than those of the bath room. Many fail to realize the importance of this, because they have an idea that tiles are used on the floors and walls of the bath room chiefly because they are attractive in appearance and can be worked into the most artistic designs of color and form. We must remember, however, that the artistic properties of beautiful tiling sink

into insignificance when compared with sanitary qualities, due to the non-absorbent and absolutely germ-proof character.

The true sanitary reasons which necessitate tiled floors and walls in the bath room apply with redoubled force to the kitchen. Wooden floors and walls form a permanent lodgment for germs of every kind which thrive in the corners, cracks, and in the material itself. The "anaerobic" germ, for instance, needs only warmth and moisture in order to lead a most thriving existence. The heat is ever present in the kitchen, and the



A Kitchen Floor Completely Tiled

very water which is used to wash the floors and walls supplies the necessary moisture. Thus these germs of decay, invisible to the naked eye, but very evident to the sense of smell by a peculiar musty odor, are fostered by every attempt to keep the walls and floors well washed. Other less offensive but more dangerous germs are propagated in the cracks between the boards and especially under the paper, cloth, or rubber coverings which are frequently used on the

walls and floors. Oilcloth, linoleum, and especially rubber tiles, are not sanitary covers for kitchen floors, because, seldom taken up, they merely hide the dirt and dust which gather under them during months and years. The rubber tiling is especially dangerous, on account of the tendency of the cracks between the tile to absorb water and other liquids spilled upon the floor, and, preventing them from evaporating, cause them to rot the floor.

The ideal sanitary kitchen should have its walls and floors covered with the real

clay tile set in hard cement. Such walls and floors are non-absorbent, are unaffected by the numerous vapors arising from the cooking of food, are absolutely sterile, so far as germs are concerned, and can be easily washed. In fact, even

a hose can be used on a kitchen the walls and floor of which are properly tiled. Tiled or ceramic mosaic floors do away with an endless amount of scrubbing.

Then, too, the moral effect of the neat, clean, and cheerful appearance of a well-lighted tiled kitchen, supplied with a modern open plumbing, upon the housewife, and indeed upon every member of the household is incalculable.

So we reiterate, the tiled kitchen, with the modern open plumbing, is a hygienic necessity, far more so than the tiled bath room, and its absence may



The White House Kitchen, with Floors and Walls Tiled

at any time become responsible for the ill-health of the entire family. No modern house which professes to be erected according to the laws of sanitation should be built without a kitchen with non-absorbent, washable floors and walls.

For Purity of Life, Home and Nation

BY MRS. ROSE WOOD-ALLEN CHAPMAN

NO greater field of work ever confronted an organized body than that which was spread out before the National Purity Federation, which held a congress under its auspices in Battle Creek, October 31 to November 6. To purify not only the world at large, but the hearts and lives of individuals, is a tremendous undertaking; one that, in fact, inspires enthusiasm just because of the overwhelming odds that seem to be against it.

For six days those interested in purity work gathered to listen to papers and take part in discussions. To attempt to compress into the space allotted a magazine article an adequate account of the proceedings of this body, would be impossible. All that we can hope to do will be to give a summing up, to concentrate into brief form a "finally, brethren."

In order thoroughly to purify, it is necessary to investigate the darkest corners and learn just what is the real condition. So at this Congress, we at times were compelled to gaze upon dark and forbidding pictures; but it is not necessary to allow our gaze to linger, and we turn from these revelations with renewed determination to fight the good fight in order that some day all these abominations may be wiped off the face of the earth. Our sympathies are broadened, our devotion to the cause deepened, as we learn of the great work being done by those who go night after night among the fallen, to take them the message of Christ, and our hearts are stirred with admiration as we learn of the noble fight being carried on by those who are bending every energy to the abolition of the "White Slave Traffic." One of the most

encouraging statements made at this Congress was that the United States government officials are awakened to the necessity of united effort for the suppression of this horrible traffic, and are appealing to this and other organizations for assistance in this great undertaking.

The causes of purity and impurity were carefully considered. It was shown that upon our food, our dress, our exercise, our thoughts, depend the purity of our lives. It is more than a mere matter of restraint. It is building into the very tissue of our being the noblest thoughts, the highest aspirations, and then giving them channels of expression.

That there are economic causes of impurity was also clearly shown. So long as young women in shops and offices are poorly paid, just so long will the temptations to immorality prove overwhelmingly strong for many of them. The close connection between intemperance and vice was also pointed out, and a stirring appeal made for the enforcement of the laws against the liquor traffic, as well as the laws against vice. From the South came a glorious note of encouragement in the report of the rapidly spreading prohibition sentiment.

As the cigarette smoker is stunted morally as well as physically, it was very appropriate that the evils of the cigarette should be emphasized at this time. So also must the unnatural conditions surrounding the children who are unlawfully employed in mines and factories result in a blunting of their spiritual perceptions and the contamination of their moral natures.

It was necessary, also, to consider the dangers that threaten the nation and the

individual, and from the addresses given along this line many practical, helpful suggestions were received. Many parents do not realize that novels by writers of reputation may yet be suggestive of evil, and by their very beauty of style prove most insidious and alluring. The disclosures made at this Congress emphasize the need for a censorship of the books put in the public libraries, and even sometimes in the Sunday-school libraries. The bad book could not by any possible means creep in, but books that present vice in attractive guise may find a place upon these shelves. Then there is the educational force of pictures to be considered. The billboards of every city, town, and village should be most rigorously supervised in order that the young may not be educated in vice by the suggestive pictures thus publicly displayed. The daily newspaper is a school of vice for the young, and should be kept from the home as much as possible.

Great as may be the work that can be done and needs to be done for adults, it cannot compare in importance with that which should be done for children. Hence, it is only right that more time and attention should be paid the protection and right training of the young. The value of the curfew law was made very evident, keeping the children off the streets at night as it does, and so preventing their attendance upon those schools of vice which congregate at every street corner. Since so many parents fail to appreciate their responsibility in this matter, it behooves the State to see that its future citizens are by law kept within the safer bounds of home. This is no curtailment of personal liberty, but rather a wise paternal supervision of those upon whom the future welfare of the nation rests.

For their protection, too, we have laws against obscene literature and its trans-

mission through the mails. One shudders to hear of the tons upon tons of evil books which have been kept from the mails by the vigilant supervision of the New York Society for the Suppression of Vice.

All of these laws for the protection of the young are a step in the right direction, but still more fundamental is the positive work in character building which should be done in the home and the school.

We speak of the training and education needed by the child, but we sometimes forget that this should begin before the child has taken up its life as a separate individual. The mother and father who would see their child come into the world with strong upward tendencies should make every effort to surround its prenatal existence with an atmosphere of uplifting thoughts and acts. Thus would the first step toward the purification of the race be taken.

Much attention at this Purity Congress was given to the proper education of the young in the mystery of life and of their own natures. Not only were papers given, but separate conferences of those especially interested in this educational work were held from day to day, at which many practical suggestions were brought forth. It was urged not only that the books on the library shelves should be carefully supervised, but that proper literature of the right kind be substituted. Teachers are already becoming awakened to the necessity of rightly training the child's literary tastes, and local workers may well co-operate with them in this respect.

The assistance of the teachers in impressing upon the mothers the necessity of purity instruction should also be gained. If the teachers will call together meetings of the mothers of the children in the various rooms, it may be possible

thus to organize a Mothers' Club or a Mothers' Meeting for the consideration of all kinds of character-building. Beginning with work along general lines, such as honesty, uprightness, promptness, and so on, the question of truthfully answering the children's inquiries as to their own origin will arise, and thus will come an opportunity to point out the wise way of beginning purity instruction in the home. Talks on parental responsibilities before women's clubs will also be productive of much good, while to arouse the interest of the Christian physician and to secure his co-operation will help to awaken the men of the community to the value of this great work.

It is not enough to give our children instruction concerning their own natures. We must teach them also how to protect themselves. The boy needs to learn how to defend himself from the evil suggestions of his comrades; the girl needs to be taught how to protect herself from undue familiarities. It might be wise to go one step farther, as was suggested by one speaker, and teach the girl that there is one time when she is justified in fighting, and that is when her honor is assailed.

One of the large questions considered by those in attendance upon this Purity Congress was that of sex-instruction in the public schools. It is a fact that at the present time probably the majority of parents are unequipped for giving

their children such instruction. It is being admitted on all sides that it should be given, and the question was whether or not its introduction into the public schools at the present time should be urged upon educators. The conclusion reached was that the point of beginning is the normal school, the summer school, and the teachers' institute.

However thinkers may differ in regard to this instruction in the public schools, there are few today who have not come to believe that such instruction should be given in the home. Not only was the importance of this instruction pointed out, but in some of the conferences the best way of telling the story of life was shown. It was of especial interest to know that the United States does not stand alone in this work. One delegate had come all the way from England to tell us what she has been able to accomplish along these lines during the last few dozen years. From Canada came the same word, while from Greece came one who hopes to establish a model school for boys and girls in which this instruction may be wisely given to the individual children by the teachers. Thus it may be seen that the thought of the whole world is changing along this line, that we are really beginning to see the beauty and holiness of God's plan of creation, and to regard ourselves as procreators with Him.

The Yellow Peril

BY J. H. KELLOGG, M. D.

WE hear much nowadays about the "yellow peril." Whether there is a political yellow peril is a mooted question, but there is a yellow peril concerning whose deadly nature there can be no

doubt. Evidence of it is to be seen on every hand. A menace compared with which the Mongolian hordes of Asia are scarcely worthy of consideration, it is to be found in every community, in every

household almost. It is an ever-present, silent, subtle, deadly, devastating agency which spares no state or condition of life, dealing even more severely with the rich than with the poor.

The yellow peril to which we refer reveals itself in the wasted, tawny, yellow-tinged faces of the millions of invalids and semi-invalids that constitute so large a part of the population in every civilized land. For statistics show that one out of every fifty of the population dies annually, and that one out of every ten is sick all the time, or a total the world over of one hundred and fifty millions of people ailing continually.

One of the characteristics of most forms of sickness is the change in the tint of the skin. The peculiar coloring that results is generally regarded as due to sickness, whereas it is really the cause of it. The yellow, dingy skin and the sclerotic white of the eye are the result of a deposit in the skin of poisons, waste matters, and products of putrefaction which accumulate not only in the skin, but in the brain, the nerves, the muscles, the glands, the membranes,—in fact, in every fiber and cell of the body.

This accumulation of poisons is called "auto-intoxication," a word coined by that profound physiologist and eminent physician, Bouchard. "Self-poisoning," it really means. It is this yellow peril which civilized men need to fear far more than any foreign invasion.

If we follow this yellow peril to its source we find its headquarters to be the alimentary canal, especially the large intestine. One of the most important scientific discoveries in modern times is the large part played by intestinal poisons in the production of disease. Escherich, Tissier, Combe, Roger, and other European savants have isolated, one by one, the various germs which grow in the intestine, and have found one hundred and

sixty-one species. Some of these are harmless organisms, a few are even beneficent, though the majority are pernicious, one might almost say malevolent, agents of disease, degeneration, death.

These so-called "pathogenic"—disease-producing—bacteria give rise to poisons, some of which closely resemble the deadly poisons of the poisonous mushroom. Each produces its own peculiar poison, which, when absorbed into the blood, produce diverse and characteristic effects. Certain of them affect the brain, causing drowsiness, depression, nervousness, irritability, mental confusion, insomnia, brain degeneration, even insanity. Others manifest their presence through the skin, causing acne, eczema, nettle rash, and other skin maladies.

Certain germs produce poisons which destroy and dissolve the blood cells. Some produce volatile poisons which cause a bad breath and foul-smelling perspiration. Still others penetrate the blood vessels and give rise to deadly disease processes in the heart, liver, and other vital parts.

Certain poisons of germ origin in the intestine find their way into the blood and set up processes which end in hardening and shriveling of the blood cells, or arteriosclerosis. These poisons, as Metchnikoff has shown, are the cause of old age. They interfere with all the processes of life, and cause premature decay.

Along with these various intestinal poisons are pigments, similar in character to the green, pink, yellow, red, and black pigments produced by the various molds and yeasts. These poisons are absorbed with the rest, and give to the skin the yellow, dingy, or "bilious" coloration that is so characteristic of nearly all forms of chronic disease.

The practical side of this question, of course, concerns the remedy. How may

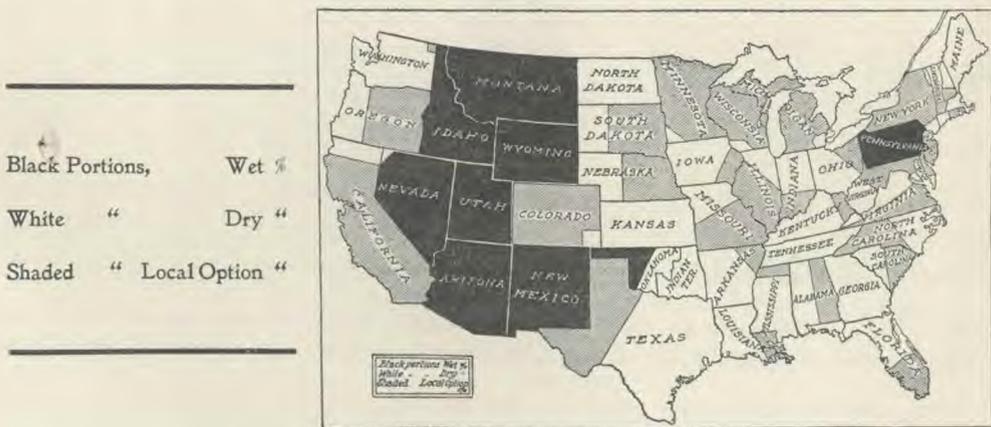
this impending peril be averted? Metchnikoff, Tissier, Combe, and Herter have given us the facts from which to formulate our answer. These investigators have shown that the poison-forming germs which grow in the intestine are fed by certain food elements, especially meat and eggs. Meats—flesh, fish, and fowl—are the food *par excellence* of these organisms. Without animal substance they cannot live in the intestines.

The first thing to be done, then, to oppose the yellow peril is to starve out the poison-forming germs by eliminating meats of all sorts from the dietary. Eggs must be used sparingly, and the bill of fare must be made up of foodstuffs which discourage the growth of these death-dealing organisms. Such a dietary may be appropriately termed *anti-toxic*. It consists first of fruits, then of cereals,—especially malted honey, cereals, and mel-tose,—of fresh vegetables, and of fer-

mented milk products, such as buttermilk and fresh, soft cheese. A Bulgarian milk preparation known as yoghurt is especially beneficial in combating unfriendly germs.

Persons who have once experienced the symptoms of intestinal autointoxication must definitely and permanently abjure flesh foods of all sorts. When this is done it is often wonderful to note how quickly the skin loses its yellow tint, how soon the eyes acquire a new luster, the bloom of health appears on the cheeks, the perspiration and the breath lose their cadaverous odor, the stools are no longer putrid, the general vital uplift is apparent.

The place to deal with the yellow peril is at the dinner table. This is the enemy's stronghold and recruiting station. Radical tactics will eliminate this death-dealing agency, and save hundreds of lives annually, and with every life five years of sickness.



Rapid Spread of the Temperance Campaign

THE irresistible sweep of the temperance movement has become the great question of the hour. The accompanying map, taken from the Chicago

Tribune, shows how small is the territory of the United States without saloon regulation of any kind. And while so large a portion has regulation of some

kind, 33,000,000 people live in absolutely "dry" districts. The growth by decades is thus given by the *Tribune*:

LIVING IN DRY TERRITORY.

	Number.	Pct.
1870	3,500,000	9
1880	7,100,000	14
1890	11,300,000	18
1900	18,355,000	25
1907	33,600,000	40

Says the *Springfield Republican*, reviewing, in a recent editorial, the present status of the temperance movement:

"An exhaustive statement of the territorial partition of the United States between license and no-license would overwhelm an article of this character, but certain States may be referred to for illustrative purposes. Ohio has 1,140 dry towns out of a total of 1,376. Massachusetts has 250 dry out of 350. Vermont is wholly dry, except 24 towns and

cities. Kentucky, the home of whisky distilling, has 97 dry counties out of 119. Connecticut has 96 dry to 72 wet, or did have prior to the latest town elections. There are 200 dry towns in Illinois, and in Iowa 65 out of 99 counties are without saloons. Maryland has 14 counties dry out of 23. There are 300 dry towns in New York State. Indiana, out of 1,016 townships, has 710 on the arid list. Passing to the Pacific coast, one finds four dry counties in California and 'much dry territory in other counties,' while Oregon reports 12 dry counties and 170 dry towns and cities in other counties. These exhibits from different sections demonstrate that the local option system has banished the public saloon from large areas in all parts of the United States."

We might add that since this was written prohibition made heavy gains in the recent elections in Kentucky (notably in Louisville, where the liquor forces lost the day), Illinois, Mississippi, Ohio, and Delaware.

The Evils of Sugar

[The following is an editorial by Harry Brooks, which appeared in the *Los Angeles Times*.—ED.]

THE magazine, *What to Eat*, whose editor probably knows more about hotels than hygiene, published in its February number an article headed, "Taste for Sweets an Index of Wholesomeness." That depends. A craving for sweet fruits, containing grape sugar, is natural and wholesome. A craving for concentrated cane-sugar is unnatural and harmful. In the article referred to, the editor of *What to Eat* says:

"Nothing could be said in greater praise of a people than that they have a taste for sweets. It shows a wholesome, vigorous, healthful condition—an appetite not jaded from excessive indulgence. The child whose appetite has

not become polluted or calloused from false relishes, smarting sauces, and burning drinks and dissipation, loves sweets; so does the girl of bright eyes and untainted youth, as is evinced by her fondness for ice-creams and desserts; the young athletic among men love sweets nearly as does the child."

The writer goes on to point to other countries, where they prefer things that are sour and bitter, and tells how much better off we are, adding:

"So let's rejoice in the fact that America and England eat twice the amount of sweets of any other nation in the world."

How about the fact that dyspepsia, which is comparatively rare in the countries referred to, is so common in America as to be the rule rather than the exception, and has been called the "na-

tional disease"? How about the fact that no other country in the world maintains so many dentists per capita?

So far from rejoicing at the immense amount of cane-sugar consumed in this country, the editor believes the fact should be sincerely deplored. He believes that the great consumption of cane-sugar in various forms, is the unrecognized cause of a large proportion of the diseases that afflict the American people. In the case of many people, about all they need to do to recover their health is to abandon the use of cane-sugar. This is especially true when the sugar is consumed with cream or milk, causing easy fermentation and acidity. Cane-sugar does not produce sweetness, but acidity. Subacid fruits, on the other hand, have an alkaline reaction.

The editor sincerely believes that cane-sugar does more physical harm to the people of this country than tea, coffee, and beer combined.

Otto Carque contributes to the "Care of the Body" the following interesting article on this subject:—

"It should be borne in mind that the various forms of sugar, as we find them in their natural state in fruits, stems, and roots, where they are organized by nature during the process of growth and intimately associated with other nourishing ingredients, are far better adapted for nutrition than the manufactured products of commerce which are chemically isolated food principles and never apt to fully supply the needs of the body.

"The reason for the injurious effects of manufactured sugar and glucose is that they are not complete foods. They are deficient in those organic salts which are necessary for the building up of the nerves, tissues, and bones, and neutralizing the acidity of the blood. Without the presence of the salts of sodium, calcium, magnesium, and iron, the process of digestion and assimilation is incomplete. No doubt the extensive use of artificial sweets in the various food

products which are now found in the market is responsible for a very large number of diseases, such as dyspepsia, diabetes, etc. This is but another example of the fact that we cannot improve on nature; for the entire juice of the unripened sugar-cane is a complete food, while refined sugar is not, for the former contains other constituents besides carbohydrates. The nutritious and fattening qualities of the sugar-cane are abundantly shown on every sugar estate of the world. From their free use of the cane the negroes of the West Indies and every animal about the plantation at the time of harvest show every indication of the wholesome and nutritious properties of the juice.

"Not enough can be warned of the prevalent and extensive use of refined sugar, glucose, and white flour which contain little or no organic salts. The annual per capita consumption of sugar in the United States has increased 300 per cent (from 23 pounds to nearly 70 pounds) in the last fifty years, and the annual expenditure now amounts to \$100,000,000.

"Whatever interest these figures may or may not possess from a commercial standpoint, considered from sanitary grounds they are most significant and most discomfoting. Indeed, the use of artificial sweets is one of the most pernicious customs of the day, causing defective development of the skeleton of the infantile body, and in later ages a morbid softening of the bones. That we have to employ over 40,000 dentists in this country to repair the defects caused by the premature decay of our teeth is but one of the striking evidences of our dietetic mistakes in this respect. The taste for sweets is natural, and indicates a physiological demand. This demand, however, can be met only by the natural sweets existing in fruits and vegetables.

"Statistics show that the world's annual output of manufactured sugar is now over 10,000,000 tons, while nearly the same amount of natural sugar is destroyed by the production of fermented and distilled liquors every year. Furthermore, under the present economic system, hundreds of tons of fruit are

annually rotting on the ground, fed to the cattle, or sometimes thrown into the water, partly for lack of proper transportation facilities, partly to keep prices up, partly on account of exorbitant freight rates which keep the farmer at the mercy of the railroad magnates and deprive the toiling millions of the necessities of life.

Dr. C. S. Porter, of Long Beach, referring to a suggestion from the editor about the use of cane-sugar, wrote:

"Of course I condemn factory sugar. Dried fruit is good, but I discovered, some time ago, that fresh fruits when cooked with cane-sugar, 'invert' the sugar into glucose—or rather dextrose and levulose—making it as easily digestible as grape sugar. This, of course, cannot be an original discovery, but I have been unable to find any published account of it. I arrived at this result from noticing how much more digestible sugar became after combining with fruit, such as sliced oranges, for instance, and letting it stand a while, and also from slowly cooking or simmering fruit with factory sugar. In this connection I en-

close an interesting clipping which you may not have noticed. It indicates that fruits contain a digestive ferment."

This may or may not be so. The normal process is that cane-sugar is changed to maltose by an intestinal ferment, sucrose. Whether the addition of fruit acids hastens or retards the process has to be proved. Dr. Porter appears to think he has proved it. It is an interesting theory, and worthy of further investigation. It should be noted, however, that in his latest book, "The Miracle of Life," Dr. J. H. Kellogg says: "The acid of fruit is not neutralized by the addition of cane-sugar. The use of cane-sugar with acid fruits is objectionable. It is better to combine acids with sweet fruits, or, if necessary, to avoid acid fruits."

As to the asserted "ferment" in fruits, it is a well-known fact that the acids in fresh fruits aid digestion. This is one of their most valuable qualities. This may be what is referred to as a "ferment."



Lacking the Grace of Acceptance

BY HELENA H. THOMAS

OH, there is our good Maggie coming!" cried our hostess the first week in January, as a woman beaming with goodness made her way to the side door. The door was speedily opened by Mrs. Cameron, whose greeting evinced that the humble caller had a warm place in the heart of the one whose servant she had been in her younger days.

"I meant to have had this here for Christmas," said Maggie, when there was a little lull in the interchange of queries, "but I helped Mrs. Leggett out all last week, so I couldn't do a stroke for myself, let alone any one else."

Thus remarking, the speaker took from a box a fruit cake which any housewife might well have coveted, and handing it to her former mistress, turned to the stranger and, in an apologetic tone, said:

"I'm ashamed to give her the like o' that, but she will have it that one o' my fruit cakes is the very present she wants."

"Indeed it is, Maggie!" cried the delighted recipient, "for our annual gift by one of the best cooks in the world is counted on by the entire family."

Then, after the cake had been sampled, and received such praise that the maker must have felt rewarded for her painstaking gift of love, Mrs. Cameron put the query:

"Did you have a pleasant Christmas, Maggie?"

"Well, y-e-s," was the hesitating reply. "You know Jim has a fine payin' job now, an' so I had a tree for the children 'n' tried to make up for the pinchin' we had to do last year, on account o' so much sickness. Jim giv' me a big rocker, 'n' all together we had a nice show o' presents an' had good reason to be happy an' thankful."

"But, Maggie, you know I can always read you like a book," said her old mistress, in a half-chiding tone, "so you may as well confess that you, for one, were not happy in spite of your pretensions."

"Well, you do beat all for readin' people, Mrs. Cameron," said the blushing woman, "so I may as well own up to lettin' my Christmas be sort o' spoiled by a bit o' paper."

"A bit of paper! Why, Maggie, how could any one write in a way to wound your feelings, when you are the kindest hearted person in the world!" cried Mrs. Cameron indignantly.

"But I didn't make my meanin' clear," Maggie made haste to say. "Most folks wouldn't feel hurt over gettin' a check on Christmas mornin', but I was that hurt it spoiled all the doin's for me, though I fooled 'em all but Jim. He can read me jus' like you do."

"Explain yourself, Maggie, for I always gave you credit of having good sense," urged Mrs. Cameron, "and shall not change my mind without sufficient reason; still, I cannot see how so sensible a woman as you are should allow a check to mar your happiness."

"Yes, I know it looks like I was ungrateful, an' all that, an' p'raps I can't make you understand how I feel," said Maggie, twisting her fingers in an embarrassed way, "but I'll do my best, for it would hurt most as bad as gettin' the check did to lose your good opinion, Mrs. Cameron. I believe you don't know the Leggetts?"

"No, not personally; but you have told me so much about the years you spent with them during our long absence from the city, and of their great kindness to you that I have much respect for them,

and only wish that wealth and generosity oftener went hand in hand. But a check from that source surely couldn't wound you, my good woman."

"Well, it did, all the same," was the emphatic rejoinder of the one who evidently began to fear that she could not make herself understood, and hastened to add: "An' just because o' all their goodness, too! You know I told you I had been helpin' Mrs. Leggett."

"Yes," rejoined Mrs. Cameron, "and it struck me a little strange, too, as I supposed that nothing could take you away from your home, now that you are independent, in a way."

"You are right there, commonly speakin'," said Maggie, warming up to the subject; "but when I happened to meet Mrs. Leggett's daughter—when I was in a store buyin' Christmas presents for the children—an' she told me how their cook was so sick she had to be taken to the hospital, an' how her mother was nearly distracted, thinkin' o' havin' a strange cook who didn't know her ways. when she expected a house full o' Christmas company, I rushed home an' told Jim, all excited, about it, an' then I said:

"This is our chance to do something for them! I can go there an' train the new cook in their ways, for I know every last one o' them, an' that will be our Christmas present."

"He thought it a fine idea, so I went to see Mrs. Leggett an' told her that I would go to her days an' go home nights until things was clear sailin'. She was that pleased I thought she'd never let go squeezin' my hand an' callin' me her good angel.

"Well, I went there an' staid ten days, an' by that time things were runnin' like clock-work, an' nothin' suffered at home, either, for my youngest sister was out o' a place an' glad to do my work for her

keep. I tell you I never put in ten happier days, even if I didn't see much o' Jim an' the children, I was so set up, you see, all the time, thinkin' how I could give myself to the folks who'd done so much for me, for I knew that money couldn't buy what I was doin'."

Here the faithful creature came to a pause and sighed, as she added:

"But I was cheated out o' any lastin' happiness, after all, for when I'd helped cook the Christmas dinner an' I wasn't really needed no longer, Mrs. Leggett said:

"I want to settle with you now for your valuable services, Maggie, though I owe you a debt of gratitude I never can repay."

"Then, with my heart in my mouth, for very joy, I up an' said: 'You don't owe me one penny! My work is a Christmas present to the best folks in the world—the Leggett family!'

"But Mrs. Leggett shook her head an' began talkin' fine-like, an' sayin' how the 'commodation was present enough an' how she couldn't accept my work 'thout pay.

"Well, I s'pose I was a ninny, but I felt that hurt, when it all come over me how they kept doin' for us all through Jim's awful sickness, an' how I couldn't be let give what didn't cost anything, I was that trembly an' near cryin' that I jus' said:

"It's true, then, like I've always heard, that poor folks can't be let give rich folks anything."

"Mrs. Leggett saw how I felt, I s'pose, for then she patted me, kind-like, an' said:

"You may have it your own way, Maggie, good soul!"

"So she let me off with a basket o' nice fruit an' things for Christmas, an' I went away happy, after all, but—"

"Ah, I understand it all now, you dear, kind-hearted creature!" cried Mrs. Cameron, "and I do not blame you in the least for being wounded when Christmas morning brought pay for your services in the form of a Christmas present."

"Yes, that was the long an' short of it," rejoined Maggie, who was smiling through her tears when she realized that the friend she so prized understood her position, in a measure. "Though, o' course it came with a 'Merry Christmas,' as a sort o' blind. But I tell you it hurt, just the same, for poor folks have feelin's same's rich folks. I s'pose Mrs. Leggett's pride wouldn't let my work go unpaid, but she robbed me of a whole lot o' happiness, an' I don't think it's fair for the givin' to be all one way."

"Mrs. Leggett would likely comfort herself with the thought that it is 'more blessed to give than to receive,'" ventured the hitherto silent listener, as Maggie arose to leave.

"Yes, like's not!" sighed the wounded creature, "but poor folks would like a blessin' once in a while, too!"

When Mrs. Cameron re-entered the room, after a little parting chat with Maggie at the door, tears were very near the surface, as she said:

"I never saw the faithful creature so wounded. I feel sorry for her, indeed, and yet, learning of her keenly felt disappointment may prevent my wounding others in a similar way, at some future time, for, like Mrs. Leggett, I find it much easier to give than to accept, especially from those poorer than I."

"I have been thinking along that line, too," rejoined her guest, "for what I have listened to has made me realize anew that the grace of acceptance is too little cultivated, and because of that wounds often crowd out 'peace and goodwill,' which is the rightful heritage of all, when Christmas carols are heard and sung with joy and gladness on every hand."

HEALTH AND THE SCHOOLS

III

Heredity vs. Environment

BY CARRIE L. GROUT

A WOMAN, well and widely known, said of her children to a friend who had complimented them, "Yes, I did for them what a great many mothers do not do for their children—I gave them a good father."

More often Mrs. Browning's couplet states a fact:

"Men do not think
Of sons and daughters when they fall in love."

We have long known the desirability of raising thoroughbred cattle, horses, dogs, and chickens, and it seems strange we should be so blind to the desirability of thoroughbred children.

Frances Willard did the world good service when she got into general circulation the thought that every child has a right to be well born.

Heredity means in a general way the racial characteristics and special likenesses derived from our parents congenitally, and must not be confused with pre-natal influences or those things that affect the unborn fetus.

Heredity comes alike from father and mother, and is as important in the new life as the seed is to the plant, but the best of seed will not insure a good plant if both soil and culture are neglected.

I have seen boys in State reformatories—sad specimens of debauchery at fourteen—cleaned up, fed with plenty of wholesome food, constrained to take abundant exercise and sleep, deprived of beer and cigarettes, improve so that in three months their own mothers would not know them.

I once asked Mrs. Amigh, the capable superintendent of the Illinois Industrial School for Girls, if she believed there were any wholly incorrigible children. She answered, "None but the defective children." Now let us see how we come by these defective children, according to the consensus of opinion of those who have studied them the most carefully. In the first place, about seventy-five per cent of them are born so, only a comparatively small number being the result of accident or sickness.

Whatever lowers the vitality of the parents to the point of exhaustion, leads to degeneracy in the offspring, following a descending scale from the dull-witted or abnormally developed child, lacking in some of the avenues of sensation, to the absolute idiot. The producing agents are many and varied: disease, as for instance, tuberculosis, drunkenness, tobacco, sexual excesses, lack of nutrition, nervous exhaustion. A visit to the schools almost anywhere will reveal the extent to which these debilitating agencies have been at work.

The degeneracy which follows is not seen alone among our poor people. The children of the rich are often tainted in the same ways.

In our proverbial "mad rush" we seem to be losing sight of the true purposes of life, and it is becoming a weary burden where it should be a joyful and beautiful evolution. Crime is increasing and the criminal is beginning his career

younger and ever younger. The last time I was in the Juvenile Court of this county, a lad was brought before the judge who was so little he could not see over the top of the judge's bench, and a gang of thieves who were none of them ten years old.

The superintendent of a certain State reformatory for boys undertook, a few years ago, to find out if crime were hereditary. He found but few with criminal inheritance, but a very large proportion of weakness in body and mind, ready to adopt always the course of least resistance, and very open to the suggestions of evil afforded by the streets, which were their only playgrounds.

In the changed economic conditions under which we are now living, the home is often unable to furnish the room and the materials to exercise the normal activities of children. The small city lot, largely filled with ornamental shrubbery, the flat or tenement with no legitimate access to God's out-of-doors, make it necessary for the school to furnish, not only playgrounds, but industrial training and various forms of sense development in addition to the brain culture of the old days.

In manual training, the school gardens, nature study, and well-managed athletics, the boy is finding not only mental discipline, but delight, and a fine antidote to the evil influences of the street. In the same things the girls will be able to get good red blood and steady nerves when our old-fashioned prejudices give way sufficiently to let them be available for girls as well as boys. And it would be in no way amiss for the boys to take the cooking lessons now reserved for the girls; the wholesome camaraderie of occupation and thought will do away with some of that sex-consciousness which works such havoc.

Chautauqua School of Health

Mouth Infection

BY KATE LINDSAY, M. D.

THE writer has witnessed two deaths from septisemia in youths of fourteen and eighteen, due to an infected mouth full of stumps of decayed teeth, has taken note of the many scars from mouth abscesses which so often deform youthful faces, and has often been led to wonder why more attention is not given in medical books and works on personal hygiene to the care of the mouth—the necessity of keeping it sound and the teeth and glands free from infection.

The time of most frequent mouth infection is infancy and childhood. The lot of most babies is to suffer more or less from mouth infection from three to seven months, or all through the period of first dentition. The baby has catarhal inflammation, thrush, or ulcerated sore mouth, and often has very little attention paid to what is known as teething sore mouth. No effort is made to cure the inflammation or keep the little one's mouth clean and free from infection. In fact, much is done to favor foulness of the mouth. Especially is this true of bottle-fed babies, the infant having to suck a bottle requiring a long, invariably infected tube. The writer has seen the baby and bottle on a dirty floor, the nipple dropping from the mouth and mopping the floor, then put back into the mouth. Mother had not time to take the child in her lap and feed him

decently from a clean bottle with sterile nipple. To increase the danger the baby was given a dirty rubber ring to continue the mopping of the floor and the infecting of the mouth. It was no marvel that this country baby died in August heat, of cholera infantum.

If we examine the mouth of the three-year-old child, we will often find red swollen spongy gums and decayed teeth; often gum-boils, with the teeth blackened and unsightly. The baby cries with the toothache, but the mother says, "Never mind; they are only the first teeth, and there will be another set." She does not realize that infected, unhealthy gums and diseased, deformed sockets are not likely to produce a healthy set of permanent teeth, and is wholly oblivious to the dangers of infection from the gum-boils and other abscesses of the various cavities of the face in close proximity to the mouth. The upper jawbone is made up of spongy tissues, and often the roots of some tooth project into a cavity and infect it. Again, the abscess may burrow in the bone and discharge in places often remote.

The writer remembers, years ago, having her attention called to a case of this kind by a dentist in dispensary practice. A young woman called to have a tooth in the lower jaw treated, as it had been alternately swelling and discharging for

months. Incidentally she mentioned that since the tooth was suppurating she had had a discharge of pus from one nipple. The dentist tested the matter by injecting the abscess cavity with a strong-smelling disinfectant and closing it up so that the discharge would be downward into the sinus if there was really a connection between the two. Sure enough, the odor appeared in the nipple discharge, which was healed by pulling the tooth and healing the abscess.

I have made observations on scars on the face during the past ten years, and altogether have met with seven young persons with scared faces due to gum-boils.

Every cavity in a tooth is a channel that admits all manner of infection into the great system of glands around the face and neck. Thus tubercular germs often gain an entrance to the cervical glands through decayed teeth. The young, who are the ones most likely to suffer in this respect, sometimes carry unsightly scars all through life on their faces and necks as the result of infection from bad teeth in early childhood and youth. We are told to teach the children to chew, or Fletcherize; but how can children chew with gum-boils and decaying, aching teeth? Or for that matter, grown-up people either?

We now come to the permanent teeth of adults. How little value the average man and woman places on a sound, healthy mouth, and clean, well-kept teeth! Observe the mouths of persons over twenty and see how many show the red line on the upper edge of the gums, indicating the commencement of Rigs disease. Gradually the gums are separated from the tooth fangs, and a pus sac forms. The cavity grows deeper and deeper until the tooth is loosened and drops out. Such teeth are often covered with tartar, and the breath smells foul. Every mouthful of food is poisoned and

the patient suffers from indigestion. Often there is anemia present, and the patient, weak and nervous, goes from one health resort to another, in vain searching for health.

The writer saw a striking example of this a few years ago in a lady about forty-five years of age. Her mouth was full of old stumps and loose teeth. She had been vainly searching for health for several years, and when asked why she did not have her teeth attended to, she said she felt too weak to have them pulled or treated; yet when it was insisted that her stomach troubles could never be cured with such a foul mouth and bad teeth, and that she must have a dentist and her family physician come to her house and treat them, she endured the operation of pulling the already loosened teeth, and three months after showed a gain of eleven pounds in weight, and better health than for years. With a well-fitting set of artificial teeth, enabling her to masticate, she continued to gain until now she is enjoying the average health for a woman of her age.

The teeth, which can be easily reached by the individual, are neglected so far as cleanliness is concerned. Many educated people of sound sense still neglect their mouths. They forget to use their tooth-brushes and otherwise maltreat their teeth and oral cavity by putting into the mouth all manner of foul things and using the teeth as scissors, pinchers, nut-crackers, and the like. It is little cause for wonder that when they take such bad care of their own mouths and teeth that they fail to give their children proper instruction about the dangers of putting foul things into their mouths. The writer has seen a loving grandma, with a foul mouth, chewing all the baby's food for it, and once in an orphanage found eight little children from two years to four all seated in a row with water-

proof bibs before them, being fed with a common spoon out of one common bowl. The writer was called to treat two of the little ones for canker sore mouth.

Intelligent teachers now warn against common drinking cups at school; also against putting into the mouth anything that has been used by others. At home this advice is too lightly spoken of. The children disregard the teachers' warning, and as a result continue to contract diphtheria and other contagious diseases. Often an entirely healthy child or an adult may carry in his mouth the germs of the most deadly disorders. Little can be done to save the children except as we educate the mothers and nurses to keep unclean things out of the mouths of their babies. They must be sure their own nipples are always clean when the baby is breast-fed, and equally sure that when bottle-fed the rubber nipple is sterile; they must give the baby nothing to suck after its meal is over, and must teach it to keep its fingers and other objects out of its mouth. They must learn never to put anything that has been in another mouth into the baby's mouth; to keep the child's mouth free from inflammation, thrush, and any other infection through the period of first dentition; to keep them clean and under the care of a good dentist who will inspect them at

least twice a year or oftener and have every cavity filled.

As the child grows up and the permanent teeth begin to appear, it should be taught to use the toothbrush for itself at least twice a day. The mother must inspect this work and see that it is thoroughly done. The habit is easily kept up if the parents have regular times for teeth cleaning.

As with the children, so with the adults,—the dentist should be consulted at least twice a year. Teeth should never be permitted to ache by going with unfilled cavities, thus exposing the sensitive nerves in the pulp. The family should diet on food which contains plenty of lime salts, nutritious, but easy of digestion. Neither eat too hot nor ice-cold food; avoid tea, coffee, and tobacco, and use the teeth for their proper work. An organ not properly exercised grows weak. The neglect of proper mastication of the food tends to deterioration of the muscles of mastication and all the bones and tissues exercised by chewing.

Now to sum up: The muscles, bones, soft tissue, and teeth must be sound. To avoid gum-boils, toothache, and cervical gland infection, have a healthy mouth. To avoid other infections, put no unclean thing into the mouth. Never put into the mouth what you know already to have been in the mouth of some one else.

A Vegetarian Manifesto

AN epoch-making manifesto was issued in London, August 31, by thirteen prominent British medical men. The statement reads as follows:

"We, the undersigned medical men, having carefully considered the subject of vegetarianism in its scientific aspects, and having put its principles to the practical test of experience, hereby record our

emphatic opinion that not only is the practice based on a truly scientific foundation, but that it is conducive to the best physical conditions of human life.

"The diet of vegetarianism provides all the constituents necessary to the building up of the human body, and those constituents, as proved, not by the misleading tests of the chemical and physical laboratory, but by the experience of numerous

persons living under normal conditions, are at least as digestible and as assimilable as the corresponding substances obtained from flesh.

"We therefore claim vegetarianism to be scientifically a sound and satisfactory system of dietetics.

"Moreover, considering the liability of cattle and other animals to ailments and diseases of various kinds, and the pure character of food obtained from vegetarian sources, we are convinced that abstinence from flesh food is not only more conducive to health, but, from an esthetic point of view, is incomparably superior.

"Robert Bell, M. D.

"George Black, M. D., Edin.

"A. J. H. Crespi, M. R. C. S.

"H. H. S. Dorman, M. D.

"Albert Gresswell, M. A., M. D.

"Walter R. Hadwen, M. D., L. R. C. P., M. R. C. S.

"John Reid, M. B., C. M.

"George B. Watters, M. D.

"J. Stenson Hooker, M. D.

"Augustus Johnston, M. B., M. R. C. S.

"H. Valentine Knaggs, M. R. C. S., L. R. C. P.

"Alfred B. Olsen, M. D., M. R. C. S.

"Robert H. Perks, M. D., F. R. C. S."

The Headache Tribe

BY W. J. MCCORMICK, M. D.

VITAL statistics tell us that 15 per cent of school children, 25 per cent of men, and over 50 per cent of women suffer from headaches. A brief consideration of the causes and treatment of this distressing malady should therefore be of general interest.

Headache of itself is not a disease, but is merely a symptom—one of nature's danger signals—indicative of a deviation from the right way of living. We should in every case seek to find the cause, and in treatment endeavor to remove it.

We may, in general, classify headaches as follows: Toxic, neuropathic, organic, reflex.

Of these the toxic class is perhaps the most common. Headaches of this kind are produced by the action of various poisons brought to the brain in the circulating blood. These poisons may be produced within the body by constipation and intestinal putrefaction; by such constitutional diseases as gout, rheumatism, diabetes, and uremia; by the products of bacterial activity in acute infectious diseases. They may be taken into

the system from without, as by lead poisoning; by the use of alcohol, tobacco, tea and coffee; by the inhalation of impure air and poisonous gases. The pain in these cases is generally characterized as dull and diffuse, or in the frontal region if localized, and is increased by sudden movements of the head.

In the treatment of headaches of toxic origin our efforts should be directed toward decreasing to a minimum the production and intake of poisons, and hastening the elimination of poisons already in the system. To accomplish this, select a diet of an anti-toxic nature, consisting of fresh fruits and fruit juices, dextrinized cereals; malted foods, such as melrose, granuto, and malted nuts; acid preparations of milk, such as buttermilk, kumyss; cottage cheese, and yogurt; nuts, nut foods, and eggs in moderation. Meats of all sorts, tea and coffee, and the fiber of coarse fruits and vegetables should be avoided. An abundant supply of fresh air, uncontaminated by tobacco fumes or other impurities, should, it is needless to add, be provided at all times.

To hasten the process of elimination, sweating procedures of all kinds, such as the electric-light bath, Turkish or vapor bath, copious water drinking, and the enema may be resorted to. As palliative measures the ice collar, ice cap, or cold cephalic compress, together with the hot foot bath, may afford relief, especially in the headache of the acute infectious fevers.

The neuropathic class includes the headaches which accompany functional diseases of the nervous system, such as neurasthenia, epilepsy, and hysteria. The neurasthenic headache, probably the most frequent of constant headaches, is very characteristic. The pain, which is generally accompanied by a sensation of pressure, is usually located in the vertical or occipital and cervical region, and is almost invariably worse in the morning than in the evening. The headaches of epilepsy and hysteria are often described as boring or splitting, and are usually located in the vertical region.

The treatment of this class is naturally the treatment of the underlying condition of the nervous system in the individual cases. In the neurasthenic our efforts should be directed toward improving the general tone of the vascular, muscular, and nervous systems. This is best effected by a graduated course of tonic hydriatic measures, together with the judicious use of galvanic and sinusoidal electricity, especially the latter. The alimentary derangements, dyspepsia and constipation, which in many of these cases are most potent causative factors, should be corrected.

A carefully regulated anti-toxic and laxative dietary similar to that previously outlined is essential. Abdominal massage, the moist abdominal girdle, and the graduated cold enema are also effective adjuncts. As palliative measures, alternate hot and cold sponging to the upper

spine and the hot and cold cephalic compress are most efficient. The latter consists of the application of an ice bag to the back of the neck, a cold compress to the top of the head, and fomentations over the face and ears. When this fails the reverse is sometimes effective, applying the cold compress to the face, and the fomentations to the back of the neck. Positive galvanism to the head and upper spine is also of value in some cases. In the treatment of epileptic and hysterical, as well as of the neurasthenic headache, remarkable results may be attained, as pointed out by Dr. Haig and others, by the adoption of a dietary free from uric acid, excluding the use of all flesh food, tea, coffee, and cocoa.

In the reflex group of headaches may be included the referred pain from diseases of the eye (hypermetropia, glaucoma, iritis), of the ear (otitis media, mastoiditis), of the teeth (caries), of the tongue (cancer or irritable ulcer), of the nasopharynx (tumors or foreign bodies), and of the generative organs (ovaritis, endometritis, cystitis). The location of these headaches is dependent upon the organs involved, as will be seen by reference to the accompanying diagram. The treatment of these cases should naturally be directed to the relief of the causative affection, which in most cases requires the services of a competent oculist, dentist, or surgeon.

The members of the organic group are fortunately quite rarely met with; fortunately, because little hope can be held out for recovery. In this class we may include the headaches accompanying brain tumors, meningitis, and other organic diseases of the brain and spinal cord; also that accompanying pronounced arteriosclerosis, as in Bright's disease. Only palliative measures, such as previously described, can be employed in the treatment of these cases.

In addition to the above a few words should be said regarding two rather common forms of head pain, known as neuralgia and migraine, which should not, strictly speaking, be classed as headaches. In the latter the seat of pain is usually within the skull, and more or less diffuse in character, while in neuralgia the pain is sharp and paroxysmal, and confined to the distribution of the affected nerve, in the course of which tender spots may be elicited upon pressure. Migraine is a constitutional or hereditary disease of the nervous system, characterized by periodical attacks of severe pulsating pain, generally affecting one side of the head only, lasting for a short time, and leaving the

patient feeling as well as ever. The attack is often accompanied by nausea, vertigo, pallor of the face, and zigzag flashes of light before the eyes. In treatment the severity and frequency of the attacks may be greatly diminished and in some cases completely eradicated by strict adherence to the non-flesh dietary as previously outlined, and by the taking of a gastric lavage and copious enema the day before the attack is expected.

In conclusion let us not overlook the fact that in headache, as in all other ailments, "an ounce of prevention is worth a pound of cure;" hence the importance of following the simple life, of being in tune with nature, as the best prophylactic.



Diagram showing location of pain in various headaches.

The Hygienic School Dinner

BY MRS. M. A. EMMONS

THE fact that thousands of school children are obliged to carry their dinners with them makes it important that great care should be taken by the mother to see that the foods chosen are of the simplest character, that they are harmoniously selected, and that each article is neatly packed. The sandwiches, for example, should be wrapped in oiled paper or else in a plain white paper napkin.

Any of the following recipes may be used, a variety to be provided from day to day:

Egg Sandwiches.

2 hard boiled yolks of eggs.

2 teaspoonfuls cream.

1/8 teaspoonful salt.

1 teaspoonful lemon juice.

Mix the ingredients, place between two slices of bread and butter, and cut into any desired shape.

Fig sandwiches may be made by placing between thinly sliced whole-wheat bread (buttered) chopped steamed figs. To steam the figs, wash thoroughly and place in steamer over boiling water twenty to thirty minutes. Delicious date sandwiches may be made by combining equal parts of chopped dates and peanut butter. Such sandwiches make a good substitute for the unwholesome sweets so often found in the child's lunch basket.

Bean Sandwiches.

Press through a colander well-cooked lima beans, from which the juice has been drained; season the "bean butter" with salt and a few drops of onion juice. This makes a delicious filling of which the children seldom tire. A jelly sandwich, made of good home-made jelly, will afford a pleasing variety.

Recipes for several other appetizing sandwiches were given in the September GOOD HEALTH.

A large variety of shelled nuts, such as English walnuts, pecans, or Brazil nuts, can be purchased at a reasonable price, and are very wholesome when thoroughly masticated. They should be found daily in the lunch basket. To these may be added dates, figs, or raisins.

A generous supply of fresh fruit, such as apples, pears, grapes, oranges, and bananas, should be included,—even fruit sauces may be carried in a glass with a closely fitting cover. With these may be served whole-wheat wafers, graham crackers, or cream crisps.

Cream Crisps.

1/2 cup graham flour.

1/2 cup white flour.

2 level teaspoonfuls sugar.

1/2 level teaspoonful salt.

1/3 cup thin cream.



Off to School

THE WALKING CLUB

Winter Homes of Insects

BY JULIA E. ROGERS.

WE sometimes ponder over the question, "Where do the insects go in the fall?" The multitudes of various kinds that hum and swarm in summer somehow disappear. The Monarch butterfly is the only one I recall that migrates like the birds. The rest stay. Many die, their lease of life expiring with the waning year. But of each kind enough live over winter to insure swarming hosts for the summer to come.

It was my pleasure to devote a whole season to the study of winter homes of insects, and a time of surprises it was to me. The most astonishing discoveries I

That box-elder tree has shed every leaf but two. Let me suggest that this is suspicious. If there is a sassafras tree in your neighborhood, examine it. A dark, handsome brown moth we have met spends its winters in tree tops, asleep in a cocoon of silk, wrapped in a dead leaf of the same color, perfectly secure by being roped to the twig that cannot fall off,—what wonder he sleeps well! What wonder that birds are cheated of many a dainty because it never occurred to them that the clever moth cradle is anything but a dead leaf!



"She Digs a Tunnel Down the Stem"

made came not by the uncovering of secret hiding-places, but by the actual seeing of things that were constantly in plain sight. I proved to my own satisfaction that the ability to see things is one of the finest acquisitions of the student of nature.

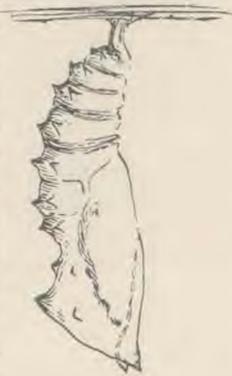
It is not necessarily a sign of stupidity that we miss the insect forms that pass the winter in exposed situations. For the hungry winter birds a fat grub or a plump chrysalis is a beaksome morsel. Nature must give the weaker creature a fair chance with the strong, so she bestows upon the insect a clever disguise.

Butterflies spin no cocoons. They shed the caterpillar skin, and pass the winter as *chrysalids*. These cartridge-shaped objects are hung up by almost invisible cords, often in the most exposed situations. The color of the chrysalid so closely imitates the surface to which it is affixed that the protection thus afforded is ample. Birds go by unaware of its existence. You may go over the bark of that maple tree a dozen times before you find it. The one who sees it first confesses that only when it stood out in range with the sky did he locate it. Notice how perfectly the texture of the surface imi-

tates the bark. Chip off a flake of bark and take the insect home.

Examine the siding of the house next to the garden. Look close up in the angles of the overlapping boards. The cabbage butterflies have hidden there in numbers. The young which fed on your tender cabbages crawled away to this convenient station to transform. They spend the cold weather asleep as chrysalids. The ones you take indoors will emerge soon as butterflies.

Under the trees, in the leaf carpet of the woods, insects lie asleep by hundreds. We remember that the great cocoon of Luna sleeps there, rolled in a leaf wrapper which is glued securely around the precious bundle. No bird nor mousing rodent is likely to guess the secret. Take a lapful of leaves, and run through them. Between the two walls of some of them are the winding tunnels of leaf miners. A swollen end of this small tube may contain the chrysalis of one of the least of the moths, called the "white-blotch oak-leaf miner." Look for it only under oak trees. You may find the larva asleep. Cut away most of the leaf, and paste the part that you keep on a card. Open the cell with fine-pointed scissors. Note the changes from day to day, and you will see the larva change to a pupa as it casts its skin. Later the moth will emerge from the thin cocoon. It is a beauty, with fringed white wings, shining and new.



Asleep

On the sides and in the sloping roofs of the outbuildings are found in plenty the winter homes of wasps we saw last

summer puttering around the watering trough, or about the pump outside the kitchen door. Pellets of mud form the mummy cases in which the young of this solicitous mother wasp pass the winter.

Pick open with care one of the cells. There, lying in its narrow bed, swathed in a thin, brown, papery case, is a wasp of full size and familiar form, slim, thread-waisted, long-legged. It is colorless, though; its legs look like glass. In the cell with the sleeping insect are the remains of spiders packed in by the provident mother before she laid the egg. The spiders were not dead, but stung into unconsciousness, and providing a supply of fresh food for the waspling from the moment it was hatched.

Roadside sumachs have pithy stems, as every boy knows. The little carpenter bee knows it, too, and utilizes her knowledge in the late summer. She finds a hole that will admit her body, and digs a tunnel down the stem. This may be four or five inches long. She then carries pollen to the bottom of the tunnel, and lays an egg upon it. This is sealed in with a partition made of the pith and her own saliva. A half dozen cells are thus provisioned and sealed before the autumn frosts destroy the flowers with their pollen, and the little bee's life-work is accomplished.

Some winter month, as you pass through a sumach thicket, carefully split a few broken twigs. If it is November yet, the little fat grubs are likely to be eating the pollen ball. If it is in February, the partitions are broken between the cells, the pollen is all gone, and a row of grown-up, shining dark blue bees are fast asleep, lying single file in the tunnel.

Take home a few sections from these sumach stems. Split them so as to uncover but not to disturb the inmates. Put

the nest in a glass bottle stopped with cotton, replace the lid every time you take a look, and thus all will be comfortable, and you will make the acquaintance of one of the prettiest and most interesting of bees. You need not fear its stinging. It is like a mosquito bite.

Strange balls grow on oak leaves, called, when green, "oak apples." Inside there sleeps over winter the pupa of the little gall fly that emerges through a hole in the wall to lay its eggs on opening oak leaves. Within the soft tissues of the pierced leaves the young grub feeds, while the morbid condition its presence creates is the cause of the globular gall on the stunted leaf. Look for oak galls on and under the trees. Look for the pine-cone gall on the ends of willow twigs, especially on young trees growing close to ponds or brooks. Find the dried-apple galls on willow leaves.

Investigate the mossy rose galls on your sweet briar twigs,—a whole family of gall flies are wintering in each one. Scan the dead golden-rods in the back pasture or by the roadside. There are gentle swellings in their stems. Higher up are globular bunches in which sleeps the pupa of the fly whose adult form will hover, with delicate, banded wings, about the ascending stems of young golden-rods early next summer. Out of the *elliptical* golden-rod gall emerges a tiny moth. We shall find its pupa in a silken cocoon in winter. Both kinds will show themselves indoors if we put them into

stopped bottles, with breathing air enough.

We always find the enemies of fruit and shade trees near the scenes of their ravages. Dilapidated nests of the tent caterpillar remain in orchard and roadside apple trees. The wild cherry is their breeding place *par excellence*. Look on young twigs for a thickening band an inch long. These are the eggs, carefully sealed with a shiny brown wax. Break off a bunch and you will see the eggs next to the twig.

Borers are asleep in their burrows in the wood at the base of your apple and peach trees. Crumbs like sawdust, or an oozing jelly indicate the doors to these winter and summer homes. Tussock moths have left their egg masses in chinks of the bark of their favorite trees. One of these is the deadly Gypsy moth, whose coming has destroyed so many shade trees in the Eastern States, and whose extermination has been so unsuccessfully attempted.

The prize of my winter of spying among insect homes, however, is as graceful a piece of pottery as was ever turned. I found it in a tamarack tree, and carefully cut the twig to which it was cemented. The mouth of the jug was plugged. Indoors I showed it to my friends, and we all speculated on its occupant. I gave it to an artist friend to draw, who gave an exclamation of joy as he began his work. The inmate had awakened and gone forth to the world.



“As Graceful a Piece of Pottery”

THE CHILDREN'S COOKING CLASS

CONDUCTED BY LENNA FRANCES COOPER

Children's Christmas Dinner

MENU AND RECIPES

Tomato Bouillon
Grape Fruit
Bread Sticks
Protose Roast—Dressing
Mashed Potatoes
Scalloped Corn
Baked Cabbage à la Russe
Orange Pie
Salted Almonds
Noko



A Daintily
Set Table

Tomato Bouillon.

1 cup of diced celery.
1 cup of diced carrots.
3 onions, sliced.
1 cup of diced turnips.

1 teaspoonful of salt.
1 teaspoonful of sugar.
2 tablespoonfuls of melted butter.
2 quarts of water.

$\frac{1}{2}$ quart can of tomatoes.

Put the vegetables on to cook in the two quarts of water. Let cook slowly for about two hours. Drain and add to the liquor the salt, sugar, and butter. This should make one quart when finished cooking. Serve **HOT**.

Protose Roast.

Remove the protose whole from a pound can by opening can in both ends before attempting to remove. Split the protose lengthwise through the middle, and place flat side downward in a small roasting pan. Over this pour the sauce made by using one and a half cups of strained tomatoes, one and a half cups of water, two tablespoonfuls of butter, one bay leaf broken in pieces. Put into the oven, and baste protose every half hour with this sauce, cooking about two hours, or until the sauce is quite well evaporated. Remove and place upon platter and



Protose Roast with Dressing

serve with the following dressing:

2 cups of sliced vegetable oysters.

$\frac{1}{4}$ cup sterilized butter
2 tablespoons grated onion.

1 teaspoonful of salt.

1 teaspoonful of sage.

2 cups of stale bread crumbs.

Cook vegetable oysters in boiling salted water, using enough water to cover well. Let them cook down until about one-fourth cup of liquid remains, then add butter, grated onion, salt, and lastly, fold in lightly the bread crumbs. Turn into a pan and bake in a moderate oven.

Scalloped Corn.

$\frac{1}{4}$ cup of sterilized butter.

$\frac{1}{4}$ cup of flour.

$\frac{1}{2}$ teaspoonful of salt.

$1\frac{1}{2}$ cups of milk.

1 scant tablespoon of sugar.

1 can corn.

$\frac{3}{4}$ cup of cracker crumbs.

$\frac{1}{4}$ cup of cream.

Rub butter, flour, and salt together, heat milk to scalding, and pour slowly over the flour, stirring meanwhile; then place over fire and let come to boiling point; then stir in sugar and corn, from which the water has been drained. Pour



Cabbage a la Russe

all into a baking dish, and over the top spread evenly the cracker crumbs, moistened with the cream. Set in oven and bake fifteen to twenty minutes.

Baked Cabbage à la Russe.

- | | |
|----------------------------------|----------------------------|
| 1 large head of cabbage. | 1 teaspoonful of salt. |
| 2½ cups of toasted bread crumbs. | 4 cups of milk. |
| ¼ cup of sterilized butter. | (1/3 cream if obtainable.) |

Cut off stem; hollow out center of cabbage from stem end, in this way removing the pulp. Cut away the cabbage adhering to the core and chop cabbage very finely. Mix with this one and a half cups of the bread crumbs, made by rolling on a moulding board zwieback or thoroughly dried and toasted bread, also the butter and salt, and fill center with this. Place stuffed cabbage in crock which can be tightly sealed. Surround the cabbage with the remainder of the bread crumbs and the milk, and cover. Place in oven and bake slowly for two hours or more. When tender and the milk is quite largely evaporated, remove and serve.

Orange Pie.

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|-------------------------|---------------------------------------|
| 1½ cups of milk. | Juice and rind of two oranges. |
| 2 tablespoons of sugar. | 2 egg whites and 2 egg yolks. |
| 4 tablespoons of flour. | 2 tablespoonfuls of pulverized sugar. |

Heat milk to scalding, reserving one-half cup with which to moisten the flour. When thoroughly mixed, add to the scalding milk and cook until thickened, add sugar, and lastly the orange juice, grated rind and juice and egg yolks. Put into tins lined with crust made as follows:

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| 2 cups of flour. | 3 tablespoons of cream and 1 egg. |
| ¼ cup sugar. | 2 tablespoons of vegetable oil or butter. |

Mix sugar and flour together, add the oil a few drops at a time, and thoroughly blend the two. To this add the egg and cream beaten together. This mixture should be added a small amount at a time, stirring so as to form small masses. When all the liquid has been used up, there should be a number of small masses which may be pressed together with as little manipulation as possible and rolled out. Crust may be partially baked before filling is put in. Bake until set. Make a meringue by beating egg quite stiff and adding pulverized sugar, then replace in oven for a few minutes until meringue is set.



Orange Pie

Health News

THE rice crop of Japan for the year 1907 was 249,798,179 bushels, an increase of 8.8 per cent over the output of 1906, and 14.8 per cent over the yield of the average year.

The milk supply of New York City consists of 1,750,000 quarts daily, which is gathered from over 35,000 farms and shipped from about 700 creameries, located in six different States.

The Illinois legislature has had to enact a law with fines as high as \$1,000 and imprisonment in order to check the increasingly indiscriminate selling of cocaine by Chicago druggists. Sales to persons addicted to the drug are absolutely forbidden.

Billboards have suffered a defeat in Cincinnati, where 300 prominent billboard advertisers have agreed not to resort to this mode of display, and have signified their intention to co-operate with the municipal arts committee of the business men's club in its effort to beautify the city.

The Cunard Steamship Company, replying to a request that provision be made in the new "Lusitania" for supplying a non-meat fare to vegetarian travelers, wrote: "We will give instructions for vegetarian fare to be prepared. There is no difficulty in this matter on board our steamers."

France has discovered that large numbers of her officers stationed in her eastern colonies have fallen slaves to opium, and strenuous measures are to be resorted to for stamping out the habit. The Colonial Minister has ordered stopped the promotion of any official until reform takes place.

An unusually high death rate in Liverpool, England, was recently traced by the health committee to the large number of flies which made their appearance during the warm weather. The large increase in infantile mortality is ascribed to the contamination of milk and other foods by insects.

Berne, Switzerland, has established a permanent exhibition for school hygiene. In the city of Basel the Liberal School Union has adopted a resolution demanding obligatory instruction in swimming for the upper classes of the public schools, the erection of school sanitariums, and the completion of the Institute for School Physicians.

"That meat consumption per capita has declined in this country since 1840 is plainly indicated," says a report issued by the Department of Agriculture. "There is some ground for believing that at that time meat constituted

about one-half of the national dietary in terms of total nutritive units consumed, whereas now it constitutes about one-third."

Dr. Oerum, of the Finsen Institute at Copenhagen, has found that darkness reduces the total amount of blood by 3 to 3.3 per cent, while decreasing at the same time the amount of blood contained in the heart. Red light will exert a similar action, while blue light is apt to result in an excess of blood. Light baths are apt to increase the amount of blood in the course of four hours.

The new commissioner of labor for New York has given notice that the law in relation to the employment of children is to be vigorously enforced. The leniency shown to employers in the past is to be shown them no longer. Every offense against the law is to be made the basis of actual prosecution. The provision limiting the hours of labor for children to eight hours a day must be observed.

Commissioner Darlington of the New York Department of Health has just issued a circular of information on consumption "cures," in which attention is called to the fact that there is no specific treatment for consumption, and in which it is insisted that a sufficient amount of proper food, with plenty of fresh air and rest, constitute the essential basis of all successful methods of treatment.

Germany is stirred up over the germ-infected condition of the Kaiser's mustache, or at least the apparatus for producing it now appears in a new guise—that of the propagator of all the plagues. This apparatus is a contrivance of gauze and rubber, and the director of the Berlin bacteriological institute, after examining it, was appalled to find the horde of bacilli of tuberculosis, pneumonia, asthma, etc., that they yielded. Guinea pigs and white mice infected from them became ill and died.

Philadelphia's new system of purifying its water is quite a departure, providing for the practical burning of the bacteria. "Electric discharges are passed through air confined in tubes, changing the oxygen to ozone. The air is then driven into a column of water at its base. As it rises through the standpipe containing the water the ozone seizes upon bacteria and other organic matter, uniting to form carbonic acid gas, which bubbles to the top and escapes. The process is exactly similar to burning coal, except that the combustion is perfect and there is no ash. Foul water goes in at the top of the standpipe and a steady stream of pure water, clear as crystal, flows from the base of the pipe."

EDITORIAL

New Facts About Typhoid

LIEUTENANT-COLONEL A. M. DAVIES, a military surgeon in the British army, in an interesting article in the *British Medical Journal* for August 31, calls attention to the fact that typhoid fever is not, as was formerly supposed, exclusively communicated through water or food, but, as claimed by Osler, may be communicated by direct transmission through air from one person to another. He cites many cases in proof of his position, one of the most striking being the series of terrible outbreaks of typhoid fever during the Spanish-American war, which prostrated more than twenty thousand officers and men, and killed more than ten times as many as were injured by Spanish bullets. Investigation showed that nearly 63% of the cases were connectible either directly or indirectly with other cases; in other words, that personal contact accounted for more than half of all the cases of infection. For a number of years Prof. Koch has maintained that not only persons actually suffering from the disease, but also convalescent patients and persons who have been in contact with typhoid patients, may be sources of infection.

Another striking example of personal communication of typhoid is an outbreak of fever reported by Dr. Horton Smith in 1903. There were nine cases: first, a girl of fifteen, who died, and then a sister who had slept with her during the early part of her illness. Next the mother fell a victim to the malady, then a brother. Three weeks after the father's sickness, an aunt fell ill of the disease, then a boy living in the house, and an infant sister. There were no other cases of typhoid fever in the vicinity, so that the fault was not with the public water or common milk supply.

In view of these facts, it is evident that the greatest care should be taken to prevent any possibility of infection through personal contact with persons suffering from this disease. Nurses, attendants, and other members of the family should exercise the greatest care to

avoid infection. Dr. Davies suggests proper precautions as follows:

1. The patient should be isolated.
2. Special clothing, bedding, towels, and cloths should be set apart for the use of the patient.
3. Special dishes and food utensils, bed-pans, urinals, spit cups, thermometers, and enema apparatus should be assigned to the patient and used by no others.
4. The nurse who is caring for a typhoid fever patient should not at the same time care for patients suffering from other diseases, and should, so far as possible, avoid contact with the well, taking care to bathe and change her clothing before mingling with non-infected persons.
5. Not only the excreta and urine of the patient should be carefully disinfected, but also the sputa and water used in bathing.
6. All utensils used for food, excreta, etc., should be disinfected as soon as used.
7. Everything brought into the ward should be considered as having been infected, and must be thoroughly disinfected. This includes books, pictures, newspapers, mineral water bottles, water pails, etc.
8. After the patient's recovery, the room should be thoroughly disinfected by scrubbing and fumigation with formalin.

The writer's personal experience leads him to add to the above:

9. The patient should be disinfected at least twice daily by a soap shampoo of the skin, special care being given to the genitals and buttocks.
10. The nurse should cleanse her hands several times a day by washing with hot water and soap, and dipping them into a one to one-thousand bichlorid solution, or a 2% solution of lysol.
11. The nurse should not use the same drinking cup as the patient, and should avoid drinking or eating in the same room with the patient. She should also take the greatest care to avoid touching her hair or face with her hands after touching the patient until after the hands have been thoroughly disinfected by scrubbing with hot water and soap and dipping in some reliable germicidal solution.

It is also important to remember that persons may be a source of infection for some months after recovery from typhoid fever. Metchnikoff reports a case in which a woman remained a source of infection for more than ten years after recovery. Typhoid fever germs were found in gall-stones removed by the writer from a patient who had suffered from typhoid fever some twenty years before. These observations show that the typhoid bacillus is exceedingly resistant, and that a person who has once suffered from typhoid fever should remain an object of suspicion as regards the possibility of infection until it can be shown by bacteriological examination of the feces and the urine that the typhoid bacillus has disappeared.

FOOD VALUE OF THE POTATO

One of the Most Wholesome Products and a Most Digestible and Assimilable Form of Starch

THE potato, one of the most wholesome of foods, is the most digestible of all forms of starch, and one of the most assimilable. Experiments made on potato flour baked and made into gruels show that the potato digests in one-third the time required by wheat or corn flour, and in one-twentieth of the time demanded by oatmeal.

Recent studies by Gautier, the eminent French physiologist, have proved that people sometimes err by eating too much bread. An excess of phosphorus is contained in bread, and this forms in the body phosphoric acid, resulting in a reduction of the alkalinity of the blood.

Now, unless the alkalinity of the blood is high, the digestive powers of the body are inactive. Symptoms of reduced alkalinity are pimples on the face, boils on various parts of the skin, and other eruptions, together with scrofula. By using fresh vegetables, such as squash, potatoes, etc., particularly the potato, we get alkali, which increases the alkalinity of the blood and antidotes the phosphoric acid within the body.

One important thing that must be borne in mind is that the potato must be thoroughly chewed. At this season of the year there is not so much difficulty, because the potatoes are mealy when properly cooked. But in the spring the potatoes are no longer fit for baking,

or for use in the form of boiled potatoes. They must be mashed, else they will be soggy.

What makes the potato soggy and heavy?—In February it begins to get ready for sprouting time. A change is going on within. The potato is off down in the dark bin, away from the light. But it knows that spring is coming, and begins to prepare itself for sprouting. The first change that takes place is the conversion of some of the starch into dextrin and some into sugar.

Finally, along in April and May, as potato planting time approaches, the potato contains enough sugar and dextrin to make it sweet. This sugar absorbs the water in cooking, with the result that the potato is made heavy and soggy. No amount of boiling will make it mealy. Baking must be resorted to. After the potato is baked, it must be broken open to let out the steam that has formed within. Then and then only will the potato be dried out.

If a heavy, watery potato is brought to the table, great care should be taken to mash it thoroughly with the knife and fork until every lump is crushed. Then, too, be careful to chew every mouthful, mixing well with it the saliva, and rubbing it against the roof of the mouth with the tongue, so as to inspect it and remove any little granules, which if carried into the stomach would not be digested, but would lie there until, finally passing into the colon, they would stop there, fermenting, souring, decaying, causing flatulence and distress.

"A CARNIVOROUS PRODUCT"

Lord Byron's Famous "Mot" is Wholly Disproved by More Recent Dietetic Investigation

SAID Lord Byron, "Man is a carnivorous product; he must have prey." Nothing could be farther from the truth. Man is not a carnivorous product. He is not naturally predatory. His carnivorous tastes are cultivated and acquired, inconducive to his happiness or welfare when he lives under natural conditions. Indeed, under no condition, other than the actual absence of other food, is the use of flesh food an actual necessity.

When we were laboring under the "high proteid" delusion, it seemed necessary to supplement ordinary vegetables with animal foods in order to obtain the proportion of protein or tissue-building material believed to be re-

quired. The remarkable work of Chittenden and Mendel has conclusively demonstrated that the most commonly used vegetable foods contain a sufficient quantity of proteid to meet the requirements of complete human nutrition. Even the potato contains protein a trifle in excess, according to the Chittenden standard, while all the cereals—especially those most commonly used, wheat, oats, and corn—furnish an actual excess of this necessary food principle. Thus it appears that the fear of protein starvation was really without scientific foundation, and the faith in butcher's meat was like so many of our other common beliefs—merely a superstition born of ignorance of true physiology.

The sagacious observations of Fletcher, which led to the scientific experiments of Chittenden, and the later conclusive demonstrations of Fisher, have forever emancipated us from the slavish fear of blood and tissue depreciation by use of a non-flesh dietary. The latest word of science assures us that Lord Byron was wrong in his estimate of man's character. The lord of creation is a creator, a protector, not a seeker of prey, a destroyer. His intelligence leads him to the original, natural, and pure sources of animal nutrition—the products of the earth—rather than to the second-hand, deteriorated products of other creatures which, like himself, are by nature eaters, and not eatables.

EFFECTS OF TEA ON HEART

Are Palpitation of Heart, Dyspepsia, Neurasthenia, Insomnia, as also of Coffee

HUCHARD, one of the most prominent physicians of Paris, a specialist in diseases of the heart, called attention in a recent paper to the fact that distressing palpitation of the heart is often due to toxic causes which are overlooked. Illustrative of this, he gives the case of a fashionable young woman who had constant and painful palpitation of the heart, and was laboring under the impression that she had an organic disease of the heart. On examination he found no evidence of any disease of the valves or heart structures, and on inquiry found that the young lady was in the habit of spending her afternoons in calling, frequently making several stops, and at each taking a cup of tea, so that in the course of the afternoon

she drank many cups. Following his urgent advice, the young lady renounced the use of tea, and in a short time was entirely relieved of her cardiac trouble.

Huchard calls attention to the fact that it has long been known that the use of tea produces functional disorders of the heart of a very pronounced character. Dyspepsia, insomnia, and neurasthenia have also been shown by Morton and Bullard, of Boston, to result from the use of tea.

Huchard asserts that coffee produces frequently the same symptoms, with tremor of the limbs, pain in the region of the heart, nausea, and profuse sweating. Here is something for tea and coffee drinkers to think about.

BRITISH VEGETARIANS

Notable English Society of Non-Flesh Eaters Celebrate Sixtieth Anniversary of Its Formation

THE British Vegetarian Society recently celebrated its sixtieth anniversary. Conference sessions and a public memorial service held in Manchester celebrated the event. Prof. Mayor, of Cambridge, in his chairman's address attributed the health and vigor of his eighty-third year to be due to his adherence to vegetarianism for over half a century. Congratulatory addresses were sent by the Conference to three of its veteran members who were unable to attend: Mr. Samuel Saunders, of Devizes, aged 94 years; Mr. John Albright, of Lancaster, 92 years; and Mr. Thomas Wiles, of Buxton, 90 years. Mr. Wiles spent five weeks mountain climbing in the Alps earlier in the year, in one day making an ascent that occupied five and the descent four hours. In relating the incident the aged Professor declared jocularly, "Those doctors who say it is impossible to exist on a meager fare have a good many nuts to crack in our old members."

A valuable paper read by a Dublin vegetarian presented the relation of the housewife to the movement. "Women take up a position antagonistic to vegetarianism," the address declared, "mainly because they are afraid that the new diet will give them trouble. On the contrary, its advantage is that it will save them several hours a day in cooking. The cooking of vegetarian dishes is not difficult, and the initial trouble is saved over and over again through the elimination by the diet of so many

of those illnesses and troubles which cost time, worry, and expense in the ordinary woman's life, while at the same time the new mode of life brings many joys with it and an expansion of thought on all subjects."

Among others who addressed the Conference were Mr. Robert Blatchford, editor of the *Clarion*, Mr. Eustace Miles, Mr. George Allen, and other well-known vegetarian athletes and writers. The society is the pioneer association formed for the promotion of vegetarian principles in Great Britain. The good work which it has done has not been confined to the homeland, however, but has spread to the Continent, where it is represented by several branch organizations.

CANCER IS CONTAGIOUS

Sarcoma and Carcinoma Found to be Contagious. The Former in Rats, the Latter in Mice

DOCTORS GAYLORD AND CLOWES, of the New York State Cancer Laboratory, have shown that a form of cancer known as *sarcoma* is contagious in rats, and that true cancer or *carcinoma* is contagious in mice. The observations which established these important facts were as follows:

In certain cages in the Buffalo Laboratory for the Study of Cancer were kept a number of rats affected with sarcoma which had been inoculated from rats suffering from this disease. In October, 1902, the rats were removed from these cages, and two of the cages were left unused, without disinfection, for some nine months, when healthy rats were accidentally placed in the cages. Two years later one of the rats in the cage was found to have a sarcoma of the same type as that with which the rats previously occupying the cage had been affected.

Several white mice affected with cancer of the breast had been obtained from a certain dealer in animals. On investigation it was found that these animals had been kept in a certain old wooden cage. Information was obtained from the dealer that he had taken thirty or forty mice having similar tumors from this cage during a period of a few years. In 1904 he removed all these mice from the cage and put in a new lot obtained from a distance. Notwithstanding the change, thirty

or forty mice were within two or three years removed from the same cage suffering with carcinoma of the breast. During the same period no tumors had developed in any of the mice that were kept in the twelve or fifteen other cages of the establishment. The infected cage was purchased and will be used for further experiments.

The importance of this question of cancer infection is very clearly shown by the report of the Registrar General of England for 1906-1907. According to this report, among persons who have reached the age of thirty-five years, two men in every twenty-three die of cancer, and one woman in every eight. Taking the population as a whole, one person out of every ten over thirty-five years of age in Great Britain is certain to die of cancer. This disease has thus come to be a terrible scourge, and it is certainly high time that a thorough-going search was being made for the causes of this terrible malady.

WHAT TOO MUCH FUEL DOES

A Man Who Eats an Excess of Rich Foods Like a Locomotive Overloaded with Water

THE *Detroit News*, in the course of an editorial on "Abstinence from Meat Beneficial to Many," makes the following sensible observations:

"A steam boiler that carries too much water presently gets water in the engine cylinders, and is fortunate if a cylinder head is not knocked out. The man who overloads his blood with rich food products for which he has no present use will accumulate surplus flesh for a time if his assimilation is good, but sooner or later he reaches his storage limit, and then his vital organs are put to a constant strain in order to eliminate the unused elements as well as the waste tissues. Such a man wonders why he has rheumatism, why he gets muddled in his head, why his heart is often oppressed. Often he develops dangerous organic lesions such as are characteristic of Bright's disease, diabetes, and liver affections. Scientists have been grubbing patiently, almost feverishly, for years in the hope of tracing the etiology or source of the growing scourge of cancer, and although no convincing data has yet been brought forward, it is a general suspicion that the rapid prevalence is due to overindulgence in meats.

"Under the diminished consumption of recent months many people have found that they have been better off mentally and physically while subsisting on a different regimen. Instead of a hardship it has proved a benefit."

SIMPLE LIFE AND LONGEVITY

Peasants of Isonbolgi, Hungary, Celebrate Centenary of Their Wedding —Ages 120 and 116 years

A CABLE dispatch to the *Chicago Tribune* announces the celebration in the village of Isonbolgi, Hungary, the anniversary of a wedding which occurred in that village just 100 years ago. The husband and the wife, aged 120 and 116 years, bear the name of Szathmari. Both are in fair health, and neither is bed-ridden.

The peasants of Hungary have long been celebrated for their remarkable longevity, which is attributed by Metchnikoff and other eminent authorities to their simple outdoor life; a simple diet, from which meats of all sorts are practically excluded; and particularly to the use of yogurt, a special ferment which destroys the putrefactive germs which grow in the colon, and which Metchnikoff has shown to be the most active agent in producing premature old age. This remarkable couple have a fair prospect of living several years yet. Their claim to longevity has been officially recognized by the Hungarian government, which grants them a moderate pension.

Peter Czarten, the most noted example of longevity who has lived in modern times, and who is said to have attained the patriarchal age of 184 years, though born a Greek, was practically a Hungarian, having lived in Hungary by far the greater part of his life.

Recent statistics show that there are more centenarians in Hungary in proportion to the population than in any other country in the world, while in Bulgaria it is stated that centenarians constitute 1 per cent of the total population.

AVOID ALL OILS IN BURNS

Boric Acid and Picric Acid Used by British Navy and Military Surgeons for Dressing Wounds

PROBABLY the remedy most commonly used in the treatment of extensive burns is carron oil, a mixture of lime water and linseed oil, which was first employed at the Carron Works,

in England. This application has but one virtue,—it relieves pain by excluding the contact of the air with the injured parts. It has many disadvantages; it has a very disagreeable odor; it retains the secretions, preventing their absorption by the bandages; it is neither antiseptic nor sterile; it furnishes a good medium for the growth of baneful germs; it is altogether dirty and disagreeable. Its use has been practically abandoned in the British navy, and military surgeons depend entirely upon solutions of boric acid and picric acid. Picric acid is used in 5% solution. Dressings saturated with the solution are wrapped about the injured parts and are kept moistened with the solution. Picric acid is antiseptic, prevents the growth of germs, has an anodyne effect, relieving the pain, and does not interfere with the healing process. Boric acid has some of these advantages, but it does not relieve pain. When picric acid is used, the first dressings should be removed at the end of forty-eight hours.

THE JAPANESE DIET OF RICE

Occidentals Attribute Physical Endurance and Mental Astuteness to their Natural and Simple Food

IN a recent reference to the Japanese, the *British Medical Journal*, perhaps the highest medical authority in the world, remarks that "the extraordinary prowess of the Japanese, the marvelous feats of courage and endurance displayed by that nation in the late war with Russia, their humanity and kindness, have been justly attributed to perfect health of body and mind." The Japanese themselves believe that the extraordinary health of body and mind which they as a nation enjoy is due in large part to the simplicity and naturalness of their dietary, which excludes meat almost wholly and consists chiefly of rice. Bunge has shown that rice is one of the choicest of all foods, owing to the small amount of alkaline salt which it contains. The alkaline salts are eliminated chiefly by the kidneys, so that the smallness of the amount of alkaline salts present in this cereal is conducive to the health of these important vital organs by leaving them free to eliminate from the body the poisons which are the natural result of the wear and tear of tissue activity. Rice is readily digestible and contains, with the exception of fat, all the nutritive elements required by the body.

Prof. Chittenden's experiments have shown that the proportion of proteid contained in rice is ample to supply the body needs. This important discovery has greatly strengthened the cause of diet reform, because it destroys all ground for apprehension that a rice or other cereal diet is incapable of supporting health and vigor of body.

Practically the only argument which has been offered against Prof. Chittenden's position is the conjecture of Prof. Haliburton that ordinary proteid may be like the mud which incloses the rough diamond of the mine, and that it may be necessary to eat a considerable amount of ordinary proteid, more than the body appears to need, in order to secure the scarce and precious protein elements which the body needs.

To any one who knows anything at all of the science of food and nutrition, it must be at once apparent that such a conjecture is pure hypothesis, with no sound scientific basis whatever, and it is surprising that so eminent an authority as Prof. Haliburton should be willing to go on record with an argument having so little in its favor.

OPPOSING ARMIES OF GERMS

Mischievous Bacteria in Intestines, which Produce Majority of Chronic Ills, now Destroyed by Introduction of Friendly Bacteria

MODERN discovery has traced a large share of all chronic ailments and many acute maladies to infection of the intestine by microscopic organisms known as bacilli, or germs. As in our gardens there are two classes of plants, beautiful flowers or useful plants in one class, and noisome weeds in the other, so in the intestine there are friendly or useful germs which correspond to invading noxious weeds. The latter give rise to fermentation and putrefactions in the intestine and accompanying poisonous products. This is the cause of the condition known as autointoxication, of which "biliousness" is a common example.

The friendly germs combat the poison-forming parasitic germs, preventing their growth or actually destroying them.

One of the most important aims and chief advantages of the "simple life" is the suppression of these poison-forming germs by proper habits in diet and otherwise, thus pre-

venting or curing the autointoxication which is the chief cause of old age and of most human maladies.

VINEGAR UNFIT FOR FOOD

Never Intended for Eating, Productive of Gin Liver, Unnecessary, Poisonous, Its Use should be Abandoned

VINEGAR was never intended to be eaten. It is a product of putrefaction and decay. It is made by setting a great number of fungi to work upon sweet water until acetic acid is produced. This acid, the juice of the fungi, is used upon food as a sauce. The most curious fact about it is that people ever acquired a taste for it. It is not wholesome, it is not food, it is poisonous.

Voix, the great French investigator, demonstrated some years ago by experiments upon guinea pigs, dogs, and rabbits, that vinegar has twice the power that alcohol possesses of producing gin-liver. Gin-liver is a liver covered with great knobs; and it is this same diseased organ that vinegar produces with such ease.

Only a few years ago a young lady died of vinegar poisoning. Examination showed that a hole had been eaten into the stomach by the large quantities of vinegar that she had eaten,—three or four ounces a day had been her accustomed ration, for the purpose of becoming thin.

The system does not need vinegar. The lemon gives us a wholesome and a much more palatable acid, and if one prefers the vinegar to the citric acid of the lemon, it is because his taste is vitiated.

Moreover, vinegar contains worms, little eels wriggling about. In fact, the eel is always found in good vinegar. If your vinegar is adulterated, made up of hydrochloric acid and sulphuric acid, there will be no eels in it. They could not live in such an adulteration. If, on the other hand, it is genuine cider vinegar, it is certain to have a little world of little eels in it.

In the September number of GOOD HEALTH, in answer to question No. 10,585, it is stated that "twenty-five ounces of beans, peas, lentils" will furnish the proper amount of proteid. The statement should read, "About 25 ounces of *cooked* beans, peas, or lentils, will furnish this amount of proteid."—EDITOR.



CORRESPONDENCE SCHOOL OF HEALTH

Correspondents should bear in mind that no questions can be answered in these columns sooner than one month. Questions received in May, for instance, cannot be answered sooner than June, and if received late in the month, may have to wait over two issues.

10,622. Malt Extract.—E. V., Maryland:
1. "Is malt extract a healthful food product?"

Ans.—Malt extract is usually a wholesome food.

2. "Is there danger of using it too freely? I refer not to that sold in bottles, but that sold in cans, similar in appearance to molasses."

Ans.—When used in large quantities it sometimes produces disagreeable symptoms, particularly "sour stomach," or excess of acid in the stomach. In such cases the use of the malt extract should be discontinued for a time, or it should be taken in smaller quantity in combination with sterilized butter or cream.

10,623. Asthma.—G. A., Ontario:

1. "Following every siege of asthma, which usually lasts a month or so, I am left with a severe attack of nervous indigestion, my stomach rebelling and bloating, causing new attacks until I am forced to leave off food. Take injections to keep colon empty, but don't know what to eat. After a fast should I start on solid food? Milk in any form I cannot take; malted milk and similar articles sour in my mouth. What should I eat?"

Ans.—The diet suggested in the answer to 10,609, third part, November number, will probably help you. In addition use Colax and Yogurt capsules, advertisements of which appear among the advertising pages of this number.

2. "What would you advise in the way of a liquid diet?"

Ans.—Among the liquid foods available in your case are gruels of taro, malted nuts,

toasted corn flakes, toasted wheat flakes, browned rice, and purees, broths, and soups of beans, peas, lentils, vegetables, potato, tomato, protose, and fruit. Fruit juices and stewed fruits are also permitted in your case.

3. "Is there nutrition in caramel cereal for such an invalid?"

Ans.—An ounce of Caramel Cereal, made according to directions, contains only five or six calories of nutriment. Whatever nutriment there is in a cup of coffee is furnished principally by the cream or sugar that is added.

4. "How can I relieve congestion in abdominal viscera and solar plexus, getting the blood away from those organs?"

Ans.—Congestion of the abdominal viscera may be relieved by cold rubbing of the skin, alternate hot and cold applications to the liver, followed by a heating compress; lying with the hips elevated; deep-breathing exercises practiced with the chest held high so that the abdominal muscles are forced to assist in breathing; breathing exercises with the weighted compress on the abdomen; exercise in the open air.

5. "What is your most simple work on dietetics?"

Ans.—The "Miracle of Life," obtainable from the Good Health Publishing Company, is at present our most simple work on dietetics.

10,624. Eruptions of the Skin.—J. W. G., California:

1. "If eruptions of the skin are due to lowered vitality, and if fruit is conducive to health, why is it that with some the eating of fruit causes breaking out on the skin?"

Ans.—The eruptions of the skin produced by the use of fruits are purely nervous in character, and are not due to lowered vitality, but to individual idiosyncrasy.

2. "Kindly suggest a pocket or small dictionary for a layman who is not familiar with medical terms."

Ans.—Dorland's Pocket Medical Dictionary is a good small dictionary of medical terms. Its definitions are not intended for laymen. We know of no small dictionary of medical terms for laymen. In the Home Book of Modern Medicine, published by the Modern Medicine Publishing Company, Battle Creek, Mich., and sold by the Good Health Publishing Company, there is a glossary giving the definition of the most common medical terms in simple language.

10,625. Catarrh.—C. M., Newfoundland: "Have had nasal and throat catarrh and catarrh of ears for some years. At times throat is raw and sore. Sense of smell is gone. Am somewhat constipated. Can this be bettered or cured? If so, how?"

Ans.—The measures to be employed in the treatment of chronic catarrh of the head are chiefly the following: Careful regulation of the diet, taking pains to avoid all articles of food which contain, or, by their putrefaction, are likely to produce poisons, the absorption of which tends to diminish the activity of the liver. In nearly all cases of chronic catarrh there is chronic inactivity of the liver. Butter, except sterilized butter in moderate quantities, cane-sugar, animal fats of all kinds, flesh foods, an excess of food of any kind, particularly proteid food, should be carefully avoided. The patient should drink freely of pure water, and live in the open air and sunshine as much as possible. An abundance of outdoor exercise should be taken every day. The body should be clothed warmly, and care should be taken to prevent exposure to drafts or other means which will produce a liability to "catch cold." The activity of the skin should be excited by various forms of general baths, especially vapor baths, shampoos, and cold friction baths. Fomentations over the liver, and alternate hot and cold applications to the spine are also beneficial in these cases. A specialist in diseases of the nose and throat should be consulted, as in some cases there is

a pathological condition of these parts which can be remedied by a simple operation or by treatment. A laxative diet, such as described in the answer to 10,609, third part, should be adopted.

10,626. Fulness in Abdomen.—M. E. H., Iowa:

"I have a fulness in left and right side of abdomen,—in the left side from the top down, in the right not quite so low down. Feel pains only when troubled with gas, or sitting or lying down. Examination by doctor failed to find a growth. Doctor advised warm water enema, when bits of substance passed, which I took to be mucus. Have ringing in ears, and itching of the nose and anus. Have a good appetite. Am sixty years old and unmarried."

Ans.—You are probably suffering from infection of the colon. An antitoxic diet is essential. The strictness of the diet must depend upon the severity of the intestinal infection. The different degrees of rigor in the treatment may vary from absolute fasting for one day to one week, to the full antitoxic diet.

When absolute fasting is employed, the patient should drink from four to eight pints of water daily, and take two or three cakes of Colax three times a day to encourage bowel action, as the bacteria thrive upon the retained secretions. Such a diet is indicated in cases of acute autointoxication.

In cases of chronic autointoxication it is best to begin the treatment with a diet consisting of Colax, two cakes three times a day, meltose two to four ounces three times a day, and fruit juice, two to three pints daily. After a few days of this diet, liquid cereal foods, especially rice gruel, barley water, and gruels prepared from malted cereals may be employed, followed soon by a dietary consisting of the following articles: Cereal and taro gruels; granose; toasted wheat flakes, toasted corn flakes, browned rice, granola, breakfast toast, dry toast, gluten preparations; malted foods; purees of beans, peas, lentils, vegetables, potato, fruit, tomato; potato and fruit salads; fresh fruits and fruit juices, and a small amount of sterilized butter.

Later milk preparations, such as Yogurt, buttermilk, cottage cheese, and the yolks of eggs may be added, followed later still, when improvement has been marked, by the addition of the more easily digestible vegetables. The following articles must always be avoided: Meats of all sorts, fish, oysters, shellfish, lobsters and crabs, eggs except the yolks, cheese except when fresh, tea, coffee, cocoa, choco-

late, condiments excepting salt in very small quantity; never mustard, pepper, or vinegar.

The use of Colax is an advantage in most cases,—one or two cakes three times a day, an hour or two before or after eating, and at bedtime. Add Colaxin if necessary to secure free movement, but its use should be temporary and the dose gradually reduced. The Colax should be taken regularly. Its irregular use produces most unsatisfactory results.

Plain water enemas, hot or cold, soap enemas, especially coloclusters, are useful in some cases. In probably half the cases there is spasm of the intestine, contraindicating cold enemas. The hot enema relieves the spasm.

Manual Swedish movements, or medical gymnastics, mechanical vibration of the abdomen and abdominal massage are useful. An abdominal supporter is very serviceable in some cases by giving support to the transverse colon and compressing the cecum. The moist abdominal girdle is of almost universal application in these cases. In cases which receive the water enema daily, an antiseptic suppository should be used after each bowel movement to prevent irritation of the rectum.

10,627. Pruritis Ani.—S. S., Illinois:

"Have suffered from pruritis of the rectum for five years. Am a vegetarian, take cold sitz baths morning and evening, bowels are regular, and am very nervous. What would you advise me to do?"

Ans.—Bathe the parts with very hot water several times a day, and apply an antiseptic lotion. A saturate solution of boracic acid or a resorcin lotion, consisting of 20 grains of resorcin to the ounce of alcohol, ought to be helpful. The application of ichthyol suppositories is also beneficial.

10,628. Soreness in Stomach.—A. B. C., Texas:

"A mother of several children, who has not been strong since birth of her firstborn, has for some time had soreness in the left side of stomach, near the groin, about two inches from it in fact, a little more than half-way down. Sometimes it affects left limb from hip down. When a young lady, weighed 137 pounds, now 106. The past year has been on the decline, though manages to attend to household duties. Side is not sore to press on, but rather tender, and usually confined to a small spot. Dreams a great deal. Bowels move every day, though not sufficiently. Please give remedy."

Ans.—This soreness described may be due to colitis, or it may be due to ovarian disease. The patient should visit a competent

physician and have a careful examination. It is impossible to know what the difficulty is, and prescribe a remedy, without the opportunity of giving the patient a personal examination.

10,629. Viavi Treatment.—H. C. E., Illinois:

"Please state whether the medicine used in connection with the Viavi treatment contains opium or other deleterious ingredients."

Ans.—We have never made an analysis of this nostrum, but we cannot recommend it, as it is evidently incompetent to secure the beneficial effects which are claimed for it. We have many patients under our care who have been unsuccessfully treated by this and similar nostrums.

10,630. Throbbing in Stomach.—J. G. L., Guam:

1. "When lying down or sitting quietly reading I feel distinctly a pulsation, or throbbing, in my body. It seems most noticeable in the stomach, and when I lie on the back the throbbing can be seen. At times it feels in my ears like a blowing of wind. Have also slight stiffness in joints of the two forefingers. Trouble of about four years' standing. Abstain from medicines, coffee, tea, liquor, and tobacco, and eat meat sparingly. What is cause and remedy?"

Ans.—The pulsation which you describe is common in people who are in a state of lowered vital resistance. It is probable that you have an excessively high blood-pressure, and that you are living on a diet too rich in proteids, which encourages putrefactive processes in the alimentary tract and the formation and absorption of poisons which irritate the sympathetic nervous system, especially the sympathetic ganglia located in the abdominal region. This irritation of the sympathies may give rise to the throbbing of the aorta which you describe. The chief cause in your case is probably an excess of proteid in the diet, the remedy for which consists in balancing the bill of fare so that the amount of proteid used will not exceed 10 per cent of the total nutritive value of the day's ration. The alimentary canal should be cleared of all toxin-forming substances. This is accomplished by measures described in the answer to 10,629.

2. "How is kumyss prepared?"

Ans.—Kumyss is prepared by adding yeast and cane-sugar to milk and allowing it to ferment. It is not a very wholesome beverage, as it contains considerable quantities of alcohol. Yoghourt is much preferable. If this

cannot be obtained, the active principle of the yoghurt may be used. This active principle produces the same effects as the fermented milk preparations, and is in some respects preferable. It may be obtained under the name of Yogurt, from the Yogurt Company, Battle Creek, Michigan. See advertising pages of this number.

10,631. Coated Tongue.—L. H., Missouri:

"Have had coated tongue for several years. Diet is simple, consisting of rice, baked potatoes, corn flakes, and milk. I keep bowels regular, using enema when necessary. Would you advise fasting? If so, for what length of time? and what foods should I break the fast on? Am sixteen years of age."

Ans.—You should stop the use of milk, substituting malted nuts and fruit juices. Buttermilk is preferable to ordinary milk. A laxative dietary, such as is described in the answer to previous questions, is very important. In most cases the bowels may be perfectly regulated by means of the diet without the necessity of using the enema. We would not advise fasting, except in cases in which food is forbidden because of ulcer or inflammatory con-

ditions of the stomach and intestines. The chief object of fasting may be secured by wholly excluding protein and fats. Carbohydrates are antitoxic and render valuable service in destroying the poison-forming bacteria. It is important that the intestinal secretions and excretions should be regularly discharged from the body during fasting as well as at other times. Daily movements may be secured by the taking of substances which supply bulk without protein. The following carbohydrates and nitrogen-free substances are found serviceable: Meltose, honey, fruit juices, juicy fruits, fruit gelee, melons, colax. But even this modified dietary is probably not necessary except for the first two or three days. After the bowels have been cleared out thoroughly, the antitoxic dietary described in the answer to 10,609, third part, may be employed.

10,632. Housebuilding—Itching about Arm—Tapeworm—Reduction of Weight—Rheumatism.—J. R. T., Virginia:

1. "Please recommend best book on housebuilding, especially with reference to ventilation and heating. Have moderate means."

Ans.—In the Home Book of Modern Medicine, published by the Modern Medicine

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¶ Listerine is peculiarly free from irritating properties, even when applied to the most delicate of the tissues, whilst its volatile constituents give it more healing and penetrating power than is possessed by a purely mineral antiseptic solution; hence it is quite generally accepted as the standard antiseptic preparation for general use in domestic medicine, and for those purposes where a poisonous or corrosive disinfectant can not be used with safety. ¶ It is the best antiseptic for daily employment in the care and preservation of the teeth.

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Publishing Co., Battle Creek, Mich., and sold by the Good Health Publishing Co., you will find complete description of the ventilation and heating of houses.

2. "For some years an adult of twenty has complained of itching and uneasiness about arms; sometimes very small, short worms have made egress. Her health is not of the best; she takes cold easily, and is much given to sneezing and frequent light coughs."

Ans.—The patient is probably in error about the worms. The secretion described is doubtless the worm-like comedones which may sometimes be squeezed out of the skin, but are best removed by a little tube having an opening about the thirty-second of an inch in diameter, or a watch-key. These comedones are due to an excessive production of sebaceous matter in the fatty glands of the skin. This patient should give attention to general health. Daily cold baths on rising in the morning, and sweating baths two or three times a week at night, just before retiring, an abundance of outdoor air and sunshine, are all helpful measures. Special pains should be taken to avoid the formation of noxious products of putrefaction in the intestine.

3. "What are the most prominent symptoms of tapeworm, and what is the remedy to expel the whole of it?"

Ans.—The most prominent symptoms of tapeworm are colicky pains in the lower part of the abdomen, especially after fasting, relieved by a full meal; ravenous hunger, distention of the bowel with gas, alternate constipation and diarrhea, itching and prickling sensations; in children, convulsions; the passage of portions of the worm. Of the various symptoms just named the last is the only positive sign of the presence of tapeworm. No patient should ever be treated for tapeworm unless the positive signs of the presence of the parasites are first detected. The application of measures for expelling the worm must be managed by a physician. There are various remedies, but they should be used under the supervision of a competent medical man, as is true of the use of all poisons.

4. "Does vigorous rubbing nightly with a stiff flesh brush reduce weight, and render the muscles flabby in a woman of forty-three?"

Ans.—No. Such measures are beneficial to both the skin and muscles.

5. "Why is it that one of rheumatic tendency feels the trouble worse after eating tomatoes or strawberries?"

Ans.—The use of acid fruits is beneficial in rheumatism. It is probable that an individual who suffers more after the use of strawberries or tomatoes has an individual idiosyncrasy against the use of these foods.

10,633. Dry Pharynx—Proper Breathing—Constipation.—E. T. Newfoundland:

1. "What is the cause of the pharynx becoming dry and stiff and shiny, accompanied by a weak and easily tired voice, followed by hoarseness?"

Ans.—This condition is probably due to chronic pharyngitis. Acute and chronic catarrh of the pharynx are among the most common of all the forms of catarrhal disease. What is known as "clergyman's sore throat" is a variety of pharyngeal catarrh. Undoubtedly bad dietetic habits are an important factor in the production of this condition. The use of mustard, pepper, peppersauce, ginger, vinegar, and various other condiments, and the excessive use of salt, sugar, fats, and animal food must be set down among the predisposing causes. The disease is especially common in persons of sedentary habits.

2. "What faulty method of breathing and of using the voice would probably induce sore throat?"

Ans.—"Mouth breathing," especially at night, is a common cause of pharyngitis.

3. "What is the correct method of breathing? and how may the voice be used to avoid straining the muscles of the throat?"

Ans.—Speakers who do not breathe in such a way as to bring the diaphragm into use are frequent sufferers from sore throat. Abdominal respiration is the correct type of breathing. When speakers employ this method of respiration they rarely experience any difficulty with the muscles of the throat.

4. "What vocal gymnastics would you recommend?"

Ans.—Deep breathing exercises in the open air, or before an open window, several times a day, will be helpful. It is important in taking exercises to expand the lower part of the chest. One does not use the abdominal muscles actively in ordinary respiration, but they are used passively in aiding respiration. As the breath is drawn in, when the full chest is expanded, especially the lower part, the abdominal muscles are stretched. The diaphragm in descending presses the abdominal organs outward, thus rendering tense the muscles which form the front wall of the abdomen. In expiration the muscles contract, and by pushing the ab-

dominal muscles upward aid in crowding the air out of the chest and prepare for another incoming breath. In order to serve this useful purpose, the abdominal muscles must be strong and tense. In forced respiration, as in speaking, the abdominal muscles, as well as the muscles of the chest, must be kept under constant control, sometimes being contracted with vigor to give increased force to the voice. This action is especially necessary in public speaking and singing.

5. "What special advice would you give to one with a tendency to constipation and hemorrhoids?"

Ans.—Adopt a laxative dietary, consisting especially of fruits, fruit juices, rice, bees' honey, melrose, whole-wheat bread, baked potatoes, purees of peas, beans, and lentils, buttermilk, and yoghurt. It may be the hemorrhoids need removal by a surgical operation.

6. "Suggest treatment for strengthening the nervous system generally."

Ans.—Hot and cold applications to the spine, the heat being applied by means of the hot douche, especially the hot percussion douche;

radiant heat by means of phototherapy, the arc light, or by means of large fomentations. In applying the fomentations a woolen cloth, six inches wide and long enough to extend the entire length of the spine, should be wrung out of water as hot as it is possible to bear and applied to the spine. Over this apply a dry woolen cloth, considerably wider, to retain the heat. At intervals of five minutes rub the area under treatment with a piece of ice, or with a cloth dipped in very cold water, while renewing the hot application. This should be done three or four times. Other radical measures are the daily cold sponge bath on rising in the morning, the use of the moist abdominal bandage at night, massage, vibration with the vibrating dumbbell. You would be greatly benefited by two or three months' treatment at the Battle Creek Sanitarium.

7. "What is the remote cause of hemorrhoids? and suggest treatment."

Ans.—The principal causes of hemorrhoids are constipation of the bowels, violent straining at stools, the use of concentrated food, ob-



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struction of the portal circulation from various causes—such as tumors in the abdomen or disease of the liver. As palliative means the most useful measures are ichthyol ointments or suppositories, warm water injections before moving the bowels, followed by a small enema of cold water immediately after. The cool sitz bath and other local cold applications are also helpful. Whenever hemorrhoids are developed to such a degree as to be a source of pain or inconvenience, or of troublesome symptoms of any sort, a surgical operation should be had. Our readers ought to be warned against the deception and even dangerous practices of many charlatans who, under the title of "official surgeons," often prey upon the public in a shameless manner, and do irreparable damage by their reckless and unnecessary surgical procedures. At the hands of a skilful surgeon the removal of hemorrhoids is no longer attended by the suffering and risk formerly connected with this operation.

8. "What means could be adopted by a man of 60 to postpone the enlargement of the prostate gland?"

Ans.—This is a very common disease in old men, and is a difficulty often neglected, very much to the detriment of the patient. Free water drinking, careful avoidance of alcoholic liquors, strong tea, coffee, tobacco, the use of condiments and stimulating foods of all kinds, and the adoption of a dietary consisting chiefly of fruits, grains, and nuts, are the principal prophylactic measures to be taken.

10,634. Electric Needle—Tomatoes—Honey—Sleeping after Meals—Cramps in Feet.—C. F., Indiana:

1. "Is the electric needle injurious to the system when used to remove superfluous hair, and in what way?"

Ans.—No.

2. "Are raw or stewed tomatoes good for one who bloats and has gas trouble with stomach?"

Ans.—Yes. When properly masticated, tomatoes are especially good.

3. "Is honey good if it smarts the throat?"

Ans.—Yes, in small amount.

4. "What causes dizziness or belching at some time after meals? Is hot water good to drink for relief?"

Ans.—Dizziness or belching is probably due to the fermentation of foodstuffs. The drinking of hot water often gives relief.

5. "Is it good to lie down and sleep after noon meal?"

Ans.—To lie down, yes; but sleep should be avoided. Sleep slows the action of the stomach and produces acidity. Rest for half an hour after dinner is beneficial, but sleep should be avoided.

6. "What causes cramps on feet from knee to toes, worse in toes, noticed when rising at night or morning. Thirty years old. Please give diet. Am on my feet all day."

Ans.—There are various possible causes. The only cases in which a special diet would be likely to give relief are those in which the cause is a toxic condition of the intestine, due to errors in diet. In such cases an antiseptic diet is to be recommended. Foods containing fats should be used very sparingly, and the proteid of the daily ration should be reduced to the minimum. Avoid meats of all kinds, including flesh, fish, and fowl; eggs except in very small quantity, and milk in its ordinary forms. Buttermilk, clotted milk, and Yogurt are helpful, the latter especially so by introducing into the intestine so-called "friendly germs." The dietary should consist of cereal gruels, dextrinized foods, malted foods, such as granuto, meltose, malted nuts, purees of broths and soups made from legumes, tomatoes, potatoes, and fruit, fresh fruits, and sterilized butter in small amount. Particular pains should be taken to keep the bowels open. It would probably help you to wear an abdominal supporter.

7. "Is lemon juice, taken in water mornings and evenings, good for rheumatism?"

Ans.—Yes, but it is not sufficient to effect a cure.

8. "Is lemonade without sugar good for the kidneys?"

Ans.—Yes.

9. "Can hay-fever be cured? and how?"

Ans.—There is no certain cure, but great relief is obtained by the use of Pollantin, which can be secured from any drug store.

10. "How can sterilized butter be made at home?"

Ans.—Sterilized butter can be made at home by sterilizing the cream before churning.

11. "Is water at 80° lukewarm or cold?"

Ans.—Water at 80° is cool, according to the scale adopted by many hydrotherapists. The following table shows the temperatures indicated by the various terms in use:

Very cold	32° to 55° F.
Cold	55° to 65° F.
Cool	65° to 80° F.
Tepid	80° to 92° F.
Warm (neutral, 92°-95°) ..	92° to 98° F.
Hot	98° to 104° F.
Very hot	104° and above.

10,635. Fasting.—H. B. T., New York:

"In various newspapers and magazines I have seen articles on fasting. Some say it has brought wonderful results to them, and others tell only of the harm it had caused, claiming that it weakens the organs of the body, particularly the heart, claiming that after a long fasting they do not regain their normal strength and vigor. The medical profession seem also to disagree on the subject. Please give your verdict on the question."

Ans.—The only object of fasting is that it reduces the proteid, thus lessening the amount of material which in the intestine can undergo the process of putrefaction. There are two kinds of decomposition processes going on in the intestine,—fermentation, which is the decomposition of fats and carbohydrates; and putrefaction, which is the decomposition of proteids. The decomposition of proteids results in the formation of poisonous materials which, when absorbed into the blood, damage the liver and kidneys, and are carried by the circulation throughout the whole body.

A fruit diet is better than fasting, because in fasting the germs thrive upon the mucus and other secretions of the intestines, as during fasting there is no movement of the bowels to remove these secretions. Mucus constitutes one of the best foods for germs. A fruit diet maintains the bowel movements, thus preventing the accumulation of mucus, and at the same time promotes the growth of aerobes, or friendly germs, which drive out the poison-forming bacteria, and thus help to sterilize the alimentary canal. Much quicker results may be obtained on a fruit diet than by fasting, and still more rapid results may be secured by means of a highly saccharine diet, consisting of honey or meltose, fruit juices, fruits, Japanese seaweed and whey.

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LITERARY NOTES

OLD GLOUCESTER

J. B. CONNOLLY is at his best in "The Crested Seas," a collection of sea tales that are as full of fresh and rugged vigor as the nor'westers which figure so prominently in them. From beloved "old Gloucester" to the Banks is a long run, even with such a boat as the *Lucy Foster*, but it is in this vast reach that the stories move, and from it that they get their spaciousness, their large roominess, as it were, that is wanting in so many stories of the sea.

"The Crested Seas," by J. B. Connolly. Charles Scribner's Sons, New York. \$1.50.

A DESERVEDLY POPULAR BOOK

"BEAUTIFUL JOE" needs no introduction, it is to be hoped, to GOOD HEALTH readers. It is a book that ought to be in every home, and well deserves the sale of 500,000 copies that it has enjoyed since its first appearance in 1893. Beautiful Joe, it is almost superfluous to say, is a dog—or a cur, as he himself says—that was rescued from the hands of a cruel owner, a milkman, and showed throughout a long life what love and gratitude is able to accomplish in return for simple kindness.

The new and enlarged edition, fresh from the press, comes out in fine new type, artistic cover, with a fine lot of illustrations by Charles Copeland, with an introduction by Hezekiah Butterworth, and a new chapter added by the author.

"Beautiful Joe, the Autobiography of a Dog," by Marshall Saunders. New and enlarged edition. Griffith & Rowland Press, Philadelphia.

A FOLLOWER OF NATURE

"How many people thoughtlessly spend the best part of their lives in constant self-indulgence, and when nature can endure it no longer, instead of giving her a complete rest, endeavor to supplement her efforts by stimulants and medicaments. It is as if one after a hard day's work, instead of seeking relief in rest and natural sleep, should try to get the same rest and refreshment by use of electricity or external and internal stimulation." This is a good specimen of the wholesome philosophy by which Buff, a "bundle of bones, nerves, and organs covered with skin," as he came into the world, gains complete strength and vigor by living close to nature and following her methods. The story of Buff's life, as told by "Physiopath," is delightfully interesting and instructive, and will bear reading and re-reading.

"Buff: a Tale for the Thoughtful," by a Physiopath. \$1.00. Little, Brown & Co., Boston.

THINK HEALTH

THAT our state of mind has a great deal to do with our state of health, every one will admit. As Leander Edmund Whipple says, in his work on the curative powers of the mind. "Let us think health and have full confidence in it as a reality, with as much spontaneity as in the past we have appeared to think disease through our fear of it, and see if we do not find the thought a healing influence and a true soothing lotion for the many seeming ills of daily life." We cannot, however, agree with the conclusions of Mr. Whipple that all disease is a product of the mind, and consequently curable by right thinking, but he is undoubtedly right in his characterization of worry as "the nightmare of human life—a dream-illusion of something objectionable approaching and near at hand, when really nothing is, and usually nothing is to be," and the source of many ills.

"Practical Health," by Leander Edmund Whipple. \$1.50, net. Metaphysical Publishing Co., 500 Fifth Ave., New York.

VACATION DAYS

Dr. Henry Van Dyke, master of poetic prose, word painter and colorist, as verily as was the other Van Dyke an artist in oils, is at his best in "Days Off." Something of the spirit of the book may be seen in Uncle Peter's defense of vacations in general. Uncle Peter, it should be explained, is the narrator of the adventures presented. "You talk as if you thought it was a man's duty to be happy," it was suggested to him. "I do," said he; "that is precisely what I think. It is not his chief duty, nor his only duty, nor his duty all the time. But the normal man is not intended to go through this world without learning what happiness means."

The chapter on "Among the Gurnstock Hills," with its description of a visit to Alfoxton and Nether Stowey, is almost as good as an actual pilgrimage to the early Somersetshire homes of Wordsworth and Coleridge. In the same way, next to camping out among the Maine lakes and hills, stand Dr. Van Dyke's accounts of his vacations among them.

"Days Off," by Prof. Henry Van Dyke. Price, \$1.50. Published 1907 by Charles Scribner's Sons, New York.

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"Harper's Outdoor Book for Boys," by Joseph H. Adams. Price, \$1.75. Harper & Brothers, publishers, New York.

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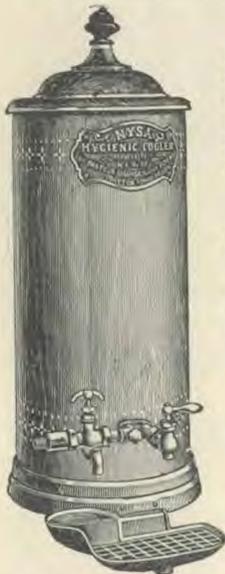
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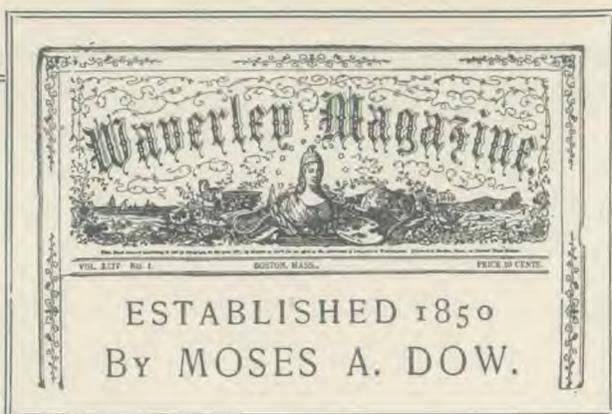
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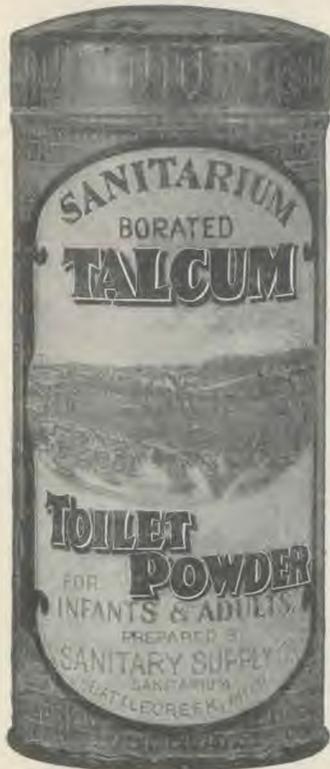
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December, 1906.—Personal Hygiene, Fresh Air, the Care of the Body, Nutrition, the Cough and the Expectoration, by John W. Heffron, M. D., Syracuse, N. Y.; Some Winter Sports that are permissible and pastimes forbidden the tuberculous; Fresh Air at Night.

January, 1907.—Quacks and Quackeries, their blighting influence on the lives of the tuberculous, by S. A. Knopf, M. D., New York; The English Sanatorium, by Vincent Y. Bowditch, M. D., Boston, Mass.

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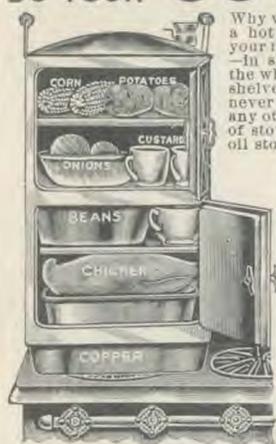
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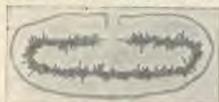
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We may destroy.
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Dare to be true,
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Stand by the boy!

3. Some, like the Levite,
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In pity glancing
Where brothers lie,
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Sadly you say,
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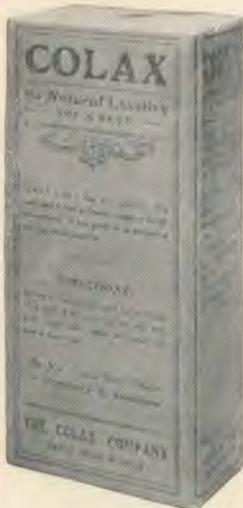
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