Fundamental Principles of Health

By ALBERT S. GRAY, M. D.

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FOOD AND DELINQUENTS.

Under a recent date an Associated Press dispatch credits Charles C. D. Hilles, formerly private secretary to President Taft, now president of the New York Juvenile asylum in Dobbs Ferry, with the discovery that bad teeth make bad boys.

What is the cause of bad teeth in children under fifteen years of age? It is universally admitted that the fundamental cause of the early decay of children's teeth is anemia, a lack of sufficient building material during the growing period. Obviously a lack of brick and mortar will result in an imperfect building, and the same lack of material must result in an imperfect body.

Mr. Hilles is not the discoverer of this truth, but none the less he is entitled to great credit for recognizing and taking practical steps to combat a dangerous condition that many foreign governments are making strenuous efforts to overcome.

In the parliamentary debate on free meals, March 27, 1905, Sir William Anson, then British parliamentary secretary to the board of education, replying to Messrs. Kier Hardie and William Crooks, admitted that in the day industrial schools, where the children had three meals a day, he found them "bright and intelligent and being developed physically and mentally in a satisfactory way." Although the children lived at home the regular and wholesome supply of food was so potent a factor that "their condition was thoroughly satisfactory."

Wilson Bruce, following other witnesses before the Scottish commission in pointing out the startling superiority of industrial school children, added that if we fed and clothed the elementary school children as suitably we should "make a new race of them."

The commissioners noted this contrast between the ill-nourished elementary school children of respectable parents and well-developed industrial school children of those who have "altogether failed in their duty."

The countess of Warwick, writing in "A Nation's Youth," says: "What a fine moral have we here. Be a bad parent, or confess yourself unable to control your own children, and they will be attached to an industrial school, given three meals a day, largely at the expense of the ratepayers, and they will become bright and intelligent boys, developed physically and mentally in a satisfactory way."

This touches upon and brings sharply to the front the whole subject of sophisticated foods around which a commercial battle royal is at present raging in this country. In no field of knowledge is there so general a lack of personal information founded on experience as in the fundamental one of food.

Eating has become an art which has to be learned by man, and unfortunately the subject is considered so unimportant that quite generally our foods are selected on the statement of persons whose only interest is in the profit to be derived from the manufacture and sale of the commodity, and then after the purchase in this slipshod manner it is too frequently turned over to some incompetent kitchen drudge to be prepared for eating.

In order that an intelligent choice of proper diet may be made it is absolutely necessary that we should possess a certain smattering of scientific knowledge. This does not consist in the memorizing of a few terms sufficient to enable us to babble about carbohydrates, proteins and fats, of calories and of balanced rations, but to have a thorough understanding of the real meaning of the closing paragraph of the fourth article of this series, which we here again repeat for emphasis: "The now prevailing standard of food values which measures the heat units produced from foods and completely ignores all other elements and factors is not only woefully inadequate in the light of modern science, but constitutes a grave menace to the health, to the morals, to the sanity and to the life of any people."

The chief reason for the improvement in inmates of well-governed asylums and industrial schools over the rate of development shown by children under home conditions undoubtedly lies in the fact that food matter is bought in bulk and largely on the horse-food basis, that is to say, the whole grains are bought, cooked and served, rather than the more expensive refined processed matter. Of course we are assured by "experts" that the food is "improved" and made "more digestible" by the elaborate process through which it is passed, but any successful raiser of cattle, hogs, chickens, pigeons, dogs or cats can tell of disastrous results following the feeding of any of these animals for any material period of time on "refined" food matter. And humanity still waits the coming of some Moses to free it from the bondage of the observance of universal law to which all living things are subject.

WHITE FLOUR FOOD.

"A little learning is a dangerous thing;
Drink deep, or taste not the Pierian spring:
There shallow drafts intoxicate the brain,
And drinking largely sobers us again."

A recent magazine article written by an "expert" on food matters misquotes the first line of the above and then gives particular point to the truth of the quotation by grossly misinterpreting a clean cut, scientific demonstration of a disease resulting from the use of sophisticated food matter.

The article in question reads as follows: "We are told about biochemical properties of wheat offals and as proof we are referred to the ravages of beri-beri from eating hulled rice. This is jugglery, something on the order of the magician Kellar. To be specific, beri-beri is a disease that has no connection with the whole wheat and white flour question. It is as remote as it can be. Beri-beri is a form of nervous disease that has affected the natives of Asia, who live mainly on rice, and of late years the introduction of hulled rice has increased the disease. It has been found that when rice polish was used as food along with the rice the disease was lessened in intensity.

"From this it has been argued that the rice hulls contained nourishing substances which had been removed from the rice in polishing. This looked very plausible. From these facts it was argued that wheat bran must also contain nourishing substances and they should not be removed from the wheat in the manufacture of flour. Fortunately, however, the subject of beri-beri has been worked out scientifically, and Funk, of the Lister institute, has shown that the disease is caused by some toxic action of rice protein.

"This should show the danger of being influenced by the exaggerated accounts of white bread and hulled rice starvation, statements which have no foundation in proved facts. White bread is safe food. Polished rice is safe food, as scientific investigation has proved."

The discerning reader will note that the matter in the body of the article controverts the finding stated in the closing paragraph quoted. The whole truth is as follows:

Casimir Funk of the biochemical department, Lister Institute of Preventive Medicine, discovered that a substance could be recovered from the matter ground from the surface of rice in polishing it which would in a few hours cure a disease known as polyneuritis, or beri-beri.

Underlying every happening in this universe is a law or principle, and the same principle will be found producing many widely separated results. The statement that beri-beri has no connection with whole wheat and white flour is not strictly true, because the same principle applies. Beri-beri is caused by a mineral starvation, and we know many diseases are caused by the mineral starvation resulting from the too free use of demineralized foods, including flour. The writer personally knows of large flocks of chickens being killed by feeding them on demineralized grain, and of dogs killed by feeding them on demineralized meat and white bread. Every physiologist of note states that the vitality of the individual cell depends on a free supply of mineral matter consisting of at least three elements. It would be reasonable then to expect some definite deleterious result from a diet composed largely of mineral-free matter, and the fact that all white bread eating peoples are greatly troubled with constipation may be considered evident to make belief. Further evidence that white bread is not healthful is given by Sherman, who states that washed bran fed to cows was found to be constipating, indicating that the laxative property of ordinary bran and whole wheat products is dependent not simply upon mechanical irritation.

It would be as logical to state that while you might break your neck falling off a thirty foot brick house, falling off a thirty foot frame house over in the next block is safe because it has no connection with the brick house. "It is as remote as it can be." That may be, but nevertheless, the chances of breaking your neck are equal, because the principles are identical.

The too free use of white flour, or of any other demineralized foodstuff, no matter whether it be demineralized by being processed or by stupid cooking methods, is detrimental to health.

FREIGHT CAR SERVICE

ROOM FOR IMPROVEMENT IN IMPORTANT MATTER.

Many Suggestions Have Been Made, Among Them That a "Clearing House" Might Help to Smooth Away Difficulties.

The subject of car shortage has for years interested railway officials, but as yet no general policy has been adopted. Every harvest season, and every season for the shipping of great quantities of winter fuel, finds the railroads more or less unprepared because of a scarcity of cars. This condition has led to many investigations and numerous recommendations. The interstate commerce commission, several years ago, endeavored to correct the demurrage rules, but some railroad men felt that thereby the situation was made more difficult.

J. R. Cavanaugh, an Indianapolis railroad man, recommends, in the Traffic World, the pooling of freight cars, that is that a freight car "clearing house" should be formed to take over all the freight cars in the country. Ownership would remain the same, but management would be centralized. The clearing association would operate under the rules of the American Railway association, would receive reports from every part of the country and would be enabled to act nationally instead of locally. The idea is to equalize car interchange. There are many thousands of cars idle in one place when they are needed in another. It would be the new association's purpose to remedy this condition.

The proposal is in line with ideas expressed by other railroad men. It is said that for at least two-thirds of the year 100,000 freight cars stand idle on the sidings. These represent an investment of perhaps $150,000,000. The average daily journey of a freight car is estimated to be but twenty-five miles. Under the present complicated system of demurrage, it is declared that, out of every nine days, a car is in actual transportation service only two days. The other seven days are taken up in loading, unloading or storage.

One investigator, writing in the Technical World Magazine last year, gave it as his opinion that there are too many freight cars—that is, too much capital is invested in this sort of equipment considering the returns. It is evident that the railroads lose millions of dollars annually, because of the lack of system in car handling. Perhaps this loss has something to do with the "hard times" which the railroads are experiencing.

Titanium-Steel Rails.

Titanium-steel rails for railways were first made experimentally seven years ago. The results then shown led to their manufacture by several steel companies, and about five years ago their manufacture was undertaken upon a commercial scale.

Experiments on the New York Central have confirmed those made elsewhere in showing that these rails wear several times as long as those made of ordinary Bessemer steel. Titanium has a great affinity for nitrogen and this property makes it desirable for railway purposes.—Popular Electricity.

Railroad Porters' Complaint.

"Mister Porter" must be the form of address used by passengers on the Great Western and the London and Northwestern companies in the Warwick and Leamington district, when they address the railroad porters. The men are of opinion that they are not treated with proper respect by the officials of the company, and consequently have passed a resolution asking the union to agitate that they should be addressed as "Mister," similarly to the clerks, and not merely by their surnames.

To Discover the Deserving.

The Canadian Pacific railroad has added to its staff a "scout," whose duty it will be to travel over the system and discover those employees who are especially worthy of advancement. Incidentally he will report those found wanting; but it is significant that his function primarily is not to make complaint, but to make doubly sure that the deserving are recognized.

A Veteran.

W. Hanley of Barlby, near Selby, England, a signalman on the Northeastern railroad, has been forty years in one signal box, and has walked to and from his work a distance of 61,000 miles.

BUILT FOR MILITARY PURPOSE

Millions Poured Into Trans-Siberian Railroad Have Had a Very Definite Object.

There is a railroad from the North sea to the Japan sea. It was built by a nation to capture nations. It has failed of its purpose so far. The Trans-Siberian, all things considered, is the most gigantic railroad task that ever was performed. In money it will eat up more than $1,000,000,000. In lives, it has destroyed thousands. Its earnings are practically negligible. Yet, at this time, the Russians are laying double tracks on it from end to end! Moreover, they are building one branch of it that would reach from New York to Chicago and leave 300 miles for sidings, and that will cost more than $150,000,000.

If that were only a railroad, it would be the greatest railroad mystery of the ages; but it is not only a railroad. It is like the army and the navy of Russia. It is a national expenditure for the conquest of Asia. Some day, no doubt, when the coffers of Russia are filled again with gold, the rest of the story of the Trans-Siberian will be written. Probably the men who are doing the dreaming will not live to see the writing.—C. M. Keys in the World's Works.

LIGHTS WARN DAY TRAINS

Simple System Which Eminent Signal Engineer Believes Will Be Found to Be Effective.

With the recent developments in lenses for signal purposes, according to Thomas S. Stevens, signal engineer for the Atchison, Topeka and Santa Fe railroad, it is now practicable for the different colors to be readily distinguished in daylight at a distance of 2,000 feet.

All the complicated mechanism necessary for the mechanical operation of signal arms are eliminated and replaced by simple electrical circuits which are far more efficient and economical to maintain.

In the majority of cases two 25-watt lamps are used behind an eight-inch lens. Indeed, it appears that the problem with this type of signaling is to provide a light signal sufficiently visible in bright sunlight which will not make the signal too prominent at night.

New Motor Plow.

An English firm is putting out a new plow that is propelled by a farm-horse power motor, that is much like the horse-drawn implement, and can be used successfully for any of the ordinary agricultural tasks, such as plowing, cultivating, scuffling, skinning, hoeing and drilling. As it is only three feet high and two feet four inches wide, it can be used in places where horses cannot work, between fruit trees in orchards, in vineyards and hop gardens, and in rubber, tea and coffee plantations. Unlike other motor plows, it has only two driven road wheels, and the attendant who walks behind it runs the engine and guides the plow by means of star wheels. With one wheel running in a furrow, the plow virtually steers itself, and needs little attention except at the end of the furrows. The makers assert that the machine will do nearly twice as much work a day as a horse-drawn plow, at about one-half the cost an acre. The correctness of the assertion naturally depends somewhat upon the nature of the land on which the machine is set to work.

Public Too Careless.

People are incredibly careless in regard to crossing railroad tracks. A statistical study of accidents states that out of 32,078 cases only 298 persons in vehicles or on foot fully obeyed the "Stop, Look and Listen" sign, or waited for the watchman's signal before crossing the tracks; 8,776 persons looked both ways, but neither listened nor stopped. The "safety first" campaign is merely a timely one in the face of such conditions.

Electro Magnets on Steam Cranes.

An electro lifting magnet would frequently prove very serviceable for use with railroad wrecking cranes of the usual steam operated variety, but the necessary electric current is lacking. In such cases it has been suggested that a small turbo-generator could be easily fitted, and would be a valuable addition to the equipment.—Scientific American.

Travel on British Lines.

In the year 1913 the railroads of Great Britain carried 1,228,316,000 passengers. By far the greater number of these (933,498,000) travelled third class. The number of season ticket holders is estimated at 595,000.

NEW REBELLION BREAKS OUT IN SOUTH AFRICA

London Hears of Uprising of Boers Under DeWitt and Beyers

ENGLISH CLAIM GERMANS ARE CHECKED ON COAST

War Ships Driven Away By Big Guns On Monday Return to Help Allies Near Ostend On Tuesday.

London—Another rebellion has broken out in South Africa. General Christian de Witt and General Christian Frederick Beyers have taken the lead of the rebels in the Orange Free State and Western Transvaal.

Having put down the rebellion in the northern province of Cape Colony, led by Lieut-Co. Maritz, the government of the Union of South Africa is now faced by the more serious rising under Generals de Witt and Beyers, the latter of whom resigned the command of the Union forces when Premier Botha decided to take up arms against Germany.

According to an official report received Tuesday, armed rebellious commandoes are already in existence; the town of Heilbron, in the northern part of the Orange River colony, has been seized and the government officials have been taken prisoners, while a train has been stopped and armed citizens of the defense force have been taken from it and disarmed.

The Union government has issued a proclamation to the people, announcing these events and explaining that, although it was aware of these rebellious preparations, it had been taking steps to preserve peace without bloodshed.

London Claims Germans Are Checked.

London—Germany's effort to raid the English channel ports of France has been checked so effectually, according to advices received here Tuesday, that London believes there is no longer any immediate danger of the threatened "sweep of the coast to Calais" and a cross-sea blow at Britain.

An Amsterdam dispatch received at midnight Tuesday says the British warships have resumed the bombardment of the German trenches at Ostend and that loud guns which were silent Monday are again firing. The battle continues to rage on the Yser and the severity of the losses exceeds that which occurred on the Nethe and the Meuse. The Germans are posting more big guns on the coast. Great numbers of wounded are being brought to Bruges.

The Germans have gained two points in the last four days—the taking of Roulers and the crossing of the Yser river. But they have not been able to advance in a way that would make these gains significant in the great scheme of war that is being worked out by the two armies in southern Belgium and northern France.

Since crossing the Yser and taking Roulers—in both of which victories the Germans suffered terrific losses—the invaders have not gained a foot of ground, while the Allies have made decided advances at Dixmude, on the Yser, and at other points along the line to the Lorraine border, where they have driven the enemy across the frontier, is the English claim.

The losses on both sides are known to have been terrific during the last few days, but the reports seem to show that the Germans were the greatest sufferers. Official statements have little to say of the losses but dispatches from correspondents indicate that the Germans have sacrificed thousands of lives in their efforts of the last three days.

One report from the continent said the British warships, in shelling the enemy on the Belgian shore on Sunday, had wiped out a German brigade of 6,000 men who were marching between Nieuport and Middlekirke. This report was not officially confirmed.

BRIEF NEWS OF WAR

Paris—The French Friday captured Altkirch, upper Alsace, at the point of bayonet. Altkirch has been taken and retaken several times since the war began.

London—Emperor Nicholas has conferred the Order of St. George, third class, on Grand Duke Nicholas, commander-in-chief of the Russian forces, and the same order, fourth class, on Captain Martinoff.

London—Captain John Jacob Astor, First Life Guards, son of William Waldorf Astor, has been wounded in a battle in France. His name appears in the list of casualties made public Tuesday night.

London—To frustrate the attempts of hostile craft to reach London, several additional channels in the Thames were closed Tuesday by order of the British admiralty. Some of the channels were closed last week. Within certain limits vessels at anchor in the river must not show lights at night.

London—In a British casualty list issued Friday but dated October 18 shows 10 officers killed, including Lieutenant Sir R. G. V. Duff, of the Second Life guards and 29 wounded.

London—The American mission for Belgian relief Friday received from the Belgian minister in London, Count De La Laing $500,000 taken from the Belgian relief funds entrusted to the minister. The commission is now purchasing food and supplies with this money.

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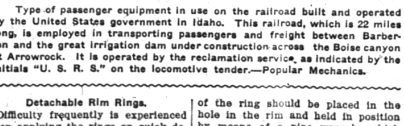

Type of passenger equipment in use on the railroad built and operated by the United States government in Idaho. This railroad, which is 22 miles long, is employed in transporting passengers and freight between Barberton and the great irrigation dam under construction across the Boise canyon at Arrowrock. It is operated by the reclamation service, as indicated by the initials "U. S. R. S." on the locomotive tender.—Popular Mechanics.

Not for Him.

J. B. Regan, the noted New York hotel man, was telling, apropos of a champagne dispute, champagne stories.

"Mean men should never drink champagne," said Mr. Regan. "They can't enjoy it, you know. They think, with every swallow, 'there goes 35 cents.'

"Once on the Mauretania a man asked me for a seasickness cure.

"'Drink,' I said to him, 'a half bottle of champagne just before you feel the seasickness starting.'

"'Oh,' he said with a worried look, 'wouldn't ginger ale do just as well? Champagne seems such expensive stuff to—er—risk.'"

Rhodes Scholarship.

A feeling that the present system leads every so often to a loss of interest in the Rhodes scholarship plan is undoubtedly the dominant force behind the determination of the trustees to make a change in the method of choosing the scholars from this country. Hereafter there will be elections from two-thirds of the states every year and the old idea of elections from all the states two years out of three will be abandoned. The new plan will insure to Oxford an uninterrupted flow of American students and should put an end to the lethargy that prevails here whenever a so-called lean year is upon us. At best the trustees seem to be having their troubles maintaining a continuous interest in Cecil Rhodes' vast enterprise and they are ever on the alert to popularize it. It was only last year, it will be remembered, that the Oxford regulations were relaxed to the extent of excusing American candidates for scholarships from entrance examinations in Greek.—Boston Transcript.

St. Pierre Still Dead.

St. Pierre, Martinique, which was destroyed by the eruption of Mount Pelee in 1902, has never been rebuilt, but it is said that even yet the ruins are being searched for valuables. The place is under police control, and two or three streets have been excavated, but it is still a "city of desolation."

Detachable Rim Rings.

Difficulty frequently is experienced when applying the rings on quick detachable rims. This is particularly true if the rings happen to be slightly sprung or bent, but the application may be greatly facilitated by observing a few simple hints. The first point to be observed is to have sufficient air in the tube to force the clinch of the tire into engagement with the rim as soon as the ring has been placed in the proper position. Then the projecting lug on the end of the ring should be placed in the hole in the rim and held in position by means of a pipe wrench, which should be twisted sideways, as shown in the sketch, to keep the ring in place. If the wrench is held in the left hand, the right hand can be used to wield the hammer.

Wireless on Airship.

The British navy's newest hydroaeroplane weighs a ton and a half, carries wireless equipment and is driven by a 200-horsepower motor.