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THE FEDERAL INSPECTION OF MEAT A RIDICULOUS FARCE*

By CAROLINE BARTLETT CRANE

[EDITOR'S NOTE: Meat was given short shrift at the National Conference on Race Betterment, held in Battle Creek last January. Dr. Louis F. Bishop, A.M., M.D., Clinical Professor of Heart and Circulatory Diseases in Fordham University School of Medicine, New York City, cited a meat diet as one of the causes of hardening of the arteries; Dr. J. N. Hurty, Secretary of the Indiana State Board of Health, welcomed the high cost of living, so far as it put meat out of the reach of most people, as a blessing; and other eminent speakers referred to it as at best inferior to natural food products, and to be easily dispensed with. One of the best addresses of

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the Conference was a paper on "Community Hygiene," of which the following is an abstract, by Rev. Caroline Bartlett Crane, famous as a municipal reform expert, whose investigations in all parts of the country have brought her into close contact with the federal inspection service and the machinations of interests that are often permitted to deceive the public and to work for the financial benefit of the packers.]

HERE ARE THREE PROPOSITIONS which I wish to bring before you today: first, that meat inspection is a federal function in our country, because it was instituted some twenty-three years ago, not for the protection of the health of the American people, but to restore the

packers' foreign trade, which had been destroyed through the discovery of the unwholesomeness of American meat and the refusal of foreign powers to accept this meat or to permit it to be bought without federal inspection.

S ECOND, that under the laws of 1890 and 1891, inspection and certification were assumed to cover meat, both in the interstate and in the foreign trade, though we find by admissions in later federal documents and by the admissions of men who had charge of this work, that by no means all of the meat which was shipped in interstate trade was inspected. That is true today also.

THIRD, that representations of the packers themselves and of the Department of Agriculture, and to a greater or less extent of the Department of State, made the federal stamp upon meat a great asset to the packers in this country as well as abroad, but that these representations which were then made and which are still made, at least by the packers, were in a great measure untrue. For example, it was held that if the most particular countries in the world, as, for example, Germany, one of the most particular, would accept our meat certificates, certainly it was better for the American to buy federal inspected meat than locally inspected meat.

BUT FIRST OF ALL it has to be said that the foreign governments do not accept the same sort of certificate that is given to us; that the very law itself, the new law of 1906, which was drawn in response to a popular indignation and a popular demand for sanitary protection in this country, has a cunningly hidden clause which requires the inspection of the animal itself (while it is alive as well as the inspection of the carcass) for all meat going abroad, by virtue of the fact that no vessel can get a clearance for meat from this country unless there is a certificate from the Department of Agriculture saying that this meat and the animal from which it was taken have both been inspected by federal inspectors and have been found sound, wholesome and free from all disease.

FOR MEAT FOR HOME CONSUMPTION, however, this is not required; there is no certificate; simply the stamp upon the meat, "U. S. Inspected and Passed." The meat that goes abroad is above the regulations governing the meat for home consumption because our regulations permit the passing at home of meat having tuberculosis coincidentally in several different portions of the body, or lumpy jaw, or tape worm, or even cancer. Read the regulations of the Bureau of Animal Industry of the Department of Agriculture, issued May 1st, 1908, and you will find that, as I say, these very regulations permit the passing of the meat of animals which certainly are seriously dis-

eased, though the certificate required to be sent with meat going abroad would preclude it for foreign shipment. Americans, therefore, are discriminated against, through the very law which was supposedly enacted for their special protection.

A GAIN, not only is it true that there is this discrimination in the printed rules and regulations, but ever since May, 1907, and up at least to the beginning of the new administration, there have been printed secret orders that upon the very face of them bear the statement that they are not for public distribution-employees, indeed, were cautioned against giving or showing copies to outsiders. One of these secret orders says that if the tumor is not a malignant tumor, or if the abscess or infestation of parasites is not such as to infect the whole organ, which would be the very point at issue in my mind, the tumor or other lesions may be cut out and the rest of the organ passed onnot for Europeans: only for us are these delicacies reserved. A few months after this regulation had been issued, Mr. Melvin. Chief of the Bureau of Animal Industry, issued an order under which five hundred and eighty cases of liver were recently rejected and refused; they had been shipped "U. S. Inspected and Passed" from America, but had been refused admittance abroad because from twenty to thirty per cent of those livers had sections cut out of them. They had been mutilated and foreign inspectors rightly held this to be evidence of disease. In view of these facts, the inspectors were notified hereafter not to certify for export livers and similar organs which are mutilated or which have had portions cut out of them. And the same was true with regard to lesions or ulcers in lumpy jaw tongues. They can not be sent abroad, but they can be sold at home. I made that statement before the City Club of the city of Tacoma

last summer, and a large packer in the audience got up and challenged me: no such a thing had been done in that city, he knew, even if the government permitted it. It was never done in their city or by any packing house of Tacoma. With half a dozen of the citizens of the city I went down to their own markets and found case after case of livers with portions cut out and tongues with portions cut out so deep you could set an entire egg in the holes from which they were cut—and they

were labelled "U. S. Inspected and Passed"!

Now I will pick out only one other instance of these secret orders, one that pertains to a commodity common all over this country-sausage. We hear a great deal about the wickedness of putting cereals in sausage, and yet, I fancy if we knew some of the other things which go into sausage we would regard the putting of cereals into them as a harmless diversion on the part of the packers. In one of the secret orders to which I refer. Mr. Melvin says that among the ingredients which are mentioned as legitimate and ordinary ingredients of sausage are pigs' ears, pigs' snouts, pigs' spleens and similar organs. Now perhaps those are fit to eat, but I ask you whether or not many of us would eat them if we knew such articles were included in them. When I told this before the City Club of Philadelphia, the head of the department of federal inspection in that city said, "Oh, that is all right. What would Philadelphia scrapple be without pigs' snouts, ears, etc.?" And I replied, "Let us have Philadelphia scrapple, but let us know what we are having." When you buy Chinese sausage, our government sees to it that it is made purely of the finely comminuted meat from the thighs of perfectly healthy hogs that have been examined for trichinosis and other diseases, and that have been kept in thoroughly clean pens and fed upon no scraps or slops whatever.

I T HAS BEEN SAID, again, that the resolutions which are in service now are endorsed by eminent scientists. This is not true. In the first place, various changes have been made from the recommendations of the scientists. I would not agree with the eminent men, and probably it would not make much difference to the eminent scientists, but it makes a great deal of difference to me that they do authorize the use of the meat from tuberculosis carcasses and other things that I would not consent to eat, under cover of the very great differences made possible by the change of a few words here and there. For example, in one order they say that if the gland is tuberculous the part to which it belongs must not be passed. But in the secret orders they give instructions for the cutting out of the tuberculous glands and passing the carcass. Yet every one who knows anything whatever about physiology knows that the gland is the key in diagnosis to determine whether or not the whole part which it drains is infected.

A NOTHER POINT: the Department of Agriculture has absolutely nullified and destroyed and overridden the very law of Congress which says that no meat shall be shipped in interstate commerce except in the original container, and that such meat as sausage, in a form difficult to come under this requirement, shall be stamped "U. S. Inspected and Passed," or some other provision made therefor. Yet within a few months after this provision was passed, the Department ruled that meat could be sent without being stamped at all if a seal was put upon the car saying that the meat therein had been inspected, though the meat itself showed no evidence of inspection. Then a warning is issued that if anybody tampers with the car seal, he is liable to a fine of \$1,0,000, or two years in prison, or both—a very

strong warning. And only a little time afterwards, comes the announcement in one of these secret bulletins saying that it has been found in numerous instances that the seals have been tampered with and the inspectors are requested to take it up with the packing houses with a view to having the practice discontinued. In the very next bulletin is the case of a poor little man, not a packer, who shipped seventeen veal carcasses, some of which were immature, across State lines and he was fined \$500 and sent for a whole year to the federal prison in Atlanta. That shows the different point of view.

W HAT IS NEEDED is that the label shall tell the truth. If people want to use meat from tuberculous and cancerous carcasses, let them, but certainly it is only right that they should know what they are eating.

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IN A RECENT editorial criticism of the sandwich, the Journal of the American Medical Association claims that on account of its large meat content this form of food runs counter to what many students of dietetics regard as desirable, and "is not as economical as is popularly believed. Thirty-five cents, for instance, has a buying power in a good restaurant of 1990 calories, while in the form of sandwiches, it supplies but 1140 calories." Thus, says the writer, "if it is really desirable to increase the purchasing power of the small daily income so as to augment the parts devoted to nutriment, the reform can not be instituted by pointing to the supposedly inexpensive lunch-counter."

SECRETARY of the Navy Daniels has issued an order little short of revolutionary—the "wine mess" of naval officers is abolished and the use of alcohol on any naval vessel or in any navy yard or station is strictly prohibited. Scarcely lses revolutionary than the order is the enthusiasm with which it is everywhere greeted. The editor of a metropolitan daily says, "It's not a question of morality. It's a question of efficiency." And this, we believe, represents the general attitude of the people throughout the country. If great railway systems, if gigantic industrial plants, if even the most obscure household can be run economically and efficiently only by abstinence from alcohol, surely we have come to the point where we are ready to insist that so huge and intricate a machine as the United States Navy, the units of which must be handled intelligently if they are to stay affoat and perform their function of shooting accurately and steaming rapidly, shall be rumlessly run.

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The Hygiene of High Blood-Pressure

NE OF THE TRAGEDIES which the physician is called upon to observe is the beginning of the rise in blood-pressure, for while it continues to rise, from one hundred or one hundred and ten (the normal pressure), going up and up until it reaches two hundred and two hundred and fifty, the heart must do more than double the work it does under normal conditions, with the result that it wears out in a short time, just as a pump, made for duty at low pressure, wears out quickly when kept upon work at high pressure. By and by the tissues of the heart begin to weaken and become diseased until, unable to hold up under the tremendous work demanded of it, the organ begins to

fail, as indicated by a lowering pressure, with subsequent loss of memory, giddiness, change of disposition, irritability, depression of spirits, shortness of breath, and poor circulation. All these symptoms indicate that secondary low blood-pressure is developing, that the heart is weakening, and that the condition is beyond relief. The best that can be done is to keep the patient alive, postponing the end as long as possible.

B EFORE THIS EXTREME LIMIT IS REACHED, however, much can be done to reduce the pressure, and to add months, maybe years, to life. There are many simple measures which can be applied at home for removing the causes of the high pressure. One of these is to take a warm bath three times a week at a temperature of one hundred degrees for perhaps two minutes, until the body is well warmed up, then lowering it to ninety-five degrees, and continuing this for half an hour before retiring, a measure that is of supreme value in this condition.

N RISING IN THE MORNING, one should take a cold water bath, or a cold air bath. A cold water bath should not be taken by jumping in a bath tub of cold water, for this procedure invites a stroke of apoplexy. Instead, a cold water bath should be taken by wringing a towel out of cold water, and applying first to one arm, rubbing vigorously with a dry towel until the arm is quite dry and becomes warm and red. The other arm should then be treated in the same manner, then the chest, then the legs, then see-sawing across the back—always first with the wet towel, then with the dry, until the whole body has been gone over.

NEXT THE BODY SHOULD BE GONE OVER WITH A LITTLE OIL, say a vaseline of good quality, or lanoline—the best thing for this purpose is lanoline cream—two drams of lanoline,

one dram of boroglycerid and six drams of cold cream or vaseline. A little of this cream will put the skin in a healthy condition and prevent irritation. During the winter the skin will often be dry, with irritation, itching, or burning. When this condition is present, put into the lanoline cream about ten grains of menthol. Rubbing with this preparation will bring the blood into the skin, and promote its health. Again, if one is obliged to be much indoors during the daytime, he should sleep out doors at night. The windows can be thrown open wide and the wind given an opportunity to sweep through every part of the room, though better still is the sleeping porch, or an especially constructed fresh-air sleeping room. These can not always be obtained, however, but many houses are being remodeled to permit of their being added, while more and more builders are coming to include at least one porch or fresh-air room in their plans, so that in time every house will have provision made for sleeping under hygienic conditions. There is no reason to be afraid of cold. If the entire body, including the skin, is kept in a healthy condition, it will be almost impossible to contract colds on a sleeping porch, while the wonderful tonic power of the fresh air revitalizes the body and counteracts the influences that are making for rising pressure of the blood.

Young Thoughts in Old Age

NO ONE PRESENT AT THE CLOSING SESSION of the National Conference on Race Betterment, held in Battle Creek last January, will ever forget the farewell address by its venerable President, Dr. Stephen Smith, ninety-two years of age. Doctor Smith had astonished the Conference at its opening

session by reading in a firm, clear voice that was easily heard in every part of the hall, his President's address of twenty-six type-written pages, an adress that for vigor and coherence of thought and lucidity of expression was not surpassed by any of the

remarkable papers presented to the Conference.

"I am often congratulated somewhat on my age," said Doctor Smith, in his farewell remarks to the Conference. "When people speak of it I generally look around to see whom they are talking about. It is a familiar thing to me to be called old, although I was reminded of it not long ago in a way that was very pleasing by coming into a crowded car and having a gray-haired lady some distance away beckon me to take her seat. I told her I thought I was quite as capable of standing as she was, but she insisted, so I took the seat and bowed her my acknowledgement. An old lady came to me the other day, past eighty, I should think. She was, indeed, very trembly, and wanted to know how I maintained good health at such an age. I said, 'Madam, I never talk with old people.' And there is a great deal more in that perhaps than you are aware of. I realize at any rate that the way to keep healthy and strong is to live in the age in which you fing yourself. Shut the door behind you, as Paul said, forget the things of the past and enjoy the things of the present and the future—especially looking forward to the developments of the future."

It is true that young they keep the mind from thoughts which really are aging—which possibly accounts for the fact that work during the later years of life is far more conducive to longevity than resting from one's labors. Just the other day, Sir Gilbert Parker, the English statesman, traveler and novelist, a remarkable example of the benefits of the strenuous life in later

years, said, "Don't stop work at seventy; do more of it." Sir James Crichton-Browne, himself well past the seventy mark, likewise believes in old age occupations:

"IF YOU WANT A FEEBLE AND MISERABLE OLD AGE, give up working. The most vigorous period of human life in its entirety is obviously between twenty-five and forty years of age," he added, "but to say that men above the latter age are comparatively useless, is to fly in the face of the biographical dictionary. Much of the best work of the world has been done by men over forty, and we should by no means stand where we are, but be back in the twilight ages, bereft of what these men accomplished."

M USICAL EXPRESSION, like speech, the Doctor goes on to say, "reaches its acme in late middle life. But higher in the cerebral hierarchy than speech or music centers are others concerned in the manifestations of purely intellectual powers, such as reason and judgment, which come to perfection late, and may long preserve their integrity. A preponderance of the work involving calm and powerful reason is done by men from fifty-five to seventy years of age. Our judicial system in this country has been built up mainly by judges from fifty-five to eighty-five years of age, and in almost all countries the most momentous affairs of state have been reserved for the decision of men at this time of life."

EVEN MEMORY, so often treacherous in old age, may be preserved intact. Doctor Dollinger, when seventy years old, a victim of insomnia, learned by heart three books of the "Odyssey" in order that he might be able to repeat them to himself in the still hours of the night.

A RECENT magazine contains pictures of various devices for catching rats. For a really efficient rat catcher, however, let us commend the hog, which, as one investigator has said, is "the champion rat catcher." The hog, by the way, is often a mere connecting link between the rat and trichinosis. In 1896, Doctor Stiles examined one hundred and six rats for trichinæ, 27.89 per cent of which he found infected, the rats for the greater part being taken from slaughter houses, butcher shops, and barns. The thing seems a matter of give and take, the rat getting the trichinæ from the hog, but returning them with compound interest when they in turn are eaten by the rodentivorous porker.

Man Not Omnivorous Like the Hog

THE HOG IS OMNIVOROUS; he eats grass, clover, fruits, corn, roots, dead calves and horses, and even dead hogs and live babies. The hog appears to be able to eat anything any other

animal can eat and to thrive on his miscellaneous diet.

The hog has teeth adapted to his all-embracing diet: broad molars for chewing grass, tusks for tearing flesh, shovel shaped incisors and a big tough snout exactly adapted to digging out roots and ground nuts, and thus he is a natural omnivore. Nevertheless, to his credit it must be said that he thrives best in a clean pasture with plenty of clean water and sweet clover. The hog becomes so tainted with disease that his flesh has a strong offensive odor when he is fed on meat; however, that the hog is a natural flesh eater cannot be denied. Hogs have been known not infrequently to kill children and eat them, and they seem to be equally fond of pork, not hesitating to devour the body of a comrade which may have sickened and died. It is in this way that trichinosis is often propagated among swine.

M AN SHOWS NONE OF THE CHARACTERISTICS OF THE OMNIVORE. His teeth and digestive apparatus are identical with those of the chimpanzee and the higher apes. His socalled canine teeth are simply cuspids and not tusks, like the canines of the hog or tearing teeth of the dog. The cuspids of the chimpanzee are so well developed that they really much resemble the true canine teeth of carnivorous animals, vet the chimpanzee is not a flesh eater. It is seen, then, that the teeth of human beings indicate man to be, if possible, still further removed from the carnivora than are the higher apes. Man is biologically a plant feeder whose diet consists of fruits, nuts, soft grains and tender shoots. It would be impossible for him to subsist on a diet consisting wholly of raw potatoes or corn. It is only by the artificial aid of cookery that he makes use of root vegetables and dry grains. Hence he is not omnivorous as regards vegetables. There are only certain vegetable products on which he can subsist—those which contain little raw starch. Raw meat is foreign to his taste and instinct, though not impossible of digestion. The sight of a fat hog or sheep does not make one's mouth water as does the sight of a rosy cheeked peach or a luscious pear. When a lion or a wolf sees a sheep he is immediately seized with the desire to kill and eat him, and the carnivore evidently enjoys the killing as well as the eating. The sight and smell of blood stimulates the natural carnivore to the point of frenzy. This is not true of human-beings. To the average man the sight of blood excites disgust or repugnance. Man has neither the natural desire nor the capacity to kill, except in self-defence. The few men who have acquired the artificial desire for hunting show little capacity as hunters. The so-called human hunter has to take along with him a dog to do the hunting. When the dog has

found the quarry, the hunter cannot kill his victim with a blow of his fist or grip of his jaw, but must use a gun or some other machine for the purpose.

M AN has become a hunting animal in the same way that he has become a flying animal—through invention. The fact that he has invented a machine which enables him to fly like an eagle does not signify that he must eat like an eagle. No, man is not naturally omnivorous as regards animal foods. The truth is that, as with all other of the higher animals belonging to clearly defined types, as the horse, the cat, the ape, man's natural dietary is a restricted one, well adapted to his individual needs, but not encroaching upon the food province of other and widely differing species.

IF IT BE ARGUED that cooking, while an artificial process which can have no relation to unborn and primitive instincts, may nevertheless render a rabbit as wholesome and suitable a foodstuff as a potato, it is only necessary to note that in the case of the potato, cooking renders easily digestible a substance otherwise only to a very slight degree digestible and impossible as a food; whereas, in the case of flesh foods, cooking diminishes digestibility, and often to a very marked degree.

An animal's dietetic needs are ruled by great biologic laws which he cannot ignore or set aside any more than he can change

the law of gravitation.

A GRICULTURE IS MAN'S NATURAL VOCATION and the products of agriculture afford the kind of nourishment which is in the highest degree adapted to his needs and capable of satisfying all his natural wants.

DR. CHARLES W. ELIOT, President Emeritus of Harvard University, sums up in these words the nearest possible equivalent to a prescription for longevity, so far, at least, as it has worked out in his case: "I feel safe in affirming that any one who desires to have a like experience [of reaching eighty] will do well to eat moderately, to sleep at least seven hours a night with windows open, to take regular exercise in the open air every day, to use no stimulants, to enjoy all the natural delights without excess in any, and to keep under all circumstances as serene a spirit as his nature permits. This is the way to win from life the maximum of real joy and satisfaction."

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No More Smoking to be Permitted in Executive Sessions of United States Senate

THE NEWSPAPERS REPORT that a constant titter was caused in the United States Senate by a speech in which Senator Tillman, of South Carolina, induced his colleagues to adopt a rule against smoking in executive sessions. We suspect the titter was rather forced, however, and that back of it lay a very deep apprehension that Senator Tillman's attack on Washington habits of living might be based upon fact. Senator Tillman told the Senate in a-spade-is-a-spade language that a vicious habit has so mastered them that they are nervous and miserable unless they can get the poison of nicotine to soothe their nerves. The Senator has never been a smoker, and since an attack of paralysis four years ago, he has been unable to endure smoking by those around him. In short, he said, "I am beset with the danger of being driven out of the party and of the Senate itself, and I do not know where to turn.

"THE PITY OF IT IS I HAD TO RUIN MY HEALTH before I learned how to live rationally. Had I lived ten years ago as I am doing now, my health would never have broken down at all. I believe I would lengthen the life of every man in this chamber from ten to fifteen years if I could only get them to follow my advice. But all men are prone to consider 'old age, sickness and hell' as for other people and not for themselves.

"S INCE I WAS PARALYZED FOUR YEARS AGO, TWENTY-ONE SENATORS, including Vice-President Sherman, most of them younger than I, have died. There is no doubt in my mind that this great mortality among us is due to the way we live in Washington. A fitting epitaph for most of the Senators who died would be: 'He lived not wisely, but too well, and killed himself by eating.'"

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"I HAVE not eaten so much meat, butter or eggs as most of the men with whom I have been intimate, or whom I have met at public luncheons, and dinners," says Doctor Eliot. "This moderation was natural to me, and not the result of any peculiar wisdom or lively sense of duty. In the second half of my life, I often have had to speak at public or semi-public dinners; under such circumstances, the only safe way is to eat lightly. It seems to me that people who bolt a large amount of food as the dog does when he has a chance, do not get so much pleasure out of eating as slower and more moderate eaters. I imagine that my good health has been largely owing to my moderation in eating and drinking and to the habits of daily exercise."

THE FRENCH ACADEMY has been discussing in a very vigorous manner the subject of noise and its relation to the increase in nervous disorders so characteristic of present-day life. M. Gautier voiced the sentiments of many members when he described the roar of our cities as an "infernal charivari which daily drums our ears, shatters our nerves and shortens our lives." Every pulsation and noise, M. Gautier explained, "causes nervous shock, comparable to a blow with a hammer, that is felt throughout the entire cerebral mass. These shocks are liable to create serious trouble. Experts who have studied the noises of Paris and their effect on the nerves and brain matter are convinced that the modern malady of neurasthenia is directly attributable to the riot of sounds by which we are daily assailed. No other explanation is needed for the growing number of nervous disorders."

Quietness Necessary for Sound Sleep

DURING SLEEP THE EYES ARE CLOSED but the ears remain open. Physiologists have demonstrated that the brain recognizes impressions made through the ears during sleep as definitely as during waking periods. A loud noise which may not waken a person from sleep will, nevertheless, produce such strong nervous and muscular reactions that the effects may be easily registered by an instrument that has been designed for the purpose. A person who is sleeping in the midst of noises may be unconscious, as in sound sleep, but the constantly recurring impressions made upon the brain through the ears will prevent that absolute rest of the entire brain which is essential to perfect sleep and bodily recuperation, and he will waken from sleep under such conditions unrefreshed.

ONE OF THE ESPECIAL ADVANTAGES OF LIFE IN THE COUNTRY is the quiet which prevails in the hours of night. In a large city the whir and clang of urban activities never cease. The rush of trolley cars and the shriek of automobile horns strike constantly the ear of the sleeper and keep him half awake, even when he seems to be asleep.

THE UNDEADENED FLOORS AND PARTY WALLS OF TENEMENT HOUSES, which also prevent sound sleep, emphasize the lack of consideration for the feelings of one's neighbors so often encountered in cities where people not infrequently remain strangers for years, while living under the same roof. But the situation in the tenement houses is not so bad as it was a hundred years ago, when Doctor Kitchiner called for an amendment to the "Building Act." From the following description of conditions in his day it is evident that reforms were needed: "Sound passes through the thin Paste-board Party Walls of modern Houses (which of the first rate, at the Fire Place, are only four inches in thickness) with such unfortunate facility, it is really an evil of the first magnitude, which is by no means counterbalanced by the consideration, that they become so heated, that they will serve for a Plate-warmer in the Kitchen, and a Warming-Pan in the bed-room—for while receiving these calefacient comforts, one can hardly help fancying, that it is not impossible that what warms our plates and our beds, may some day or night Roast Ourselves!!! In the Second floors the Party Walls are still thinner, and a Sigh-Laugh—Sneeze—or Snore, in one house, is heard in the next, as plainly as that in which it was let off; as we learn from the following doggerel, by Humphrey Hearquick:

"'If you Sigh—Sneeze—or Snore, We can hear you next door, Therefore pray be so kind To take care of your wind; If you're Doleful or Dry, Pray, dear neighbour, don't sigh, Nor your Nose-itch to ease, Don't furiously Sneeze Nor sonorously Snore, Nor do any thing more That will wake us next door.'"

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Civilized and Non-Civilized Babies

THE WRITER THE OTHER DAY was asked this question: if two babies, one civilized and the other wild, are educated in the same way, how will they compare when their education is completed? The question is complicated by the fact that there are various kinds of civilized babies. There are civilized babies with a fine pedigree, and of a quality ahead of anything to be found in the woods and forests, while, on the other hand, there are civilized babies at the opposite end of the scale, feeble-minded and degenerate—and unfortunately these are increasing—at the present time one per cent of the entire population of the United States being defective, mentally. Select a baby of this kind and educate it in competition with the wild baby, and it will be far behind in the race.

THERE ARE NO IMBECILES OR IDIOTS among Indians. Native peoples are almost entirely free from idiocy and lunacy. Lunatic asylums are unnecessary for the care of crazy

Indians, for the only crazy Indian is the Indian under the influence of liquor introduced by the white man; indeed, one would as easily find feeble-minded squirrels or rabbits in the woods as a feeble-minded Indian baby. They are born under natural conditions, not subject to the degenerating influences that are producing idiots, imbeciles, lunatics and feeble-minded in all civilized communities.

A GAIN, we must remember that we are all born wild and afterwards tamed, some far more than they should be. For education is merely a process of taming, and many people are spoiled in the taming. It were better for one to remain wild and uneducated than to lose his individuality and initiative. The process often follows this course: Jimmie starts to school full of life, brimful of questions and curiosity. He puts some posers to the teacher, and this person, perplexed and annoyed, says, "Now, Jimmie, keep still; I haven't time to bother with you." Parents, too, are often guilty of the same fault. Thus the child is continually repressed and forced back upon itself until it begins to believe that it is quite wrong to ask questions. The result is that it ceases investigating and concentrates its attention on schemes of how to get away from restricting authority and to obtain the freedom that it longs for. A great many children are regarded as bad and incorrigible, when the fact is they are merely repressed too much. And there is no question that the child of the woods will surpass any child educated in this manner.

THE FACT IS, we are only beginning to understand the psychology of childhood and adolescence. The case of the ordinary child is illustrated by a story recently told the writer

by a man whose dog was too zealous in watching the house. It ran out at anybody who happened to be passing, and one day bit a man, injuring him severely. The owner thrashed the dog until it was almost dead, crushing the animal's spirit. So far as the dog was concerned, people could have come onto the premises and carried off what they wanted. Its will was broken and subdued. This too often happens in the case of children with active minds and persistent curiosity. They are discouraged at every hand, and when they rebel against an authority that refuses to answer their questions, they are punished, and often the will is broken. And the boy with a broken will is scarcely worth a fig. What we want are boys with wills strong enough to stand up against the temptations and evils that they are to meet in the world, with wills sufficient to undertake enterprises and carry them through to success. This is the boy worth while, whether he comes of civilized parents or wild.

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DR. GEORGE CHEYNE, a famous English physician, and himself weighing more than four hundred and fifty pounds, once said, "Every wise man after fifty ought to begin and lessen at least the quantity of his aliment, and if he would continue free from great and dangerous distempers and preserve his senses and faculties clear to the last, he ought every seven years to go on abating gradually and sensibly, and at last descend out of life as he ascended into it, even into a child's diet." Dr. William Osler, who was once accused of desiring to chloroform all men after forty years of age, quotes with approval the above statement and adds, "We eat too much after forty years of age."

Hot Water for Indigestion

E VERY PERSON SUFFERING FROM INDIGESTION ought to know that one of the most universal and efficient of all means of securing immediate relief from petty and annoying symptoms attributed to indigestion is taking a copious draught of hot water and remaining in a horizontal position for half an hour or an hour immediately afterward. The water should be taken as hot as it can be sipped without burning the mouth, a temperature of 105 or 110 degrees, about a half a pint to a pint at a time. If plain water is disagreeable to the taste the water may be flavored with a slice of lemon, a few drops of peppermint or wintergreen or some other aromatic herb. When the stomach is sour as a result of excessive secretion of hydrochloric acid, as in heart burn, half a teaspoonful of soda may be added to the water to advantage.

8 8 8

Appendicitis and a Diet of Meat

PR. LUCAS-CHAMPIONIERE, the leading surgeon of France, years ago made a number of observations which clearly proved that meat eating is the cause of appendicitis. He first noted that while appendicitis was exceedingly frequent among the meat-eating soldiers in Algiers, it was almost entirely unknown among the Arabs, troops whose rations rarely included meat. Dr. Lucas-Championiere later extended his studies of the subject by observations in France, where he found appendicitis to be unknown in various religious institutions, the inmates of which abjured meat as a part of their discipline. He found that it was equally rare in insane asylums, and in prisons—except in the cases of newly admitted prisoners,—meat being

practically excluded from the bill-of-fare of prisons in France. Surgeon John Stokes has been making a study of the causes of appendicitis in the United States Navy, for, says an

of appendicitis in the United States Navy, for, says an editorial in the New York *Times*, "appendicitis is increasing in the United States Navy to such an extent that 'on board ship it may be considered as an occupational disease."

"The rate of the disease last year per 1,000 men among the force afloat was 9.35, while the rate among the force on shore was 7.25. This was greater than the year before by an

appreciable margin.

"It is declared by the naval medical authorities that the large proportion of meat in the diet of the sailors while at sea has much to do with the prevalence of appendicitis, the disease being associated with the lessened amount of green vegetables obtainable while the ships are on sea duty. The fact that in many ratings the men lead a sedentary life is also advanced as a cause of appendicitis.

"As a result of a report of observations made by the medical officer at Samoa it further would seem that the ratio of appendicitis is increased by cold storage meat, it being found that when the change was made to this from fresh meat the disease

became more frequent.

"In all, including both the force afloat and the force at stations and navy yards, there were 21,751 days lost during the

year through appendicitis."

IT IS INTERESTING TO NOTE that the observations of the naval authorities agree with those made in France by the eminent French surgeon. These observations also agree with those made by the late Doctor Senn, who, in an extensive tour

of the world, made a careful study of the diseases prevalent among various nationalities which he observed. In an interesting series of articles written for the Journal of the American Medical Association, he called attention to the fact that appendicitis was practically unknown among the natives of the east coast of Africa, whose diet consisted mainly of bananas, corn meal, manioc, palm cabbage, and other vegetable products. These natives eat meat on rare occasions, but so seldom that it can be hardly considered a part of their dietary.

Now that the cause of appendicitis is known the naval and military authorities will doubtless take measures to see that our

soldiers and sailors are supplied with a better dietary.

A MEAT DIET IS THE NATURAL DIET OF LIONS, TIGERS AND WOLVES, who cannot suffer from appendicitis for the reason that the appendix is not a part of their anatomy. Nature has kindly fortified them against the dangers involved in flesh eating, not only by omitting from their structure that dangerous "germ trap," the appendix, but also by giving them livers with four times the capacity of the human liver, thus making it possible for them to deal with a high-protein dietary.

Parenthetically let us note, however, that Chittenden's experiments have shown that even dogs thrive best on a low-protein diet, a fact known to hunters, who give their dogs little or no

meat, so as to give them a keen scent and good wind.

BUT THERE ARE OTHERS BESIDES SAILORS AND SOLDIERS who are suffering from appendicitis as a result of flesh eating. Mortality reports sent out by the census bureau show that the death-rate from appendicitis continues to rise, each year's report showing a higher mortality rate than the preceding,

and this notwithstanding the better knowledge of the disease now possessed by the medical profession, which makes possible its early recognition, and also notwithstanding the great improvements in surgical technic which have made possible the saving of a great number of lives which formerly were lost.

Meat, even the freshest butcher's meat obtainable, is swarming with myriads of meat bacteria that are capable of producing appendicitis and other inflammatory infections. Any person who has once had an attack of appendicitis, no matter how slight, has thereby received ample notification of the fact that further trouble is in store for him unless he reforms his dietary by discarding flesh foods and adopting a natural bill-of-fare. Constipation and meat eating are a combination which can not be excelled in the promotion of appendicitis, cancer, colitis and other infections of the colon.

It is exceedingly instructive to note that modern researches in bacteriology and pathology are continually bringing out new facts which furnish accumulating evidence of the enormous mischief which results from the attempt by certain sections of the human race to cultivate a universal appetite by adding to the bill-of-fare of his primitive ancestors (and still adhered to by his nearest relatives, the big apes) the diet of the wolf and hyena.

3 3 3

ONE farmer says to me: "You can not live on vegetable food solely, for it furnishes nothing to make bones with"; and so he religiously devotes a part of his day supplying his system with the raw substance of bones; walking all the while he talks behind his oxen, which with vegetable made bones, jerk him and his lumbering plough along in spite of every obstacle.—

Thoreau.

DR. M. J. ROSENAU, of Harvard University, sounds a warning of particular timeliness at the beginning of the vacation season: "Many a person obeys the call, 'back to Nature,' with direful results," he says, "for when he gets in Nature's solitude, he thinks he can disregard Nature's law. Sanitary habits are quite as important in the wilds as in the tenements. It especially grieves the heart of the sanitarian to note how frequently people contract typhoid fever at country, mountain or seashore resorts. The excess of typhoid fever in the autumn now goes by the special name of 'vacation typhoid.' The insanitary conditions found in many sparsely settled communities temporarily occupied during the summer season often challenge the conditions found in military camps during the bow-and-arrow age. Before people leave the sanitary security of a well-guarded city for vacation grounds, they should demand a bill of health from the health officer."

* * *

A Foolish Experiment

A CCORDING to the Chicago Tribune, a certain Doctor Schultz, an Englishman with a German name, has undertaken to breed a new race. He is making a collection of boys and girls of different nationalities and proposes to rear them together with the expectation that they will intermarry and by continuing to intermarry during several generations create a race with universal qualities. He has already collected representatives of six different races: a Swede, an Indian girl, an English boy, a negro girl, an Eskimo baby, and a Japanese. He expects soon to have a Chinese girl, a German boy, a Hawaiian boy, a young Spaniard and a Porto Rican.

THE REASON FOR THIS EXPERIMENT is given in the following paragraphs: "It seems that recent discoveries of immense deposits of mineral and vegetable wealth, where climatic and other conditions make it impossible for the white man to develop them, make it necessary to contemplate seriously the breeding of a new race which will combine the special advantages of the white with the peculiar abilities of the native. Another proof of its necessity is shown by the growing scarcity of coal and of various minerals. Civilization faces a future famine of many essential things.

"It is thought that an Eskimo and a Swede, or some other member of the northern white races, would create a white race which would exactly fill the conditions in the Arctics. It is prophesied that as soon as this is done the great corporations of the next generation will begin to exploit the coal and iron and then go ahead on a large scale breeding these special employees, managers and workers alike. Then in the same way other still undiscovered deposits will be exploited, for, as in the Arctics, there are rich regions in the tropics where fever and disease soon end the activity of the white, while, like the Eskimo, the natives are lazy, indifferent and untrained. For soon steps must be taken to propagate the rubber trees in the Congo and in South America."

THE FOLLY OF SUCH AN EXPERIMENT is so evident that it is hard to believe that any intelligent person would seriously undertake to carry out so impractical a scheme. Human beings cannot be bred like cattle and poodle dogs. A new race is needed, not to meet the demands of commerce or to satisfy the greed of big business through the exploitation of the coal fields of the Arctics or the rubber plantations of the tropics, but to save

the human species from deterioration and ultimate extinction, and to preserve and perfect those noble characteristics which make him, in the words of Shakespeare, "The beauty of the world, the paragon of animals." The perfect man need not be a universal type; there may be many types of perfect man, each adapted to his own sphere of activity and his own environment. The acme of perfection, however, can only be reached by a race developed under conditions closely allied to those under which primitive man developed and lived. To attain the highest excellence man must conform to those great physiologic laws which control his structure and functions as definitely as does the law of gravity control the movement of the planets. Obedience to these laws is a moral obligation as well as a physical necessity for the attainment of the highest mental and bodily excellence.

THE WORLD NEEDS A NEW RELIGION: not a religion greater than Christianity, but such an amplification of the present conception of Christian principles as will make the demands of physical righteousness a part of the great decalogue by which human conduct shall be ruled, and will establish such sanctions and standards as shall require man to be law abiding in relation to those principles which govern bodily health and efficiency, as well as those which concern our relations to God and our fellows.

2 2 2

Sensible Advice by an Old Doctor

THE FREE USE OF HOT CONDIMENTS that has become a most constant practice among civilized nations during modern times was early recognized as most injurious. Doctor Trotter, an eminent English doctor, who more than a hundred

years ago wrote an admirable work on nervous diseases, fully recognized the evil effects of these irritants. "Mustard, though one of the mildest of the condiments, is capable," he said, "in the form of a Sinapism, of vesicating the sole of the foot, over which is spread the thickest epidermis on the whole surface of the body. Must not such a substance be hurtful to a delicate stomach? Therefore to Mustard and Pepper I have never accustomed myself from infancy upwards; and I remain a proof of the truth of my own doctrine, few persons being more exempt from Dyspepsia. All these articles ought therefore to be denied to children, which will be one grand step to make them dislike every hot ingredient in diet when they grow up."

THE IDEA THAT THESE THINGS ARE NEEDED TO WARM THE STOMACH is as absurd as the notion of Pityllus, who, according to Suidas (Dr. Moffett), made a sheath for his tongue so he could swallow his pottage scalding hot in order to warm up his cold stomach.

• • •

The Relation of Alcoholism to Mortality

MEMBER OF THE FRENCH CHAMBER OF DEPUTIES, M. Henri Schmidt, in a recent article has brought forward statistics which prove without any question whatever that alcohol has a fatal effect upon infants through drinking mothers, upon men and women of all ages through hereditary weakness, upon the general mortality rate, and upon the reproductive functions. M. Schmidt's conclusions are thus summarized in Paris correspondence of the Journal of the American Medical Association:

"It is the non-alcoholic regions of France which show the smallest number of deaths from tuberculosis (1.95 per thousand inhabitants for the years 1906, 1907 and 1908). The west, in which there is a heavy consumption of alcohol, gives the proportion of 2.61 per thousand, and the maximum (4.54) is given by the Parisian region, in which the influence of alcohol is supplemented by that of unhealthful housing and fatiguing life.

"From other causes there are more deaths in the west than in the non-alcoholic regions, both in the city and in the country. Infant mortality is particularly high in the west owing to various causes: hereditary weakness, insufficient maternal care and bad food. Alcohol is sometimes put in the nursing-bottle. It is in Normandy that the greatest number of alcoholic women is found. The infant mortality was about 11.6 in 1906 in le Gers and about 22.2 in le Seine Inferieure. It is also in the regions where there is a heavy consumption of alcohol and absinthe that the largest portion of still-births occur. Schmidt has calculated the following average for the period 1874-1904:

DEATHS FOR EACH THOUSAND CONCEPTIONS			
	1874-1884	1885-1894	1895-1904
Non-alcoholic region	3.43	3.65	3.80
Alcoholic region	4.33	4.66	4.46
Southern departments (absinthe)		5.41	5 69 ''

2 2 2

The Native American Not Carnivorous

D. BOYCE, author of "Illustrated South America," in an address before the delegates to the Southern Commercial Congress held at Mobile, Alabama, October 28, 1913, stated that while the first inhabitants of America were without

doubt Esquimos who came here from Siberia and dwelt in igloos and lived on an almost exclusive animal diet, the race later on spread toward the south and gradually improved and developed into a stronger and more intelligent race, until finally the Incas of Peru built up a civilization nearly equal to that of the far east from which their ancestors came. Of especial interest is the observation of Mr. Boyce with reference to the diet of these aboriginal people, which gradually changed as they progressed from the north toward the south from an almost exclusive meat diet to a diet from which flesh foods of all sorts were almost wholly excluded. Said Mr. Boyce, "One of the contradictions I find in the development of the South American Indian races is that they were not meat eaters to any great extent;" and he adds, "While shooting big game in the interior of Africa, I observed that the negroes who lived on meat were less intelligent and had less physical endurance than the Coast black man, who lived on fruits, vegetables and fish."

NUMEROUS FACTS INDICATE THAT THE ABORIGINAL AMERICAN used meat rather as an emergency diet than as a regular bill-of-fare. The State of Ohio is covered over with the sites of garden plots which were cultivated by the Indians for centuries before the advent of the white-man. An early history of the New England settlements records the fact that a British officer engaged in a campaign against the Indians mentions in his report to his superior officer that he had "destroyed more than eight hundred acres of corn fields and many apple orchards." Pumpkins, string beans, melons, and various other vegetables were regularly cultivated by the aborigines, who evidently preferred vegetable food to a flesh diet, their native instinct leading them toward the natural bill-of-fare.

New Medical Discoveries

of Interest to Lay Readers

The X-Ray a Form of Light

THE NEW FORM OF RADIANT ENERGY discovered by Roentgen he called "x"-ray, because its exact nature was unknown. Since the discovery of this remarkable agent physiologists all over the world have been constantly at work to

solve the problem of its nature.

Within the past few months the mystery has been at last unravelled. According to N. Lau and his associates, it is a form of light produced by vibrations of ether one thousand times more rapid than those which produce luminous vibrations. It was formerly supposed that the x-rays were not subject to deflection, refraction, etc., as is light; but new investigations have shown that the x-rays obey all the laws of light when the right conditions are supplied, and that x-rays are really light rays produced by inconceivably rapid movements of the ether.

THE SO-CALLED RADIO-ACTIVE SUBSTANCES, such as radium, throw off three kinds of rays: alpha rays, which consist of atoms of helium, each carrying a positive charge; beta rays, consisting of negative electrons, and gamma rays. Norman Shaw found that gamma rays are simply vibrations of ether and hence a form of light. The rate of movement per second is represented, according to La Nature, as being one hundred million trillion (100,000,000,000,000,000,000,000).

The Protein Origin of Headache

THERE IS PERHAPS NO SUFFERING a human being can endure that is much more terrible than the distress attending a severe attack of migraine or sick-headache. The pain of a real hard attack is indescribable. Hundreds of people have been led to resort to the use of morphine, and have become habitual users of this destructive drug through its use to alleviate

the horrible pains of headache.

The cause of migraine has until recently remained a mystery, notwithstanding the diligent efforts of medical men for centuries to discover the origin of this very common malady. Recent investigations have thrown great light on the subject. The late Doctor Herter, one of New York's most eminent physicians and an investigator of world-wide fame, proved that indol and skatol, two very poisonous substances which result from putrefaction in the colon, produce headache and other unpleasant symptoms.

EVERY PERSON WHO IS SUFFERING FROM CONSTIPATION is familiar with the mental dullness, general lack of energy, and the feeling of malaise which usually accompany an inactive state of the bowels. Every chronic sufferer from headache is familiar with the fact that an attack is always preceded by

bowel inactivity.

An observation which has been difficult to explain and which has led many physicians to assume a skeptical attitude in relation to the evil effects of indol and skatol is the fact that many persons suffering severely from constipation are without headaches, while other persons suffer from severe headaches with only a very moderate degree of intestinal inactivity. The explana-

tion of this apparent inconsistency has recently been found in the discovery that colon poisons as well as certain other toxins are capable of "sensitizing" the body. That is, the system is rendered so sensitive to these poisons that very minute doses produce most extraordinary effects. This peculiar effect is known as "allergy" or "anaphylaxis."

THERE can be no doubt that many persons are born with a predisposition to headache. The clinical history of persons suffering from headache has shown that their parents and near relatives have suffered in like manner. By recent experiments it has been found that when an animal has been sensitized it may transmit to its offspring the acquired sensitized condition. In other words, the condition of allergy is hereditary. This probably explains why in some persons, even very young children, eggs, sometimes milk, and less frequently meats of various sorts, especially fish, behave like active poisons. There are many persons who suffer from frequent attacks of milk poisoning or egg poisoning without being aware of the cause of their illness. The fact that those substances are generally considered as good, wholesome foods, and with many people appear to be so, has long diverted attention from the evil effects of these apparently harmless substances, but accumulating evidence has at last afforded certain proof that both milk and eggs are to many persons veritable poisons, and this is generally true with reference to persons who suffer from headache. This susceptibility may be either acquired or inherited. In either case the only thing to do is to discard both milk and eggs from the dietary.

THE WHITE OF EGG IS APPARENTLY MORE OBNOXIOUS to the tissues than the yolks. Persons who are very susceptible to egg poisons find it impossible either to eat eggs or anything

containing eggs without speedily suffering from symptoms of poisons, which may manifest themselves in the form of headache, dullness, loss of appetite, bad taste in the mouth, foul stools, biliousness or some other toxic effect.

EVIDENCE IS CONSTANTLY ACCUMULATING THAT ANIMAL PROTEIN is a less wholesome form of human nourishment than protein provided by the vegetable kingdom. Fortunately. vegetable foods contain an ample supply of protein. That is to say, it is not absolutely necessary under any circumstances to resort to the use of animal proteins, either to preserve or maintain human life and vitality on the level of the highest efficiency. The only possible exception is the case of young infants who for any reason must be weaned. The proper thing in such a case is to provide a wet nurse. When this cannot be done it is possible to nourish an infant without resorting to the use of cow's milk, although cow's milk properly modified is the most convenient, and in most instances a wholesome and practical substitute for mother's milk, although by no means containing the full equivalent of an infant's natural food. In Germany the milk of almonds is used. The milk of green corn has also been used for the same purpose. These products combined with rice gruel or other liquid cereal foods and purees of fresh vegetables may be used with success in the case of infants that show toxic effects from the use of milk.

B UNGE, AN EMINENT EUROPEAN AUTHORITY, many years years ago showed that the number of infants who suffer and actually die annually from milk poisoning is by no means small.

IN VIEW OF THESE FACTS IT IS COMFORTING to note that a number of physiologists have recently put themselves on record to the effect that vegetable protein is in no way inferior to animal protein and is fully capable of supporting human life and energy in its best form.

Diet for Fever Patients

DOCTOR STARK, in a work on diet published in 1788, quotes Doctor Cirelli as stating that the physicians of Naples, Italy, "frequently allow their patients in fevers nothing but water for forty days together."

Since that time various fashions have prevailed in the feeding of fevers. First a diet of water gruel; then a milk and brandy diet; later a milk diet; and recently some German authorities have proposed a hearty diet of chops and steaks.

THE APPLICATION OF LABORATORY METHODS to the study of the problem of nutrition in fevers has finally solved the problem and given us the key to the situation. A long series of experiments conducted by experts of the medical department of Harvard University show that the terrible wasting which necessarily results from starvation in fevers may be prevented by the free use of carbohydrates. A moderate amount of fats may also be taken, but protein, that is, albuminous substances, must be used very sparingly, for the reason that these increase the fever and loss of tissue. After all there is nothing better than a diet of fruit juices—such as orange juice, grape juice, and fresh apple juice. The fresh juice of fruit of any sort furnishes the body of a fever patient with the exact kind of nutriment re-

quired to make good the losses resulting from the excessive heat production, without at the same time exciting increased activity of the heat-making functions and so raising the temperature. Six or eight pints of apple or orange juice, or two-thirds as much grape juice is the proper amount to be taken daily when fruit juice is made the principal food.

EVERY FEVER PATIENT SHOULD TAKE FOUR TO SIX QUARTS OF LIQUID DAILY. If this amount cannot be administered by mouth, two or three quarts of water may be given per rectum in divided doses. A large amount of water is needed to dilute and carry away through the kidneys the germ poisons to which the fever is due.

3 3 3

Evolution of the "Stomach Warmer"

THE APPLICATION OF HEAT TO THE STOMACH is one of the oldest and, aside from diet, one of the best remedies for various gastric discomforts. A hundred years ago tin cans made concave to fit the body were to be found in almost every tin shop, and their use was continued until the manufacture of rubber hot water bags was begun some thirty-five or forty years ago. The writer well remembers an old-fashioned schoolmaster from Canada who came under his care nearly forty years ago, bringing with him a huge stomach heater of the sort described.

Two hundred years before the invention of the tin stomach warmer, the warming stone was in common use, and was described in a medical work published in 1640 as "An Excellent Help really found out for cold, aged and sicke People—and

for the Poore, who may borrow the heating of this Stone at a neighbour's fire, if his Charity be not altogether cold; for it will damnifie him no more than lighting one candle by another."

PERSONS WHO SUFFER FROM DISCOMFORT AFTER EATING are usually greatly relieved by application of a hot water bag over the stomach while lying down for half an hour or an hour after each meal.

7 7 7

In the revised edition of his famous book, "Diet in Relation to Age and Activity," Sir Henry Thompson said, "I have come to the conclusion that a proportion amounting at least to one-half of the chronic complaints which embitter the middle and latter part of life among the middle and upper classes of the population is due to avoidable errors in diet. Further," says Sir Henry, "while such disease renders so much of life, for many, disappointing, unhappy and profitless,—a term of painful endurance for not a few has shortened life considerably."

8 8 8

LITTLE DEFINITIONS IN DIET—3

BALANCED RATION: That diet which is carefully adapted to the individual's work, both in its proportion of the various food elements (proteins, fats and carbohydrates) and in quantity. The normal diet for a man of medium size doing sedentary work is two thousand calories, the proteins, fats and carbohydrates being in the ratio of 1:3:6. That is, one-tenth of the day's intake should be protein, one-third the remainder should be fats, and the rest carbohydrates. The following

table shows approximately the total number of calories, with the proportion of the various food elements for men and women of different heights:

		MEN		
Height	Calories or Food Units			
in În.	Proteins	Fals	Carbohydrates	Total
61	197	591	1,182	1,970
62	200	600	1,200	2,000
63	204	612	1,224	2,040
64	210	630	1,260	2,100
65	215	645	1,290	2,150
66	221	663	1,326	2,210
67	228	684	1,368	2,280
68	236	708	1,416	2,360
69	243	729	1,458	2,430
70	251	753	1,506	2,510
71	260	780	1,560	2,600
72	269	807	1,614	2,690
73	278	834	1,668	2,780
74	288	864	1,728	2,880
75	300	900	1,800	3,000
WOMEN				
59	179	537	1,074	1,790
60	183	549	1,098	1,830
61	186	558	1,116	1,860
62	191	573	1,146	1,910
63	197	591	1,182	1,970
64	201	603	1,206	2,010
65	209	627	1,254	2,090
66	215	645	1,290	2,150
67	221	663	1,326	2,210
68	227	681	1,362	2,270
69	232	696	1,392	2,320
70	239	717	1,434	2,390

One engaged in hard muscular labor should increase the above amount by one-third, increasing at the same time the proportion

of fats and carbohydrates, particularly the latter. Where the individual's work is extremely sedentary, calling for constant sitting at a desk, the total ration will in most cases be cut down to a point indicated by the individual's appetite. The amount which this calls for varies with the seasons, more food being consumed during the winter months than in the summer.

M EALS: The number and order of meals is usually determined by the nature of one's work. The ideal arrangement is, breakfast at nine or ten, and dinner at two or three, with no hard work to be performed after dinner, for experiments have shown that digestion proceeds with difficulty during the performance of work. The more common two-meal plan, luncheon at noon and dinner at six, is good, provided special attention is paid to digestibility of the dinner, in order that digestion will have been completed before one retires at night, digestion being as difficult during sleep as during work. The three-meal a day plan is not necessarily disadvantageous if care be taken that no more food is taken with the three meals than the system really needs. Where, however, an early breakfast is eaten, with a light luncheon, a sufficient number of calories have been taken to make unnecessary the heavy, several-course

Sir Henry Thompson also says that "the careful sifting of facts which continually came before me, compelled me to accept the conclusions that as much mischief in the form of actual disease, of impaired vigor, and of shortened life, accrues to civilized man, so far as I have observed in our country and throughout almost every part of Europe, from erroneous habits in eating, as from the habitual use of alcoholic drinks, considerable as I know the evil of that to be."

dinner that is usually taken in the evening. The subject of meals emphasizes the importance of digestibility of food. The morning and midday meals are followed by work, and so must be very easily digested, else digestion will be interfered with by work, while the last meal of the day must be easily digested in order to be got out of the way before one retires for the night.

CALORIMETER: A device for measuring the heat-producing value of food. The "bomb" calorimeter, the apparatus in most common use, looks not unlike an ordinary ice-cream freezer, having two outer jars, one fitted within the other, separated by a dead-air space. The inner jar contains another receptacle, which contains an intricate mechanism known as a "bomb." Inside this is placed the food, which is ignited by means of an electrical discharge. The operator observes carefully a thermometer which extends down into the water, so delicate that it will register one one-hundredth of a degree in temperature. The difference in the temperature of the water before and after the operation is a measure of the heat-production of the food. If the heat is equivalent to increasing the temperature of a gram of water four degrees, one calorie of food is present.

S ACCHARID: The unit of carbohydrate material, and representing three groups, as follows: "monosaccharids," or the glucoses, in which the molecule is made up of a single saccharid or unit; "disaccharids," or the saccharoses—that is, carbohydrates having two saccharids as a base; and "polysaccharids," or amyloses, or carbohydrates comprised of more than two units. The various glucoses are (1) glucose or dextrose or grape sugar; (2) levulose; and (3) galactose. The saccharoses are (1) saccharose, or cane sugar; (2) lactose or

milk-sugar, and (3) maltose. The amyloses are represented by starch, glycogen, or animal starch, and dextrin. The relation of the various groups may be seen as follows:

Sugar is present in all fruits and in most of the vegetables. The sugar found in fruits is known as "levulose" (see chart above); a special sugar found in grapes is known as "grape sugar"; sugar contained in milk is called "milk sugar"; sugar obtained from the sugar cane, maple sap, and the beet root is known as "cane sugar"; while in the process of digestion the various starches are also converted into a form of sugar known as "maltose," a disaccharid (see chart above), due to the action of the pytalin, or diastase, contained in the saliva. This conversion of starch into sugar is also seen in the ripening of fruits, in which process the starch is transformed into levulose, so that ripe fruits come to the hand predigested and ready for assimilation into the system, on which account fruit sugars are far more wholesome than cane sugar, which are obliged to go through an intricate process of digestion in the system.

CANE SUGAR: A disaccharid obtained from sugar cane, maple sap, and the sugar beet, and belonging to the disaccharid or saccharose group of carbohydrates. It is, indeed, pure carbohydrate and contains 116 calories to the ounce. In the process of manufacture, the juice obtained from the cane, or beet root, or the sap of the maple, is freed from impurities by a treatment of lime, filtered, and evaporated. The molasses, or "mother liquor," is removed, and the crude sugar thus obtained is refined by a process of redissolving, decolorizing and recrystallizing into the white sugar of commerce. Where this refining process does not take place, the crude sugar is sold as brown sugar. Sugar and molasses are also made from common sorghum.

GLUCOSE: A sugar obtained by treating starch with sulphuric acid. It is only one-half as sweet as cane sugar, and is used in the adulteration of candies, etc. It cannot be used safely, for it tends to produce flatulent dyspepsia, with acid eructations.

HONEY: A sugar obtained by bees from various flowers, and changed by them into dextrose, and then stored away in cells. Besides sugar, honey contains other substances, such as wax, gum, pigment matter, and certain odorous materials. The food value of honey is 95.2 calories per ounce, 94.7 of them being carbohydrates and 0.5 protein. It is more easily digested than cane sugar, and has a decided laxative effect.

STARCH: A term applied to the granular material found in the cellular tissue of plants, and in fruit, roots, and tubers. It is a polysaccharid. Starch predominates in all the cereal foods, in certain of the fruits, such as bananas and pears, and in the commoner vegetables, as may be seen from the following table:

Per cent	Per cent
Wheat bread 55.5	Potatoes 21.3
Wheat flour 75.6	Sweet potatoes 21.1
Graham Flour 71.8	Turnips 6.9
Rye flour 78.7	Carrots 10.1
Buckwheat flour 77.6	Cabbage 6.2
Beans 57.4	Melons 2.5
Oatmeal 68.1	Apples 14.3
Cornmeal 71.0	Pears 16.3
Rice 79.4	Bananas 23.3

Most of the starchy foods require cooking before eating, though some, like the banana, are eaten raw.

GLUTEN: A constituent of wheat and other cereals, separated from the grain in the process of making starch. It is composed of two substances known as "gliadin" and "glutenin" in the proportion of sixty to seventy per cent and thirty to forty per cent respectively, owing to the latter the adhesiveness and elasticity that make wheat flour, on account of the large proportion of gluten present, more easily made into light bread-stuffs than those cereals containing a small proportion of gluten. While extremely nutritious, the proportion of starch which it contains is small, and on this account breads and biscuits made from flour with a large percentage of gluten are used by sufferers from diabetes and obesity. Bread made of gluten flour contains on an average of protein 9.3 per cent, fat 1.4 per cent and carbohydrates 49.8, with a total food value of 1,160 calories per pound.

BRAN: The outer husk or coat of a kernel of wheat or other cereals. It consists for the larger part of cellulose, and is lacking in nutritive qualities, although it contains some carbohydrate material and certain valuable mineral salts. Throughout the digestive system it retains its bulk, and so encourages peristalsis. For this reason, bran, either in the form of a porridge or made into biscuits, is valuable in constipation. Graham flour differs from ordinary white flour in the fact that the bran has not been removed.

CELLULOSE: A term applied to the substance out of which the structure of plants is formed. It is a carbohydrate, very similar in nature to starch; it can, indeed, be reduced to starch by the action of heat and acids under proper conditions. In the body, however, it does not undergo digestion, and is cast off as refuse. Cellulose is found in large quantities in coarse vegetables, such as spinach and celery, and also in the bran of wheat, for which reason green vegetables and porridges and breads containing a large proportion of bran are valuable in cases of constipation, owing to the fact that in passing through the alimentary canal they are little affected by digestion and the bulk which they retain stimulating peristalsis.

T. C. O'D.

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Doctor Wiley's Boy

DR. HARVEY W. WILEY, author of our national pure food law, is having an opportunity to apply the results of his life-time study of foods in the rearing of his boy, Harvey W. Wiley, Jr. In a recent interview Doctor Wiley said, "The proper training for infants and young children consists in pure

food and good language. His greatest delight—from the standpoint of his father—is when he goes walking with his father and receives his daily lesson in Latin, which he much enjoys.

"Harvey W. Wiley, Jr., has never had any meat or poultry. He never has had any candy, sugar, ice cream, sweet cookies, or other foods of that kind. I need not add that he never has had any tea, coffee, chocolate, beer, wine, or whiskey. He is a perfectly developed boy, enjoys life immensly, and calls his meals by the uniform name of dinner."

EVIDENTLY Doctor Wiley knows how to feed a boy when he wants to make him a fine specimen of a boy. If a lad thrives so well on a natural simple life diet, why not keep right on and encourage him to stick to the simple bill-of-fare all his life?

The New Education

A TARECENT MEETING at the Battle Creek Sanitarium given over to the study of the physics and therapeutics of light, Dr. Samuel Dickey, President of Albion College, addressed himself to the subject, "New Light on Education." Education, he said, may be best conceived of as "a process of light revealing. I remember one time on a dark, stormy night, I was with a party up in the Adirondacks; my destination, Lake Placid. I reached the railway station about eleven o'clock at night, and so far as I could observe by the dim lights about the station, the place was most unattractive. In the morning, however, when I awoke in my room and looked out over the two beautiful lakes, I saw a scene that rivalled for beauty the best of the Alps; indeed, one might think himself standing

before minature Alps, and I said to myself, 'What a marvelous thing light is! How it reveals!' And so in education, light is a revealer.

"YOU HAVE MOST OF YOU SEEN A REPRODUCTION of the painting which inspired Markham's poem, 'The Man with the Hoe.' Ponder on such a man. Talk to him about the beauties of science, of architecture, sculpture, and painting; talk with him of the beauties of literature, of how Homer sang; talk to him about all the subjects that interest you and your words will fall on dull ears: but catch this man when a boy and educate him, disclose to him all the wealth of intellect of all the centuries, impart to him every beautiful thought that has ever been born in the mind of man, everything beautiful that has ever been produced in oratory or the arts, all that is noblest and best in human aspirations, and you have, not the man with the hoe, low of brow and dull of brain, but a man of intellect, whose mind and heart are aglow with light."

8 8 8

How a Great Pitching Record Was Made

B ASEBALL FANS the country over honor and reverence the name of Cy Young, one of the greatest pitchers, certainly the most loved, that baseball has ever known, and whose record length of active service will become one of the grand traditions of the sport. A recent interview with the great pitcher is of special interest, now at the beginning of the 1914 baseball season, when young "recruits" are trying to break into the game, many being called, but few chosen. Asked what had kept him in the "big ring" so long the great veteran said,

TAKING CARE OF MYSELF, kid, taking care of myself. I didn't dissipate much. I tried not to overwork, although a glance at the records will show that I always did my share, and I was always looking out for my own physical condition. Wander into any training camp in the Southland today and you will see a bunch of athletes lolling around, smoking cigarettes. Do you get it? I can't. I smoked years ago. cigars and a pipe. I had to quit it because of throat trouble. I found I was much better physically after I quit smoking. I don't believe any athlete should smoke cigarettes; in fact, I can't see a man smoking a cigarette without feeling sorry for him. Cigarettes and booze—they get the youngsters who start in the game hoping to climb to the top. Here's a piece of advice to these youngsters. You can't hit .300 in the Red Eye League and get by in the big show. You can't smoke cigarettes and burn 'em over the pan with telling effect. Cigarettes ruin more ball players than glass arms ever did."

Overland Walking Club Department

Suggestions for Camping

JUST AS SURELY AS SPRINGTIME turns the fancies of the young man to thoughts of love, as the poet puts it, so it turns the thoughts of men and women of all ages to love of outdoor life. With some the summer outing takes the form of a vacation of two or three weeks; with others it means spending

the season in a tent put up in the backyard or a nearby field; some are content with frequent week-end tramps and boating trips; while others, owing to unfortunate circumstances, must content themselves with thinking of former or of future vacations.

THE LAST NAMED CLASS, however, are becoming less numerous each year, for the reason that the vacation spirit is coming to be better understood. Formerly vacation meant elaborate preparations and special garments, a thirty-mile tramp requiring almost as much in the way of planning and expense as a thirty-day cruise in Norway. Fortunately this attitude towards vacation is disappearing, and it is coming to be seen that the spirit of vacation is of quite as much importance as the vacation itself. In accord with this change, the "new vacation" does not require Baedeker-like guides to camping, as were quite the thing a few years since, but rather is content with a few necessary "don'ts." A GOOD HEALTH correspondent, indeed, has thus summed up in three or four brief paragraphs an outfit that answers the purpose of really an elaborately equipped camp, and that for seasoned outers could be cut down at least one-half:

FOR FOUR CAMPERS, two wall tents, 12 x 14, with flies; four cots; eight blankets; four pillows with cases; four camp chairs; one camp table; one two-hole camp stove and three lengths of pipe; a teakettle, saucepan, dishpan, water bucket, one-half dozen each of teaspoons, tablespoons, knives and forks, with plates, cups, and saucers; two salts; one sugar bowl, one cream pitcher, one baking dish; two candlesticks, one lantern, one wash basin, one ax, one bread knife, one vegetable knife, one can opener.

Many would prefer to make their beds of green boughs, for which purpose two slender logs, cut from fallen trees, are placed lengthwise in the tent and about two and a half feet apart; then two short pieces are laid across the head and foot. This makes the frame of the bed. A layer of branches on the ground serves as springs, and on this the tips of say, pine, laid shingle-wise, complete the bed.

Tables and seats may be constructed of materials found on the ground. A fireplace, four big flat stones, one at each corner, across which two five-foot logs are laid parallel to support the cooking utensils, may dispense with the need of a stove. Packing boxes are useful as cupboards, and one sunk in the earth in some moist place serves an excellent purpose as a re-

frigerator.

SUGGESTIVE OF WHAT ARTICLES OF CLOTHING ARE MOST GENERALLY NEEDED, this list may be offered, although much will depend upon the probable climate and other condtiions of the camp selected: ladies, a complete golf or bicycle suit. An extra skirt, dark and heavy, walking or bicycle length. Two pair stout, heavy-soled shoes. One pair canvas leggings. Medium-weight underwear. A jacket, golf cape or wrap. A common shawl or blanket for shawl use. A soft felt hat. A wide-brimmed straw hat. A heavy veil. One pair extra heavy gloves. Two or three pair of gloves. Several outing flannel shirt-waists. One leather belt. Handkerchiefs, hosiery, neckwear, etc. Also a stick of camphor ice in case of chapped lips; and on account of the bright sun a pair of blue, smoked or colored spectacles often adds to one's comfort. For gentlemen, one or two suits of strong texture and medium weight; for example, one business suit, and a golf or bicycle suit. Two

suits of medium-weight underwear. Two light-weight, light-colored flannel shirts. One heavy blue flannel shirt. One sweater. Plenty of socks, the kind one always wears. A medium-weight overcoat. Two pair of stout shoes. An old soft hat. One stout leather belt. One pair of canvas or leather leggings. Plenty of handkerchiefs. One bandana handkerchief for the neck. Mackintosh or waterproof coat. One pair of heavy gloves. Two dozen large, strong safety pins.

THE REALLY IMPORTANT INSTRUCTIONS in the matter of vacationing relate, however, to the things to avoid. The most important pertain to diet. Foods rich in fats and carbohydrates should be avoided, since they produce a great amount of heat within the body, and it is the heat from which one is trying to escape. Richly carbohydrate foods should not be taken to excess. In most cases vacation habits demand a lighter diet than is taken at home, although the tendency in camp too often is quite the contrary, to forget that habits which are unhealthful at home are not less so in the woods.

M EAT FOODS OF ALL KINDS SHOULD BE AVOIDED, for several reasons: first, for the same reason that they should be avoided at home—because they are rich in protein; for the further reason that ordinary camp facilities do not provide for satisfactory refrigeration, so that the meat spoils rapidly; and third, for esthetic reasons, which certainly ought to be considered in vacation life, when one tries to forget the hum-drum, everyday life, and to get in touch once more with the natural life: meat is an unnatural food; it causes suffering and pain on the part of the creature that gives up its life for our

(Continued on page 18, Advertising Section)

M Book Review M

The Camper's Own Book

THERE are features of the present work to interest every camper, but that which will interest the greatest number, and which, indeed, is very commendably done, is the chapter on "Medical and Surgical Suggestions for the Camper," which tells what to take into the woods, and how to apply it in case of sickness and injury of all kinds. Of real literary charm also is the chapter on "The Fallacy of Roughing It," which discusses in a genial manner the philosophy of recreation. Other interesting chapters are on canoeing, photography, camp cooking, etc. Each chapter is contributed by an acknowledged authority on his respective subject, and in the book, every camper, whether novitiate or veteran, will find much that is suggestive and helpful. The volume is profusely illustrated with diagrams and photographs.

"The Camper's Own Book for Devotees of Camp and Trail." New

York: The Log Cabin Press.

8 8 8

America Through the Spectacles of An Oriental Diplomat

W U TING FANG, while minister to the United States, was once described as "the joy of Washington." It were truer to say that he was the delight of America. He was known wherever newspapers are read, and his disconcerting questions and his pointed comments were a universal joy in a country that does not take too profound an interest in the sayings and doings of its public men. This book contains results of the great Chinese statesman's observations on all phases of American life, from American dress and table manners to athletics and sports. A delightful chapter has to do with the subject of names. In China, says Doctor Wu, "particular care is taken not to use a name which has a bad meaning. In Washington, however, I once met a man in an elevator whose name was 'Coffin.' Was I to be blamed for wondering if the

elevator was to be my coffin? On another occasion I met a man whose name was 'Death,' and as soon as I heard his name I felt inclined to run away, for I did not wish to die.' The subject of health frequently comes up in the book, the author being a firm believer in the value of fresh air, the non-meat diet, and being an inveterate foe of hobble skirts, long skirts and decolletté waists. American women, while comparisons between them and Oriental women are not altogether onesided, may yet feel honored at the delightful things Minister Wu has to say about them. The author can not, of course, sympathize with the American business spirit, which keeps a man, even after having become a multi-millionaire, slaving from morning until night amassing money, and still more money, while he leaves uncultivated the spiritual and intellectual sides of his nature.

We do not know of a juster estimate of America by a visitor than this by Doctor Wu. The point of view is always the Oriental, but it is the inquiring Oriental, desirous of acquiring a sympathetic understanding of the spirit of our institutions. It must prove a good corrector of national vanity, and be the giftie that will "gie us to see ourel's as ithers see us."

"America Through the Spectacles of an Oriental Diplomat." By Wu Ting Fang, former Minister of China to the United States. \$1.50 net. New York: Frederick A. Stokes and Company.

8 8 8

Diet in Relation to Age and Activity

The writings of Sir Henry Thompson have served as a refuge to not a few opponents of a non-meat diet. An earnest advocate of moderation in all things, Sir Henry often said unkind things of vegetarianism, but in the present edition of his "Diet in Relation to Age and Activity," finished before he died and now published in America, he showed that meat was not without its disadvantages. For instance, he admits that the taste for meat is not a natural one. "It should be remarked," he says. "that it appears to be by no means a natural taste with the young. Few children like that part of the meal which consists of meat, but prefer the pudding, the fruits, or the vegetables." Again, "the sultry period of our summer, although comparatively slight and of short duration, is nevertheless felt by some persons to be extremely oppressive; but this is mainly due to the practice of eating much animal food or fatty matters,

conjoined as it often is with the habit of drinking freely of fluids containing more or less of alcohol." The odors of meat cookery, too, are repugnant to every refined taste, as opposed to the delicate flavors of a nonmeat meal. The slight eater finds on his table that which is delightful to a palate sensitive to mild impressions, and indisposed to gross and overpowerful ones. After the meal is over, his wit is fresher, his temper more cheerful, and he takes his easy chair to enjoy fireside talk, and not to sink into a heavy slumber, which, on awakening is but exchanged for a sense of discontent or stupidity."

"Diet in Relation to Age and Activity: With Hints Concerning Habits Conducive to Longevity." By Sir Henry Thompson, Bart., F.R.S.C., M.D. \$1.00 net. New York: Frederick Warne & Company.

8 8 8

The Commuter's Garden

PEOPLE new at the business of gardening will welcome gladly the advice given by Mr. Hayward on gardens, the care of lawns, the planting of shrubs and vines, and the general subject of farming in a small way. The book begins with the work that can be done about one's home in winter and early spring in the way of getting out strawberry beds, pruning shrubs and grapevines, repairing chicken houses and planning the garden. The handling of bulbs, the building of hot beds and cold frames, the setting out of trees, and vegetable planting are also discussed in their place, as also pruning, spraying, etc. The book is written in a delightful style and contains sixteen full page illustrations.

"The Commuter's Garden." By Walter B. Hayward. \$1.00 net.

New York: Thomas Y. Crowell Company.

8 8 8

The Backvard Farmer

THE seventy-five chapters of this useful book give complete and reliable directions for the best cultivation of vegetables, fruit and flowers, the management of poultry and pets, the proper care of the lawn, vines and shade trees, and discuss everything pertaining to the outdoors of the suburban, village or country home.

Some of the chapters are: "Making the Back Yard a Garden Spot."

"Back Yard Dividends," "Making a Garden Productive," "Preparing the Garden," "Why Gardens Fail," "Making the City Flock Pay," "Laying Out Flower Beds." The author, who is a practical gardener and an authority on the subject, was for several years a member of the faculty of two State agricultural colleges and possesses the ability to write in a clear and entertaining style.

"The Back Yard Farmer." By J. Willard Bolte. \$1.00. Chicago:

Forbes and Company.

8 8 8

The Message of New Thought

The aim of the present author has been to set forth the basic principles of New Thought, and to point out the diverging line between new thought and the orthodox creed and Christian science. As an interpretation, it is clear, logical and comprehensive, while the splendid style in which it is written makes it important as a literary production.

"The Message of New Thought." By Abel Leighton Allen. \$1.25

net. New York: Thomas Y. Crowell Company.

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The Stock Exchange from Within

The present volume, an exposition of the theory and practice of stock broking, has been written by the author, a well-known broker, in the "hope that it possesses some slight value as a contribution to the vexed and vexing discussions of the stock exchange, and that it may serve in some degree both to dull the sharp edge of what is termed criticism, and to strengthen the hands and hearts of loyal friends of a greatly misunderstood institution." The author properly asks the reader "to disregard the utterances of demagogues and self-seekers, and to consider facts." The book is well written, being free from technical terms and accompanied by a profusion of quotations from acknowledged authorities. The shortcomings of the Stock Exchange, are many, without doubt, but it is only fair that they be more thoroughly defined and more thoroughly understood by the people at large than is true today, and a means to this end is Mr. Van Antwerp's excellent book.

"The Stock Exchange from Within." By W. T. Van Antwerp. New

York: Doubleday, Page and Company.