

# GOOD HEALTH.



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### THE PHYSIOLOGY OF DIGESTION.

BY THE EDITOR.

**THE ALIMENTARY CANAL.**—The digestive system consists of a long, tortuous tube, the *digestive* or *alimentary canal*, to which are appended various accessory organs.

The alimentary canal is about thirty feet in length, and is lined throughout with mucous membrane, which is variously modified according to its location. Each end of the canal is guarded by a circular muscle, the upper opening, the mouth, being by this means opened or closed at pleasure, while the lower is involuntary in its action, only opening when overcome by force applied from above, a wise provision of nature to antagonize the influence of gravitation upon the contents of the bowels, and to retain the same during sleep or other periods of unconsciousness. This canal, which at an early period of development in human beings—as permanently in some simple animal forms—is simply a straight tube, in the fully developed individual becomes so modified as to present at least five distinct portions, each of which possesses peculiar and important functions, and hence requires separate description, together with the several accessory organs which are connected with them. Although a more detailed classification is possible, for our purpose it will be sufficient to consider the alimentary tube as divided into the *mouth*, *esophagus*, *stomach*, *small intestine*, and *large intestine*, or *colon*.

**THE MOUTH.**—The expanded upper portion of the canal, guarded by the circular muscle

of the lips, contains the teeth and tongue, and presents in its mucous membrane the orifices of the ducts of three pairs of secreting organs, known as the *salivary glands*. The back part of the mouth, usually known as the *pharynx*, communicates through the posterior nares with the nasal cavity; through the Eustachian canals, with the ears; through the upper end of the *larynx*, with the lungs; and through another opening at its extreme back part, with the *stomach*, by means of a canal known as

**THE ESOPHAGUS.**—This organ, commonly called the gullet or meat-pipe, is a muscular canal about nine inches in length, extending from the back part of the mouth to the left upper portion of the stomach. Its walls contain two layers of muscular fibers, the outer layer running longitudinal, or lengthwise of the tube, the fibers of the other being circular in character. When not in use, the walls of the esophagus lie in contact, so that there is no opening. At the lower end, the circular fibers are sufficiently thickened to form a sphincter muscle, by means of which the contents of the stomach are prevented from escaping upward.

**THE STOMACH.**—This, though one of the most important, is by no means the essential organ of digestion, as was formerly supposed. Contrary to the ancient view, it is now understood that the stomach is only one of a series of organs which take part in the work of digestion, each of which has an important function to perform, as necessary, in its place, as that of any other.



The stomach may be briefly described as a hollow muscle. It is simply an expansion of the alimentary canal, which in the esophagus is reduced to a narrow tube, but at the lower extremity of that organ abruptly expands into a pear-shaped viscus nine to twelve inches in length, and four to five inches in width, in its widest part. It is capable of holding one to two quarts, but it will allow of considerable distention, so as to be made to hold much more than this quantity.

In early infancy, the stomach is a mere spindle-shaped expansion of the digestive tube; but as the individual advances in age, it becomes more irregular in shape, its lower border being convex, while its upper is concave in outline, as may be seen by reference to the accompanying diagram,\* which very accurately represents the contour of the organ.

The walls of the stomach are made up of the outer serous coat, next to which is the muscular coat, made up of three distinct layers, the outer of which, like that of the esophagus and of the whole alimentary canal, is longitudinal, the next inner layer being made up of circular fibers; and, in addition, still another set of fibers peculiar to the stomach, running in an oblique direction. Within the muscular coat, and lining the organ, is the mucous membrane, which in addition to the usual characteristics of a mucous membrane presents peculiar glandular structures, which have received the name of peptic glands, from the character of their secretion. These glands are tubular in structure, and are found in all parts of the stomach, but most abundantly in the left, or cardiac end of the stomach, the whole number being estimated at five millions.

Besides its peculiar glands, the gastric mucous membrane contains a peculiar arrangement of blood and lymphatic vessels designed to produce rapid absorption of liquids received into the stomach or prepared for absorption by the process of digestion. Covering the mucous membrane of the stomach everywhere, and lining its tubular glands, is

a layer of living cells, known as epithelial cells, or epithelium. It is to these living, active molecules of life that the vital functions of this organ are chiefly due. By them is formed both the mucus, which protects the surface of its delicate membranous lining, and the active agent in the solution of the food in gastric digestion. The epithelium itself also protects the membrane upon which it rests.

At the lower end of the stomach is a narrow orifice at which the circular muscular fibers are much thickened, forming a sphincter muscle; this is known as the pylorus, which literally signifies, "gate-keeper." The position of the stomach may be readily seen in the accompanying diagram.

THE SMALL INTESTINE.—The pylorus forms the division between the stomach and the small intestine, which constitutes by far the greater portion of the alimentary canal, being about twenty feet in length. Its convoluted form, as seen in the diagram already referred to, is necessitated by its great length, which, together with the several functions which it performs, makes it by far the most important of the different portions of the digestive apparatus.

That portion of the small intestine which joins the stomach is called the *duodenum*, which is about ten inches in length, and broader than the rest of the small intestine. In structure, the small intestine has the same general plan as that observed in the stomach; viz., an external serous coat, the peritoneum, then the longitudinal and circular muscular layers, and an inner lining of mucous membrane with its glands and epithelium. The mucous membrane of the small intestine presents a variety of glandular structures, together with peculiar and remarkably well adapted structures for increasing the rapidity of absorption, known as villi.

THE LIVER AND PANCREAS.—In close proximity to the duodenal portion of the small intestine are two large glands, the liver and the pancreas, each of which communicates with the intestine by a duct, the two ducts having a common orifice in the mucous membrane of the duodenum, a little more than five inches below the stomach.

\*Although ample time was given for the work, the engraver has disappointed us, and we shall not be able to present the cut referred to until next month, when it will appear with the remainder of the article.—Ed.



**THE COLON.**—At its lower extremity, the small intestine communicates with a greatly expanded portion of the alimentary canal called the colon. The point of junction between these two portions is upon the right side near the groin, and is guarded by a peculiar structure of the mucous membrane known as the ileo-cæcal valve. The colon is about five feet in length. It consists of the ascending, transverse, and descending portions, the last-named part having at its lower extremity the rectum. The peculiar structure of the colon is such as to well fit it for completing the process of digestion. Like the stomach and the small intestine, the colon has also its muscular and mucous coats, the latter containing various glands, some of which are evidently excretory in character. The position of the colon and of its several portions will be readily seen by reference to the diagram.

**THE DIGESTIVE JUICES.**—The apparatus of digestion thus far described is chiefly mechanical in its operation, serving to comminute and transport the food. In some animals, as in some species of birds, this is the most essential part of the work of the stomach. In man and most animals, another class of agents is required, viz., a variety of fluids capable of reducing to a soluble and liquid condition the several elements of food, thus preparing them for absorption. We find these several fluids produced in the human digestive apparatus at the several points where they can accomplish the work required of them in the most efficient manner. They are five in number, and may be briefly described as follows:—

**THE SALIVA.**—The first of the digestive fluids is formed by the three pairs of salivary glands located in the mouth and connected with it by a system of ducts, through which the salivary fluid is conducted into its cavity. As found in the mouth, the saliva is a mixed secretion, containing, in addition to the products of the three pairs of glands, mucus from the membrane lining the oral cavity. It is a clear, limpid fluid, slightly alkaline in character, and is produced in abundance by frugivorous and herbivorous animals. Carnivorous animals produce it in scanty quantity, having little need for it, as

their food rarely contains the particular elements which the saliva is designed to aid in digesting. The quantity of saliva secreted by the human salivary glands is about three pints in twenty-four hours, of which only about one-half is formed during digestion.

**THE GASTRIC JUICE.**—This is an acid fluid formed only during digestion, by the peptic glands of the stomach. It is produced in great abundance, amounting, in twenty-four hours, to twelve or fourteen pints. Its activity as a digestive agent is due to a peculiar principle which it contains, known as *pepsin*, which can be readily separated from the gastric juice, and can be extracted from the mucous membrane of the stomach after death. Large quantities of pepsin are manufactured in this way from the stomach of the hog. One firm with which we are acquainted employs in this way over three hundred hog stomachs daily. A similar principle is extracted from the lining membrane of the gizzard of fowls; and an enterprising foreigner has recently utilized the stomach of the ostrich for the same purpose.

The acidity of the gastric juice seems to be a condition necessary for the efficiency of pepsin, its active principle; but physiologists have not yet been able to determine the exact nature of the acid to which the acidity is due. It is most probable that pepsin itself, when existing in its normal organic combination, possesses acid properties.

**THE PANCREATIC JUICE.**—This fluid, which so nearly resembles the saliva that it was once called "abdominal saliva," is the product of the pancreatic gland, which resembles the principal salivary glands in structure as closely as does its secretion the salivary secretion. This fluid is secreted only during digestion, and is then produced in considerable quantity, although the amount formed in twenty-four hours, or the quantity necessary for the digestion of a given amount of food, has not been ascertained. Like the saliva, the pancreatic juice is alkaline in character, and has an important office to perform in the digestion of certain of the elements of food.

**THE BILE.**—This fluid, usually considered an excretion, also seems to possess certain useful properties as a digestive agent. It is



strongly alkaline, of a greenish color and bitter taste, and is produced most abundantly during digestion, although its secretion continues in limited degree during the intervals of digestion. This fact well accords with the compound nature of the fluid, it being both a secretion and an excretion, the latter function evidently requiring continuous activity, while as a secretion, its activity is demanded only at intervals.

The bile, in company with the pancreatic juice, enters the duodenum at a point about five inches below the stomach, so that, contrary to the old views of digestion, the bile is found in the stomach only under very exceptional circumstances.

**THE INTESTINAL JUICE.**—This, the most complicated of all the digestive juices, is the product of the activity of the numerous and varied glands found in the mucous membrane of the intestines. Being a mixture of the secretion of a number of different glands, the intestinal fluid is of a compound character, which well fits it for its varied functions, as will be seen when we come to consider the physiology of digestion.

#### MICHIGAN STATE BOARD OF HEALTH.

The following notes of the last meeting of the Board is in part quoted from the *Lansing Republican* of July 11:—

The quarterly meeting of the State Board of Health was held in the office of the secretary, in the new capitol, last Tuesday. All the members of the Board were present. Dr. J. H. Kellogg of Battle Creek, the new member in place of Rev. C. H. Brigham, deceased, was present, this being the first meeting since his appointment.

##### PRESIDENT'S ADDRESS.

President Kedzie gave a brief history of the legislation relative to illuminating oils in this State, beginning with the law of 1869. This law provided for county inspection, but was not generally enforced. The legislature of 1873, which passed the law for establishing the State Board of Health, also passed a law raising the flash test for oil to 150° F. The State Board of Health began its work with this law in force. In 1875 the legislature re-

duced the flash test to 140° F., and increased the inspection fees. There were scarcely any casualties under this law, but the illuminating qualities of the oil were not always good. Dr. Kedzie, as a committee of the State Board of Health, devised the chill test, which was recommended to and adopted by the legislature of 1877, and secured a good and safe illuminating oil. The legislature of 1879 abolished the chill test and reduced the flash test to 120° F. Each time the law has been changed the cost of inspection has been increased, and the last law will entail an annual expense of about \$12,000 above the expenses incurred under the law of 1877.

Dr. Kedzie prophesies that the marked immunity from accidents from kerosene fires, explosions, etc., which have for the last few years been secured by the law which has existed, will in the next two years give place to a great increase of casualties under the new law, which gives ample opportunity for the introduction of cheap and dangerous oils. One or two instances have been reported to the Board in which attempts at incendiarism have been defeated by the non-explosive character of the oil which has been in use, it being found that when employed to set fire to buildings it would not burn with sufficient energy to accomplish the object designed. Careful observation will be made of the frequency of fires and other accidents from the cheaper oils which will soon be introduced.

The President presented a letter from Theodore H. Monk of the meteorological office at Toronto, asking for a set of reports of this Board, as they desire to inaugurate a system of health and weather observations similar to that of the Michigan Board.

Secretary Baker presented a letter from the secretary of the epidemiological society of London, expressing great interest in the work of the Michigan Board, especially that for the registration of disease.

A letter was presented from Mr. Avery of Baltimore, relative to

##### LEAD POISONING

as set forth by Dr. Kedzie's articles on that subject, and claiming that he had demonstrated that electroplating the tin utensil with a thin coating of silver will prevent any poisoning thereby.



## CATTLE DISEASES.

A communication was presented from A. J. Murray, veterinary surgeon at Detroit, relative to "cattle diseases in Michigan," and their relation to public health; also, a letter from a member of the National Board of Health on a similar subject. These communications were referred to the new standing committee on "diseases of domestic animals as relates to public health."

Secretary Baker presented his report of the work in the office during the last three months. It included the distribution of a large number of the regular reports and other documents, and of the registration report of births, marriages, and deaths. These were sent to meteorological observers, regular correspondents, sanitary exchanges, and other persons interested in such subjects in Michigan. Names and addresses of health officers were received from 760 townships, 113 villages, 39 cities. Much other work had been done in addition to the regular routine work of the office.

## THE STANDING COMMITTEES

were reorganized as follows:—

Epidemic diseases, etc.—Dr. H. O. Hitchcock.

Sewerage and drainage—Dr. H. F. Lyster.

Food, drinks, and water supply—Dr. R. C. Kedzie.

Ventilation, heating, etc.—Dr. D. C. Jacokes.

Climate, etc., in relation to health—Dr. H. F. Lyster.

Disposal of decomposing organic matter—Dr. J. H. Kellogg.

Poisons, chemicals, accidents, etc.—Dr. R. C. Kedzie.

Occupations, recreations, and individual hygiene in its relations to health—Dr. J. H. Kellogg.

Relations of schools to health, etc.—Dr. D. C. Jacokes.

Sanitary survey—Dr. Jacokes, Dr. H. B. Baker, and Leroy Parker.

Death-rate—Dr. Baker.

Legislation—Leroy Parker.

Finances of the Board—Leroy Parker.

Mental hygiene—Dr. Hitchcock.

Diseases of animals—Dr. Baker.

The committee on

## SANITARY CONVENTIONS

recommended that one be held in Detroit in December or January, and the next at Grand Rapids. Efforts will be made to get as large an exhibition of sanitary appliances together as possible.

## A SAMPLE OF RED FLANNEL

from Dr. Nash of Lapeer, reported to have caused sores, had been examined by Dr. Kedzie, and found to have been colored with aniline which contained arsenic and tin.

Dr. Kedzie made a very interesting report relative to the proceedings of the Sanitary Council of the Mississippi Valley lately held at Memphis.

The Board has in mind the institution of examinations in sanitary science at stated intervals, as soon as practicable, for the purpose of securing a corps of trained sanitary officers in different parts of the State. Dr. Lyster reported a general schedule for examinations on the subject. The subject is still under consideration.

Remarks were made by both the President and the Secretary respecting the high esteem in which the Michigan State Board of Health is held in other States, it being generally admitted that it stands at the head for efficiency and thoroughness in sanitary work.

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 ESCHEW STRONG DRINK  
INFLEXIBLY.

ALCOHOL is a poison as essentially and demonstrably as arsenic is, and, like arsenic and most other poisons, may sometimes be fitly used to kill a disease and save the life of its victim. Never fancy that a *little* alcohol can do no harm, though *much* alcohol may; for the alcohol diffused through a gallon of lager beer or cider is just as poisonous as though it were condensed into a bottle of whisky or a flask of brandy. No liquor stimulates except as the natural effect of the alcohol it contains or conceals; and men have died of alcoholic poisoning whose only stimulant was cider. The number hurried to their graves by lager beer is very great, though these victims generally finish their career on some kind of distilled spirits. In my judgment, whisky, honestly distilled from grain, is



among the least deadly of the alcoholic stimulants, though a quart of it will poison more than a quart of beer or cider, because, and only because, it contains a much larger proportion of alcohol. But in fact there is no honestly distilled liquor—or next to none—because it has been ascertained that an acceptable beverage (whether malt or spirituous) can be produced far cheaper by adding other poisons than by relying on alcohol alone. “I know,” said an ex-distiller recently, “that there is no honest whisky now made. Do you ask *how* I know it? Because I know that adding strychnine to the mash insures a production of twenty per cent more liquor than could otherwise be obtained; and there is not twenty per cent margin for profit on the business. Now, men do not make whisky for philanthropy’s sake; they make it for profit, and stop making when profit is denied them. So whisky-making has fallen necessarily and exclusively into the hands of those who do not scruple to use strychnine; and there it must remain.” Every observing old person will tell you that delirium tremens, palsy, apoplexy, epilepsy, etc., as results of drinking, are far more common now than they were half a century ago; and the reason is not that alcohol is more deadly, but that other poisons have been added to it that equally sap the citadel of life. Young men! as you love your God, your country, your families and yourselves, be entreated neither to make nor sell, diffuse nor imbibe, any kind of alcoholic beverage.—*Sel.*

#### STRANGE ECCENTRICITIES.

THE *London Globe* has an interesting paper on “Bodily Eccentricities,” from which we quote the following:—

“A well-known surgeon relates a curious instance of a patient on whom rice seemed to act as a poison. As rice is ordinarily wholesome, it would not appear unreasonable to assume that any apparently poisonous effects resulting from it might be regarded as a curious illustration of the power of mental prejudice. But this gentleman goes on to affirm that on one occasion, when at a dinner party, his patient felt the symptoms of rice-poisoning coming on, and was compelled to leave the

table, although unaware of having touched any rice. It turned out, however, that the white soup of which he had partaken was thickened with it. A similar instance is related by a gentleman who also found an irritant poison in a rice diet, and who was so intensely sensitive to its effect that after drinking a little bottled beer in which a few grains of rice had been put to induce secondary fermentation, he became seriously unwell, though quite unaware that the beer had contained anything objectionable.

“Dr. Prout speaks of a gentleman to whom a mutton chop was almost as poisonous as a toad-stool. This was attributed by his medical attendant to a mere whim. He fancied mutton did not agree with him, and such was the power of fancy, argued the doctor, that it actually made him ill to swallow a little. In order to prove the soundness of this theory, mutton was served up to him cunningly disguised as another kind of meat. It then became clear that it was not a matter of mere fancy, but a curious physiological fact, that an article of diet perfectly wholesome and nutritious to most people, was to this gentleman nothing less than an irritant poison, producing vomiting and diarrhoea.

“Innumerable instances of a similar kind are on record. Dr. Wynter has collected a great many of them. He himself once knew a lady who could never touch lobster salad without its producing spots all over her neck and face. She ventured to take a little, one evening, at a party, and in a short time was so disfigured that she had to retire. Cockles and shrimps, he says, have a similar influence on some persons. A medical friend of Dr. Wynter’s told him that a lady of his acquaintance always suffered from nettle-rash after eating veal, and that nervous excitement was the result of eating a little orange-peel. Sir James Eyre mentions the case of a gentleman who was invariably made ill if he ate but a single strawberry. Another person who, if we remember aright, came under Sir James’s own observation, would be sure to find his head swell in a most alarming manner if he ever ventured to touch so much as the smallest particle of hare. We have somewhere met with the mention of a case in which a person was unable to sit in a room where



cooked hare happened to be on the table, and this to all appearance not precisely on account of the smell, but because it seemed to have very much the effect which the presence of a cat had on Henry III. of France, who, by the way, was so absurdly fond of his dogs that he was often seen walking about with a basket of puppies slung around his neck by a piece of blue ribbon. Sir James Eyre speaks of a man who invariably had an attack of gout a short time after partaking of fish.

"These eccentricities are not confined to any one of the senses, but seem common to them all. Uladislaus, King of Poland, had the strongest aversion to the sight of apples. Dr. Wynter mentions an eccentric individual to whom the touch of a russet apple was intolerable. A lady of his acquaintance could not pass her hand along the bristles of a brush without its occasioning her the most exquisite nervous distress. Scaliger could not look at velvet without his whole body becoming violently agitated. Boyle would fall into convulsions if he chanced to hear water running from a tap; and La Motte de Vayer, though he would listen with the keenest pleasure to the roll and crash of thunder, could not bear to listen to music.

### A MANLY HABIT.

BY PROF. KIRK.

THE following excellent article we quote from an able English journal, the *House and Home*:—

"Is it not true," said a tender-hearted friend to us the other day, "that tobacco puts away the pangs of hunger, and so enables the starving poor to endure their privations much more easily than they otherwise would?" "And," said a kind-hearted spirit, "does it not warm the poor cabman on his box, when without a smoke he would be very miserable indeed?" "And again," said a third benevolent advocate of "comforts" for the needy, "how could a sailor get on without his plug of tobacco? Only think how cruel it would be to deny such men their last scrap of indulgence!" "Then about the soldiers in time of war—did you not read in the correspondence of the *Times* and *Daily News*, during the late campaigns on the continent, what a Godsend it was to poor shiver-

ing wretches in the winter bivouac when a supply of tobacco reached the camp? Ay, and was not your heart touched when the brave correspondents, in their strongest colors, pictured themselves as finding consolation in the 'fragrant weed,' when all else was depressing and using up their overdone natures?"

It does seem dreadful indifference to the necessities of our fellow-creatures to try to be proof against these and kindred appeals on behalf of the multitude who smoke! "Go into the hospitals for the wounded and dying, and only see for yourselves how the poor fellows have their pangs assuaged by the pipe, and then say whether you can join in the hue and cry of the anti-smokers, who would sweep all this comfort away!" It is perhaps wicked—very wicked of us; but, like other wicked people, we cannot, without great effort, help some very queer thoughts coming up in the face of these appeals in behalf of men who are so dependent on tobacco! Here is one such thought—the *women* do not smoke. If you have seen them in some parts where they do, you will have noticed that it is only the toughest of their kind, after all, who take to the pipe. The true representative of the gentler sex never does so. It is only the woman who comes nearest being like a man who shows the slightest tendency in this direction. The fact provokes most "wicked" questions for information ere we listen to the appeals that are made to us. Is it really the case that women are made of better stuff than men? It would seem so. At least it would seem that some women are made into hardier beings than are some men. These women, at least, endure privations and hardships in silence which would make the men who smoke ineffably wretched without their pipe, and such women would scorn to have their trials lessened by the stupefying influences of a narcotic. It does certainly appear as if these women were made of superior metal, and as if some men had been formed from inferior material.

The subject is a serious one when it opens itself up in its reality. We know families in which the man smokes. But he has as much as he requires of the best food his wife can secure. She has to go with less than half what



she needs, and the children have to do the same. The man smokes, and our compassion is appealed to on his behalf, but no tobacco is suggested for the wife and the children! It does look as if the women were made of better stuff than the men, as a rule, and hence the men's smaller trials must be narcotized, but the women manage to do without such "helps!"

We fear that this incredible inferiority on the part of a growing class of men, as compared with the great majority of women, will become only too credible if we pursue the inquiry further. We see, for example, a young mechanic taking an evening walk with his sweetheart. He is smoking tobacco! She never requires such a thing. Nobody dreams that she does. The charm of his presence is more than enough to warm her from head to heel, even if the night is a wintry one, and her clothing is thinner than his. But, oh! poor creature, *he* would be miserable if he could not smoke that pipe! The charms of her presence must have the addition of the narcotic, or he would be in a deplorable state in both body and mind! This is just the man who in a few years will be at the head of a family, with that young woman as his wife and mother of his family. This is the very man who will smoke his costly tobacco when his wife and children will go with less than half they should eat and wear. Is that man not an inferior being when compared with that woman? Is it not beyond dispute that he is immensely "the weaker vessel" of the two? We must pity him, certainly. But let the grounds of our pity be clear. We must be allowed to start with this fact—that he is an inferior being compared with his wife. He is, by his new and artificial constitution, less brave and capable of uncomplaining endurance than she. He is altogether so weak a being that we are to deplore his sad condition, and let him have narcotic helps which she despises! If he is upheld by his tobacco, while she endures far more severe hardships than he does, and scorns such aid, he demonstrates that he is a being inferior to her. If we must pity him, and plead for his smoking, it must be on this ground to begin with. His wife is able, in the strength of her soul, to rise above her privations and hardships, while

her poor cowardly husband is commiserated and his soul stupefied with tobacco!

But is not all this the outcome of some wretched delusion? It is so. The man, from the very nature God has given him, has a fund of endurance which a woman, other things being equal, has in less degree than he. If he does not show this, that is his shame. But if he chooses to call up his manhood when it is required to show itself, he will have vastly less need for tobacco than even his wife, and she has need of none. Neither of them has any need for the deceptive drug. They will both do better without it than they can possibly do with it. Like its kindred spirit alcohol, it can do nothing but deceive by silencing for a time the call of the nervous system for real and substantial relief. In this way it deadens the pangs of hunger, but leaves the body unfed. It removes for the time the sense of fatigue when the frame is exhausted and calls out for rest. It benumbs the sense of cold, so as to make the smoker feel warmed at the very moment when the thermometer shows it has really lowered his temperature.

How immensely low has a man sunk who confesses that he has become helplessly dependent on such a support! You say that we ought to pity him, and let him have his solace! Would it not be better to deliver him from his miserable delusion, and rouse him to be once more a man? If he will not be roused, then at least let it be understood that we pity the poor thing, weaker than the woman who is bravely independent of all his delusive consolations. It is more than high time that something like this became the general understanding. We are sinking as a nation because our men are becoming weaker than women. Our compassion is appealed to on behalf of the weak, but that now means the masculine instead of the feminine! Surely it would be worth a good deal of effort if such a state of matters could be reversed.

He who pleads for tobacco for the smoker and liquor for the tippler, has forgotten that it can never be the true way to raise men by pandering to their vices. Let them be summoned to show themselves men, and let the falseness of their refuges be exposed. If they must still be pitied, let it be on the clear understanding that they have only themselves



to blame if they will not fall back on the bravery their Creator endowed them with when he made them men.

We close with the eloquent words of a writer on "The Physiological Position of Tobacco," in the *Quarterly Journal of Science*:—

"Even in our days, notwithstanding the vast consumption of tobacco, it is a habit of the minority only. The female sex, to their honor be it said, with very rare exceptions, abstain from this indulgence. If the claims of the apologists of tobacco are correct, why is it that an entire sex avoids it? The frailer body and more mobile mind of woman seem to stand in greater need of 'soothing' and 'refreshing' than the coarser frame of man.

"It is not necessary; for all men do not smoke, and the abstainers are not subject to any inconvenience or disadvantage, but the reverse.

"Homer sang his deathless song, Raphael painted his glorious Madonnas, Luther preached, Guttenburg printed, Columbus discovered a New World, before tobacco was heard of. No tobacco rations were served out to the heroes of Thermopylæ, no cigar strung up the nerves of Socrates. Empires rose and fell, men lived and loved and died during long ages, without tobacco. History was for the most part written before its appearance. 'It is the solace, the aider, the familiar spirit of the thinker,' cries the apologist; yet Plato the divine thought without its aid. Augustine described the glories of God's city, Dante sang his majestic melancholy song, Savonarola reasoned and died, Alfred ruled well and wisely, without it. Tyrtæus sang his patriotic song, Roger Bacon dived deep into Nature's secrets, the wise Stagyrte sounded the depths of human wisdom, equally unaided by it. Harmodius and Aristogeiton twined the myrtle round their swords, and slew the tyrant of their fatherland, without its inspiration. In a word, kings ruled, poets sung, artists painted, patriots bled, martyrs suffered, thinkers reasoned, before it was known or dreamed of. Who of us can realize Moses with a 'churchwarden' in his mouth, or St. Paul smoking a prime Havana?

"Think of ancient Greece, of her glory in arts and arms and song, of her poets, sculptors, architects, after whom the moderns toil

in vain. We do but follow in their tracks with halting steps and slow, and yet they lived their lives, and thought their deathless thoughts, and gave immortal beauty to the silent stone, without tobacco.

"What shall we say, then, to this habit? It is in no case necessary or beneficial; it is a social nuisance; it is devoid of all æsthetic beauty; it is an unmanly leaning on a solace to care and labor neither sought nor needed by the weaker sex; it is an enormous and yearly increasing source of national improvidence. Above all, it is the foe to youthful development, the bane of youthful blood and brain. The subject may seem to some too trivial for serious attention; but when we consider the extent of juvenile smoking, we see that the national life and stamina are seriously threatened by this ignoble habit. So a noble tree, heaven-aspiring, with wide-spreading branches, whose leaves are a refuge for the singers of God, may be attacked by some insignificant parasitical plant, which winds round and round it in serpent-folds, and sucks away its sap and vigor, till the green leaves are blasted and the singers flee away, till the glory is departed, and Death and Ruin alone remain."

#### DANGER IN THE CISTERN.

It is far too common a practice for householders to allow the cisterns which hold the water for domestic use to remain uncleaned for years, although the danger to health is being constantly pointed out by the public press. A disgusting instance of this kind has just been reported by the medical officer of health for Kensington, which should make those who are water drinkers in any shape, whether it be in the form of cold water, tea, coffee, or spirit and water, look into their cisterns occasionally, or at any rate have them cleaned out at stated intervals.

The medical officer of health for Kensington has just published a report in which he refers to an unusually large number of deaths from scarlet fever and diphtheria. He states that he made an inquiry into the causes of these cases, and could not find any one common to all, but that in a large and comparatively newly-built house he met with several circumstances, any one of which might have



caused the fatal attack of diphtheria. In the first place, the water-closet was ventilated into the house instead of into the open air; in the second, the overflow pipe from the cistern communicated directly with the soil down-pipe; and thirdly, the cisterns were in a most filthy state, and evidently had not been cleaned out for some time. The upper one, which was uncovered, did not contain anything beyond the usual filthy deposit, but the one in the basement, which was used for all domestic purposes, contained the wing-cases of hundreds of cockroaches. The wing-cases being hard and comparatively insoluble in the water, remained in the cistern, but the "bodies had been slowly macerated and consumed by the household. In all probability these cisterns had not been cleaned out for years." It is said that cockroaches form a constituent part of Indian soy, and that many persons enjoy the flavor, but we can scarcely understand how the inhabitants of this house could have consumed this water without suspicion. Instances of dead birds and rats in uncovered cisterns are not infrequent, but they have usually been noticed before much injury has been done, through the strong smell of the water. At any rate, whether the connection with the sewer, or the solution of cockroaches, or both, contributed to the death we cannot say, but trust that this case will assist in inducing householders to look to their cisterns rather more frequently than they ordinarily do.—*Sanitary Record*.

#### SUPERSTITIOUS REMEDIES.

AN English journal, *All the Year Round*, gives the following among other illustrations of popular superstitions respecting the treatment of disease:—

"A cure for whooping-cough, in use not only in England but in North Germany, consists in putting into the mouth of the whooping child a newly-caught fish, and then letting it go again. The cough is communicated to the fish. Another cure for the same malady consists in passing the child nine times under and over a donkey. To charm away warts, an elder shoot is to be rubbed over them; then as many notches are cut on the twig as there are warts. The twig is buried,

and as it rots away the warts disappear. There are persons still living who have been stroked by a hanged man's hand for the purpose of dispelling tumors. In Devonshire there is a superstition that, if a person suffering from any disease throw a handkerchief in the coffin of a suicide, the disease will be cured as the handkerchief rots away. In other localities, the fore-foot of a hare, worn constantly in the pocket, is considered a potent charm against rheumatism. A like practice is found in this country, a horse-chestnut taking the place of the hare's foot. In some places the anti-rheumatic talisman is a potato. Bread baked on "Good Friday" is supposed to possess wonderful curative virtues. Such bread, it seems, never grows moldy. It is often kept for years, sometimes as many as twenty. It is most effectual when taken grated in brandy. Nor is it only for man's ailments that Good Friday bread is medicine; it is also considered good for some of the complaints of animals—for instance, it cures "the scours" in calves.

#### ORIGIN OF ALCOHOL.

DR. WILLARD PARKER, the eminent and venerable New York surgeon who has long stood as one of the staunchest friends of temperance, states that the process of distillation by which alcohol was obtained from fermented liquors was utterly unknown until about the middle of the eleventh century, when it was introduced into Europe by some Arabian alchemists. It does not appear that it was used, however, except for certain mechanical and chemical purposes, and also in the manufacture of a kind of paste with which the ladies painted themselves that they might appear more beautiful, until the sixteenth century. The Black Plague was then sweeping over Europe—sometimes called the Black Death—probably the same disease that is now threatening Europe from Russia. It started in China or India, and ravaged all Europe. It is estimated that ninety millions were swept away by its ravages. The *aqua vite*, or water of life, as it is called, was introduced at that time as an experiment, in order to stay the ravages of this awful disease.

During the reign of William and Mary an Act was passed encouraging the manufacture



of spirits. Soon after, and as a natural consequence, intemperance and profligacy prevailed to such an extent that the retailers in intoxicating drinks put up signs in public places, informing the people that they might get drunk for a penny, and have some straw to get sober on. In 1751 it was given to the English soldiers as a cordial, and we learn also, that for some time previous it had been used among the laborers in the Hungarian mines. Alcohol was then made mostly of grapes, and sold in Italy and Spain at first as a medicine. The Genoese afterward made it from grain, and sold it in bottles labeled "Water of Life."

During the reign of Henry VII., brandy was unknown in Ireland, but hardly had it been introduced when its alarming effect induced the government to pass a law forbidding its manufacture. In spite of all efforts to the contrary, however, the use of alcohol has spread until it has become a universal curse, and its history is written in the wretchedness, the tears, the groans, the poverty and murder of thousands. It has marched over the land with the tread of a giant, leaving the impress of its footsteps in the bones, sinews, and life-blood of the people.

**Take Care of Your Health.**—Sinners as we all are, I doubt that we violate God's moral, half so often as his physical laws, unless one counts the latter violations as part of the former. Before we are old enough to know better, we eat and drink more than would be good for us were it ever so wholesome, with much that would be hurtful if the quantity imbibed were ever so moderate. Two-thirds of the pains and aches of childhood are the immediate effects of excessive or improper eating or drinking—of these and nothing else. But for these calamitous inflections, most of us would have destroyed our digestive economy while yet in our teens. As it is, our teeth generally evince unmistakable symptoms of decay before we have severally attained the age of twenty-one. Dyspepsia soon adds its horrors in the case of multitudes; and at thirty a formidable minority, if not a majority, are in the downhill of life, victims of their own ignorance and excesses. Bad cookery (generally excessive

in the case of meats); food swamped and stewed in grease; meats, vegetables, and beverages swallowed when too hot (it were better that we took nothing when more than blood-warm); a jumble of acids and sweets, pickles and honey,—these corrode our teeth, taint our breath, honeycomb our bones, and deprave all the muscles and cartilages whereof our bodies are composed.

Of our countrymen and women above forty years old, a majority are invalids or daily sufferers because of their earlier violations of the laws of life—not to mention the larger number whom these violations have already consigned to untimely graves. We eat too much; we eat too fast; we eat at irregular intervals; we eat many things essentially and inevitably hurtful; we eat as though the stomach were an iron mill, bound to grind out whatever grists may be poured into the hopper. We pay for months of thoughtless indulgence and ignorant transgression, by years of inefficiency and suffering. Those who will inquire, and read, and consider, need not thus destroy themselves. We are victims of our own thoughtless sensuality, but not therefore innocent victims. It is our simple duty to take good care of the lives and faculties which have been intrusted to our stewardship; and any infidelity to this high trust is sin. If cleanliness be akin to godliness, a due regard for health may be justly accounted a moral duty. Let each seek out the right and pursue it, as well with regard to himself as to his neighbors.—*Horace Greeley.*

**Conscience and Health.**—Old Isaak Walton says that "he who loses his conscience has nothing left that is worth keeping. Therefore be sure you look to that. And, in the next place, look to your health; and, if you have it, praise God, and value it next to a good conscience; for health is the second blessing that we mortals are capable of, a blessing that money cannot buy; therefore value it, and be thankful for it." Health is indeed worth preserving; it is the soul that animates all enjoyments of life, which fade, and are tasteless, if not dead, without it.

—What ought not to be done, do not even think of doing.




 LITERARY MISCELLANY,
 

Devoted to Mental and Moral Culture, Social Science, Natural History,  
and other Interesting Topics.

## STEP BY STEP.

HEAVEN is not reached by a single bound,  
But we build the ladder by which we rise  
From the lowly earth to the vaulted skies,  
And we mount to its summit round by round.

I count these things to be grandly true:  
That a noble deed is a step toward God,  
Lifting the soul from the common sod  
To a purer air and a broader view.

We rise by the things that are under our feet,  
By what we have mastered in greed and gain,  
By the pride deposed and the passion slain,  
And the vanquished ill we hourly meet.

We hope, we resolve, we aspire, we trust,  
When the morning calls to life and light,  
But our hearts grow weary, and ere the night  
Our lives are trailing in sordid dust.

Wings for the angels, but feet for the men!  
We must borrow the wings to find the way;  
We may hope, and resolve, and aspire, and pray,  
But our feet must rise or we fall again.

Only in dreams is the ladder thrown  
From the weary earth to the sapphire wall;  
But the dreams depart and the visions fall,  
And the sleeper wakes on his pillow of stone.

Heaven is not reached by a single bound,  
But we build the ladder by which we rise  
From the lowly earth to the vaulted skies,  
And we mount to its summit round by round.

—*J. G. Holland.*

## JOHN BLAKE'S LEGACY.

WHEN John Blake died it was said that George Rand was sure to get a large sum, as it was known that Blake was rich, and Rand was the one of all his friends to whom he was sure to give it by his will.

But, when the will was read, it was found that not one word was said of him but this:

"And to my dear friend George Rand, I give my cold-water pledge which has hung in my room so long, and has done me so much good; but for it I should have died drunk long ago. To that pledge I owe all I own; and since it has done so much for me, it is my wish that my friend George

Rand sign and keep this pledge. It will make him rich, and in short, do as much for him as it has done me."

George Rand was mad at this will, and put it out of sight as he said,

"My drams I will not give up."

So great was his rage that he meant not to see or touch it. The old pledge lay for long years out of sight and out of mind.

In the meantime, George Rand went from bad to worse. He drank so hard that he could not do much else.

John Blake had now been dead six years, when George Rand came home one night, and told his poor wife that "not one cent of all he had was left," and that "Squire Grip would, the next day, take all they had, and turn them out in the cold world, with no house or home."

"O George," cried the poor wife, in a tone that would well nigh break one's heart, "what shall we do, where can we go?"

"I do not know," he said, with a sad heart, "to the poor-house, I fear."

"Oh! don't say that, George," said the wife. "You still have two hands left and if—"

"I cannot get work," he said, "I have been to all the men where I have had work, and they shake their heads and say the times are so hard they cannot give me work. I shall have to give it up."

"But you must not give it up, there must be work somewhere."

"But I cannot find it."

His wife stood in deep thought for a short time, and then said,

"If I will tell you how you can get work, will you do just as I say, that you may get it?"

"Pray what do you want me to do?"

"But will you do it?"

"I want to know what it is first, and then if it is not wrong, I will try."

"What you must do is to stop the use of strong drinks, and sign the pledge."



George Rand was in a rage.

"Do you mean to say that a spree once in a while is why I do not get work?"

"That is just what I mean, George," she said, with tears in her eyes, "for I have heard one of them say as much."

"Who was it?"

"Mr. Fields."

"What did he say?"

"You know the time, not more than two weeks ago when you—were—,

"Drunk?"

"Yes, when you were drunk: you were at work for him then, and when I told him you could not go, he knew how it was; and I heard him say to his clerk who was with him as they drove off, 'well this is not the first time George Rand has been on a spree when I have come for him to work for me; but he may be sure this will be the last time.' And that, my dear, is the source of all our woes, which lie so hard on us. This you must know when you think of it."

It was now George's time to think, and this he did for a time.

"By all that is dear to me you are right," he said; "but what can I do now? Our home is gone, all is gone, and I cannot get work. The pledge would not help me now."

"Yes it would help you a great deal," his wife said. "It would bring you back to where you once were, your old friends would give you work and thus save us from want."

George Rand's heart was too full for him to speak for a time, but at length he said,

"I will sign the pledge, and may God help me to keep it."

"Why not sign the old one your friend John Blake left you? I saw it the other day. If you will sign it I will bring it."

"To be sure, then we shall not have to make a new one."

The pledge was brought, and George took it out of the frame and laid it on the stand. As he did so, a small roll fell out at his feet on the floor, which he did not see. With a firm hand and his trust in God, he wrote his name by the side of the name of his old friend John Blake, who had long been dead. As he put the pledge back in the frame, his eyes fell on the roll which lay on the floor. He took it up and found a large sum—so

large that he was a rich man, and could have all he or his wife could wish. On the back of the frame, where it could not be seen till he took out the pledge to sign, he saw these words, left there by his old friend when he made his will and left the roll of bills:

"Is not the pledge a sure road to wealth?"

"God bless my old friend John Blake," he said, as the tears ran down his cheeks. "I can now save my home, and we can have all we want, and I shall have much to give. As I have found the pledge a sure road to wealth, I will try to get all I can to walk in it."

And his wife said from her heart, "Amen."

#### HISTORICAL SUN-DARKENINGS.

[We quote the following from *Nature*, an English scientific journal. It is very curious that the writer should have entirely overlooked one of the most remarkable of sun-darkenings, which occurred in this country in 1780, a graphic account of which we published some months since.—ED.]

Not a few persons appear to have been much exercised by a prognostication emanating from an American source, whereby the public are forewarned of an approaching period of sun-darkening to extend over several days. History does record instances in which the sun has been abnormally obscured, or its light paled, to such an extent that stars have come into view in the daytime, and Erman, Humboldt, and other writers have brought these occasions into prominent notice, the former in connection with the presumed passage of dense meteoric streams between the earth and the sun.

The earliest mention of such a phenomenon appears to be in the year B. C. 44, about the time of the death of Julius Cæsar, when we read in Plutarch and Dio Cassius that the sun was paler than usual for a whole year, and gave less heat, the air continuing cold and misty.

The darkness for two hours on August 22, A. D. 358, appears to have preceded the great earthquake of Nicomedia. Two years later, in all the eastern provinces of the Roman Empire, we are told there was "caligo a primo auroræ exortu adusque meridiem,"



and the stars were seen, the further description being rather applicable to a total solar eclipse; but neither the eclipse of March 4, 360, nor that of August 28, would be visible in those parts. Again, when Alaric appeared before Rome, the darkness was such that stars were seen in the daytime (Schnurrer, "Chronik der Seuchen"). Following the *Tablettes Chronologiques* of the Abbé Lenglet Dufresnoy, Alaric invested Rome A. D. 409, and became master of the city on August 24, 410; there was a visible eclipse of the sun on June 18 of the latter year, therefore while the siege was in progress; but on calculating the circumstances under which it would be seen at Rome, introducing the latest lunar elements, it appears that little more than half the sun's disk would be covered at the greatest phase, about 2h. 40m. P. M., and no sensible diminution of sunlight would be occasioned by the eclipse.

In 536, 567, and 626 we find mention of long periods of diminished sunlight. Schnurrer records that in 733, a year after the Saracens had been driven back beyond the Pyrenees, consequent on their defeat at Tours, "the sun darkened in an alarming manner on August 19; there appeared to be no eclipses by the moon, but rather an interruption by some meteoric substance." There was an eclipse of the sun, annular but nearly total, on the morning of August 14; it is mentioned in the Saxon Chronicle, which tells us "the sun's disk was like a black shield." The near coincidence of dates suggests in this case a connection between the darkness and the eclipse. In 934, according to a Portuguese historian, the sun lost its ordinary light for several months, and this is followed by the doubtful statement that an opening in the sky seemed to take place, with many flashes of lightning, and the full blaze of sunshine was suddenly restored.

In 1091, on September 29, not 21, as given in some translations of Humboldt's *Cosmos*, Schnurrer relates that there was a darkening of the sun which lasted three hours, and after which it had a peculiar color which occasioned great alarm. In another place we read: "Fuit eclipsis Solis 11 Kal. Octob. fere tres horas: Sol circa meridiem dire nigrescebat;" there was no visible eclipse at this time, and

the November eclipse was central only in the southern parts of the earth. A century later, or in June, 1191, according to Schnurrer, the sun was again darkened, with certain attendant effects upon nature: here the cause is easily found; on June 23 there was a total eclipse, in which the moon's shadow traversed the continent of Europe from Holland to the Crimea; the eclipse was total in this country between the coasts of Cumberland and Yorkshire. Erman refers to a sun-darkening on February 12, 1106, which was accompanied by meteors, and we read in the cometographies that on the 4th, or, according to others, on the 5th of February in this year a star was seen from the third to the ninth hour of the day, which was distant from the sun "only a foot and a half." Matthew Paris and Matthew of Westminster term this star a comet, and we may take it to have been the same which, later in the same month, was observed in China under the sign Pisces, and which at one time was supposed to have been identical with the great comet of 1680; this body, however, would not appear to have been sufficiently near the earth, even on the assumption of a denser constitution than usual with comets, to account for a diminution of the solar rays, by its intervention. On the last day of February, 1206, according to a Spanish writer, there was complete darkness for six hours. In 1241, "five months after the Mongol battle of Leignitz," the sun was so obscured, and the darkness became so great, that the stars were seen at the ninth hour about Michaelmas. In this case, again, the darkness referred to was undoubtedly due to the total eclipse on October 6, of which Prof. Schiaparelli has collected a full account from the Italian writers.

Lastly, in 1547, from April 23-25, Kepler relates on the authority of Gemma, "the sun appeared as though suffused with blood, and many stars were visible at noon-day." Schnurrer thought this phenomenon was what the Germans call an "Hohehrauch," notwithstanding the visibility of stars.

—A very rich man said, "I worked like a slave till I was forty to make my fortune, and I've been watching it like a detective ever since that time for my lodging, food, and clothes."



## VICTUALS AND DRINK.

"THERE once was a woman,  
 And what do you think?  
 She lived upon nothing  
 But victuals and drink.  
 Victuals and drink  
 Were the chief of her diet,  
 And yet this poor woman  
 Scarce ever was quiet."  
 And were you so foolish  
 As really to think,  
 That all she would want  
 Was her victuals and drink?  
 And that while she was furnished  
 With this sort of diet,  
 Her feeling and fancy  
 Would starve, and be quiet?  
 Mother Goose knew far better,  
 But thought it sufficient  
 To give a mere hint  
 That the fare was deficient;  
 For I do not believe  
 She could ever have meant  
 To imply there was reason  
 For being content.  
 Yet the mass of mankind  
 Is uncommonly slow  
 To acknowledge the fact  
 It behooves them to know;  
 Or to learn that a woman  
 Is not like a mouse,  
 Needing nothing but cheese,  
 And the walls of a house.  
 But just take a man,—  
 Shut him up for a day,  
 Get his hat and his cane,  
 Put them snugly away,—  
 Give him stockings to mend,  
 And three sumptuous meals,—  
 Then ask him at night,  
 If you dare, how he feels!  
 Do you think he will quietly  
 Stick to the stocking,  
 While you read the news,  
 And "do n't care about talking"?  
 Oh, many a woman  
 Goes starving, I ween,  
 Who lives in a palace,  
 And fares like a queen,  
 Till the famishing heart,  
 And the feverish brain,  
 Have spelled out to life's end  
 The long lesson of pain.  
 Yet stay! To my mind  
 An uneasy suggestion  
 Comes up, and there may be  
 Two sides to the question;  
 That, while here and there proving  
 Inflicted privation,  
 The verdict must often be,  
 "Willful starvation."  
 —Mrs. A. D. T. Whitney.

## THE FORMATION OF CHARACTER.

THE Rev. Phillips Brooks, in a recent discourse, stated that the law of evolution rules in the moral as well as in the physical world. Nature does not create, but develops. In last summer's roots nature finds the germ for this summer's verdure.

"If somebody should give me a diamond to carry to Europe, I can know exactly how much would be lost to the world were I to drop it into the sea; but if a seed should be given me, I can only regard it with awe as containing concealed within it the food of untold generations. That is the difference between looking at truth as a diamond or as a seed—as final or germinal.

"In all training of character, continuity and economy must be supreme. The notion that character is spontaneous is held by most people in the earlier portion of their lives, and is wrong. When they discover this, nine-tenths change to the other extreme. This is wrong too. Hosts of young men think that their character will form of itself, and that they will necessarily become better as they grow older. Hosts of old men believe that their character is fixed, and that it is impossible for them to become better. Such beliefs are foolish. People are also wrong in thinking that they can put off their bad traits and put on good traits. The old failures cannot be thus transformed, but out of the old habits new can be formed. This is what many a poor creature needs to know. We must make what we are to be out of what we are already."—*School Journal*.

## THE WAY TO WEALTH.

THE Rev. Dr. R. D. Hitchcock, who is not only a prominent theologian, but a profound thinker, says: "Suppose no muscle is put into the land; no sweat moistens it; it goes back into its original wildness, and that which formerly supported one hundred civilized men, affords support for one savage. The value which land possesses has developed by labor. Have you considered how short-lived labor is? Crops last no more than a year. Railways, as soon as you stop work upon them, go to pieces rapidly and cease to be valuable. Houses have to be made over constantly. St. Peter's Church, at Rome, one



of the most solid of structures, is repaired annually at a cost of \$30,000. [The Reverend Doctor might have added, mechanics actually live in houses erected on the top of St. Peters, that they may watch for any defect and attend to any leak in the roof.—Eds.] A great part of the wealth of the world is only 12 months old; when men stop working it passes away. Suppose you earn \$1.25 a day and spend the same, at the end of the year you are no better off than at the beginning. You have only lived. Suppose you spend \$1, or, better still, 85 cents; then you have become a capitalist. Capital is wages saved, and every man can become a capitalist. I began to preach at \$550 a year; I've been there, and know what it is. My rule was then, and has been ever since, to live within my income. So it would have been, no matter what my business. Spend less than you earn; then you will acquire capital, and your capital will be as good as that of any other man."—*Sel.*

**Character.**—Two things are necessary to the attainment of strength of character—power of will and power of self-restraint. We often mistake strong feelings for strong character. A man who bears all before him, before whose frown domestics tremble, and whose bursts of fury make the children of the household quake—because he has his will obeyed and his own way in all things—we call him a strong man. The truth is, that is the weak man; it is his passions that are strong; he, mastered by them, is weak. You must measure the strength of a man by the power of the feelings he subdues, not by the power of those which subdue him. Nor is it common sense to suppose that because a man is in the habit of displaying a great deal of the lightning of a fiery temper, he has a high temperament; this, and high breeding, too, is shown by him whose intense feelings are not displayed by blustering signs. Hence, composure is the highest result of strength. Did we ever see a man receive a flagrant insult and only grow a little pale and quietly reply? That is a man spiritually strong. Or did we ever see a man in anguish stand as if carved out of solid rock, mastering himself? Or one bearing a hopeless, daily trial, remain

silent, and never tell the world what cankered his home peace! That is strength. He who, with strong passions, remains chaste; he who, keenly sensitive, with manly powers of indignation in him, can be provoked and yet restrain himself, and forgive—these are strong men, the spiritual heroes.—*Sel.*

**Value of a Trade.**—That sage philosopher, Mr. Horace Greeley, in his advice to young men warns them not to neglect to secure a trade of some sort, even if they intend to devote their lives to intellectual labor. He says:—

"It is clear to my mind that no other than a man of independent fortune is fully qualified for an intellectual pursuit without a good trade to fall back upon; and even a fortune, though a guaranty for to-day, may have vanished before the dawn of to-morrow. The surest independence that any one can have must reside and inhere in his own instructed, skillful sinews. A Hebrew carpenter's son, a Galilean fisherman, and a tent-maker from Tarsus, subverted and overthrew the magnificent, all-absorbing, deep-rooted religion of the ancient Roman world. Had they acquired their Greek, and the dyspepsia along with it, at a modern college, we would probably have persisted in worshiping Jupiter and Minerva to this day. As it is, of the gods of antiquity, Bacchus, alone, is still the object of daily and earnest devotions."

**Nature and Revelation.**—The following remarks by an English bishop in reply to the views of Prof. Tyndall and those of his school are worthy of commendation:—

"Is there nothing in nature that needs the aid of revelation in our contemplation of it? Men of science will tell you of their latest discoveries—that the world, and the universe of which it forms a part, is a great machine, moving in all its parts from the greatest to the least, not by the overruling will of the Creator, but by the mechanical action of eternal, changeless, pitiless laws, in the presence of which man is as helpless as the dying leaves that flutter before the storm. And they tell us that in the presence of these eternal laws of nature, behind which lies no will,



before which existed no design, but which are to go on forever, there is no room for faith, no place for prayer, no possibility for hope. Who does not shudder at the thought of such a world? It was an awful thing for men to think that they were merely portions of huge machinery, whose great circles turned round forever so pitilessly, and that as they revolved there was man's place and destiny. This was a new gospel—a new revelation—which, indeed, it required some courage to accept. By accepting Revelation, men ceased to wonder at the mightiness of space itself and at the boundless love of God, besides gaining courage to look into their own hearts and lives, which should be regulated according to the way of the Cross, and the example of Him who died to save mankind."

**Fashionable Follies.**—Style, that most vulgar of words and things, has done as much to corrupt the women of America as liquor has. Not only is it the cause of financial downfall, but modesty, honesty, decency, are sacrificed to it. Fashion now publishes even the rules for "first communion dresses," and sets forth the pipings and coiffures in which an innocent girl may properly approach her God. There is nothing so holy that it is not made subservient to it. It is not the wealthy mother alone who vitiates her child's mind by this worship of folly, but the mechanic's wife, the poor seamstress whose aim is to 'push her daughter on in society,' to give her stylish dresses instead of a modest heart, a clean mind, and a God-fearing soul. The moral training which such mothers neglect is supplied by hot-pressed sensational juvenile literature, and the reports of foul scandals in the daily newspapers.—*N. Y. Tribune.*

**Disagreeable Habits.**—It is easy to form disagreeable habits, but not so easy to drop them again. Persisted in, they become a second nature. Stop and think before you allow yourself to form them. There are disagreeable habits of the body, like scowling, winking, twisting the mouth, biting the nails, continually picking at something, twirling a key, or fumbling at a chain, drumming with the fingers, screwing and twisting a chair, or

whatever you can lay your hands on. Do n't do any of these things. Cultivate a calm, quiet manner. Better be a statue than a jumping-jack. There are much worse habits than these, to be sure, but we are speaking only of very little things that are only annoying when persisted in. There are habits of speech also, such as beginning every speech with "you see," or "you know," "now-a," "I do n't care," "tell you now." Indistinct utterance, sharp nasal tones, a slow drawl,—avoid them all. Stop and think what you wish to say, and then let every word drop from your lips just as smooth and perfect as a new silver coin. Have a care about your ways of sitting, and standing, and walking. Before you know it, you will find your habits have hardened into a coat of mail that you cannot get rid of without a terrible effort—habits which render you obnoxious to all around you.—*Christian at Work.*

**Memory.**—That which has existed with any completeness in consciousness leaves behind it, after its disappearance therefrom, in mind or brain, a functional disposition to its reproduction or reappearance in consciousness at some future time. Of no mental act can we say that it is "writ in water." Something remains from it whereby its recurrence is facilitated. Every impression of sense upon the brain, every current of molecular activity from one to another part of the brain, every cerebral reaction which passes into movement, leaves behind it some modification of the nerve elements concerned in its function, some after-effect, or, so to speak, memory of itself in them which renders its reproduction an easy matter, the more easy the more often it has been repeated, and makes it impossible to say, however trivial, it shall not in some circumstances recur. Let the excitation take place in one of two nerve-cells lying side by side, and between which there was not any original specific difference, there will be ever afterward a difference between them. The physiological process, whatever be its nature, is the physical basis of memory, and it is the foundation of the development of our mental functions.—*Maudsley.*

—He who blackens others, does not whiten himself.



## POPULAR SCIENCE.

—In England the slag refuse of iron works is utilized in the manufacture of bricks. It is proposed to erect works for a similar purpose in this country. Slag is also used in making a cheap kind of glass.

—A French professor has been studying electrical fishes with the telephone, and concludes that the production of electricity in these curious animals is analogous to the generation of electricity by muscular contraction.

—The sun raises every minute, by the power of attraction, on an average, not less than 2,000,000,000 (two billions) of tons of water to the height of  $3\frac{1}{2}$  miles—the mean altitude of the clouds.

—According to Descartes, the discovery of the telescope was the result of an accident, being made by an ignorant boy; and it was a long time before any one was able to explain the exact form necessary for the glasses employed.

**Plowing by Electricity.**—An ingenious Frenchman has constructed a plow which is run by electricity, carrying a pilot. It is a perfect success. A machine employing the same principle has been constructed for unloading boats.

**Artificial Marble.**—Miss Hosmer has recently patented a process by which limestone, alabaster, and other like substances may be made as hard and as beautiful as marble by the application of steam in connection with a bath of alum. Different colors can be obtained by the use of various chemicals and coloring matters.

**An Electrical Railroad Engine.**—One of the most interesting novelties in the Berlin Exhibition is the construction of an electrical railway by Siemens and Halske. The electrical power is supplied by a dynamo-electric machine worked by a steam-engine to another dynamo-electric machine, which works the wheels of an electric locomotive. The length of the way is 200 metres, the velocity three metres per second; the number of wagons three, and passengers twenty.

It is thought that this new motor can be modified so as to be used in aerial navigation, by using a battery instead of a steam engine, and a dynamo-electrical machine as the source of the electricity.

**Vegetable Caterpillars.**—A traveler in New Zealand describes what he calls a "vegetable caterpillar." This curious object is produced thus: A large caterpillar becomes infected by a species of fungus, which grows until it occupies the whole interior of the body, sending out branches at the sides which closely resemble legs, and at the eyes, two long, horn-like filaments.

**The Telephone as a Lightning Indicator.**—New uses for the telephone are being constantly discovered. During a recent thunder storm we observed a loud cracking sound emanating from a bell telephone in use in our office, accompanying a lightning flash, but occurring several seconds before the loud clap of thunder which followed. We have since noticed an account of some experiments on this point by a Brooklyn (N. Y.) gentleman, which confirm the observation.

**The Odor of the Hair.**—A curious Frenchman has recently made known the fact that hair possesses an odor peculiar to itself, so characteristic that a skilled hair-dresser can readily determine whether a given specimen has been cut from the head of a living subject, or taken from a dead person. The hair of the Chinese has an odor so characteristic that it persists in spite of the most thorough washing, even with potash, and cannot be concealed with cosmetics.

**The Milk Tree.**—This most remarkable tree is described by M. Boussingault as being a native of South America. "It yields a liquid which is very much like milk. Its height is from seventeen to twenty-two yards; its leaves are oblong, alternate, and end in hard points. When an incision is made in the trunk, a white, slimy liquor, of agreeable taste, runs out of it. This vegetable milk is thicker than cow's milk, gives a feebly acid reaction, and, when exposed to the air, it coagulates into a sort of cheese. The different substances contained in this vegetable milk are the same as found in animal milk, viz.,



fatty and saccharine matter, caseine, albumen, and phosphates; but their proportions are very different, the amount of solid matter being three times as large in the milk of the tree as in that of the cow, so that the former might justly be compared to cream. In some places these trees grow in large numbers, so as to form a wood; they are regularly milked by the native Indians and the negro slaves that work in the plantations. The milk is either drunk on the spot, or cakes of Indian corn or cassava are soaked in it and then eaten, and it is said to be very nourishing, as the negroes grow fat on this diet."

**Heat and Light Identical.**—Numerous experiments tend very strongly to show that the so-called forces, light and heat, are really identical. It has been determined that at different temperatures all the different rays of light are emitted. At 1000° all solids become luminous, emitting a dull red light. As the temperature is raised there appear, successively, all the rays of the spectrum; at 1200°, orange; at 1300°, yellow; at 1500°, blue; at 1700°, indigo; at 2000°, violet.

**The Stinging Tree.**—This peculiar tree is a native of Queensland. It varies in size from a few inches in height, to that of a large shrub. It has large leaves which are armed with points, capable of inflicting the most torturing stings. The pain is much worse than that from a burn, and the effects of extensive stinging are as fatal as those of very extensive burns. A traveler thus describes experience with these trees:—

"Sometimes, while shooting turkeys in the scrubs, I have entirely forgotten the stinging tree till warned of its close proximity by its smell, and I have then found myself in a little forest of them. I was only once stung, and that was very lightly. Its effects are curious. It leaves no mark, but the pain is maddening, and for months afterward the part, when touched, is tender in rainy weather, or when it gets wet in washing, etc. I have seen a man who treats ordinary pain lightly roll on the ground in agony after being stung; and I have known a horse so completely mad after getting into a grove of the trees that he rushed open-mouthed at every one who approached him, and had to

be shot in the scrub. Dogs when stung will rush about, whining piteously, biting pieces from the affected part."

**Jumping Frenchmen.**—Dr. Geo. W. Beard, of New York, has been investigating the curious maneuvers of the "jumpers" of the forests of Maine and Canada. According to Dr. Beard, "these jumpers are mostly half-breed French-Canadian lumberers who have acquired the permanent habit, which they cannot control, of jumping or striking out with their hands, when commanded to do so by any one who chances to be near. The habit appears to have been acquired, in the first instance, by tickling one another in the winter camps where they cut lumber. The men are extremely ignorant, and one of their pastimes is this practice of tickling one another. When the jumpers are excited to strike or jump, or to perform any of their automatic acts, they present the appearance of entranced persons: their faces pale, eyes fixed and glassy, and limbs trembling.

"One of these jumpers is a waiter, and when told suddenly to 'drop it,' he at once lets fall whatever he may have in his hand. Another has so susceptible a stomach that he at once throws up his meal when any one 'gags' or makes the motion of vomiting in his presence. The man has grown thin, and at one time was almost starved. One man, standing on the bank of a pond with a five-dollar gold-piece in his hand, was told to 'throw it,' and threw the money into the water. Another was standing near a kettle of fish; being told to 'jump,' he leaped into the kettle. In these acts the jumpers are absolute automatons, utterly without volition or responsibility; they are to be compared to persons afflicted with St. Vitus's dance, hysteria, or epilepsy. Performances of a somewhat similar character were, last winter, witnessed in a town of Vermont during a revival of religion. Here the victims of abnormal religious excitement would roll on the floor in most absurd and undignified attitudes, whence the appellation of 'the holy rollers!'"

—A school for teaching silk culture has been opened in Philadelphia.





# GOOD HEALTH.



BATTLE CREEK, MICH., AUGUST, 1879.

J. H. KELLOGG, M. D., EDITOR.

TERMS, \$1.00 A YEAR.

## NARCOTICS SUBSTITUTED FOR ALCOHOL.

WE have watched with much interest the growing increase in the use of opium and other narcotics in this country, especially in connection with the efforts so zealously made to rescue men and women from the power of alcohol. We have believed for some time that the apparent reform in not a few cases was simply a substitution of opium or some other narcotic, for alcohol. We have not had the opportunity of verifying this supposition except in a very few cases; but the researches of Dr. Moffat, an English physician, show very clearly that this is the case to a very large extent in England and Ireland. He states that in many villages it has become customary for the grocers to sell laudanum by the ounce. Not only opium but chloral hydrate, "absinthe, Eau-de-Cologne, tincture of rhubarb, mixture of opium and chloroform, chlorodyne, and ether," are being more and more extensively used as substitutes for alcoholic liquors. In Ireland, sulphuric ether, the well-known anesthetic, is used so largely in some villages where liquor cannot be obtained on Sunday, or where the temperance influence prevents its sale, that on market days it is affirmed that the smell of ether can be distinguished at the distance of half a mile from the place. In these villages the grocers sell ether by the quart.

If this state of things exists in England and Ireland, it is fair to suppose that there may be something of the same tendency in this country. A few months ago we observed a large wine store in New York City which displayed in immense letters upon one of its sign-boards, the word, "absinthe," from which we judge that this intoxicating drug is being introduced into this country.

These facts are not presented as being the result of the temperance movement *per se*. By no means would we charge upon that glorious work the production of so great an evil; but still it seems quite plain that the resort to other narcotics is in no small degree owing to the fact that temperance pledges are not made broad enough. We see no reason why alcohol should be singled out from half a dozen or more stimulants and narcotics each one of which is equally bad or worse when used to the same excess. Let the pledge cover the whole class of drugs and poisons which possess the property of intoxication, and we shall then have a thorough-going reform; but to simply convert drunkards into opium-eaters, absinthe-takers, ether-drinkers, and tobacco slaves, is no improvement. Indeed, it would seem quite preferable that a man should be drunk upon alcohol occasionally, as once in a week or two, or even oftener, if sober the rest of the time, than that he should be stupefied with opiates continually.

We know of no pledge but that of the National Health and Temperance Society which is sufficiently comprehensive to exclude all narcotics and stimulants.

## A MAMMOTH HUMBUG.

SEVERAL correspondents having asked our opinion of the "Holman Liver Pad," we will answer all at once in this paragraph. Having heard from patients and others so many wonderful accounts of the virtues of this much-praised remedy, which is being sold by thousands, especially in malarial sections, we procured one, and have taken pains to examine very carefully its claims and qualities. As the result of our investigation we are compelled to say that notwithstanding the whole-



sale lying indulged in by its advertisers, it really does do good in some cases, not, however, at all in the manner claimed by its manufacturers. The pad itself is a simple affair, of elliptical form, about half an inch thick, five or six inches long, and three or four wide. It is worn over the pit of the stomach. Its manufacturers claim that the pad absorbs impurities from the blood and thus "rectifies the stomach and liver" and cures all other diseases of the body, all of which is a hoax. All the *virtues* of the pad, what few it has, are due to its utility as a pad, not to any special virtues which it contains. The strong odor which is given to it is merely to make it sell and to affect the imagination.

It has long been known that the wearing of a poultice or something equivalent over the stomach, bowels, liver, or spleen, is one of the best means of stimulating the vital activity of those parts. A simple plaster operates in a somewhat similar manner. The Holman pad, by retaining the moisture exhaled from the skin, becomes a wet poultice, and what beneficial effects it has, result from this action. We are prepared to recommend a remedy of ten times greater efficiency, however, and so simple that any one can try its virtues without expense. We do not, however, pretend that the plan suggested is a cure-all; all we claim is that it will do more, and costs less, than the patented humbug referred to. The remedy is simply this: Upon going to bed at night, apply over the stomach and liver a fomentation, by using a folded flannel cloth wrung out of water as hot as can be borne. Renew the hot applications as often as they become cool, that is, about once in three to five minutes, continuing them from twenty minutes to half an hour. Then place about the body, covering the region of the liver and stomach, a coarse towel wrung out of cool water. Cover with a dry flannel cloth, and wear through the night. In the morning renew the bandage about the body, and the following evening repeat the same process. After continuing this process for a week, wear a dry flannel about the body, especially over the stomach and liver, in the day-time, in place of the wet bandage, which should be continued during the night, however, for six or eight weeks, at the end of which time the patient

will usually find himself so much improved that he can easily dispense with it. The bandage should never be worn sufficiently long to produce great injury to the skin, as may happen if it is worn several months.

In cases of constipation, vigorous kneading of the abdomen night and morning, the use of oatmeal, graham flour, and other coarse foods, and taking a glass of cold water half an hour before breakfast, will add much to the efficiency of the bandage. Any one who will try this plan will never have any occasion to patronize either the "liver pad," "liver pills," or any other quack nostrum. We have suggested the plan described in hundreds of cases, and never without benefit; often with effects which were most surprising to the patient.

#### WILL AMERICANS BECOME TOOTH-LESS?

Not quite, perhaps, at least so long as artificial dentures can be manufactured from such a variety of substances and made to answer so useful a purpose as masticators. Indeed, some people already afford two sets of teeth—a set for every day, for rough usage, and an extra fine set for exhibition on special occasions. But at the present rate of deterioration, not many more generations will appear before we shall find a toothless race, shipwrecked in health, with digestion bankrupt and "nerves" the dominant feature.

Rare, indeed, do we find a person at thirty years of age with a sound set of teeth. Far more often do we find young lads and girls of ten to sixteen years of age whose teeth are mere shells of decaying tissue, rotting away with almost visible rapidity, depositories of decaying particles of food, and the sources of contaminating elements which deteriorate digestion, and offensive odors which contaminate the breath. In confirmation of these statements respecting the condition of American masticators it may be mentioned that there are 12,000 dentists in the United States, who annually extract twenty million teeth, manufacture and insert three million artificial teeth, and hide away in the cavities of carious teeth three tons of pure gold, to say nothing about the tons of mercury, tin, silver, and other metals employed in "fillings."



## SANITARY HINTS.

THE excellent suggestions for preserving dwellings and their surroundings in a healthful condition which we quote below were prepared by a committee appointed for the purpose by the Sanitary Council of the Mississippi Valley which convened at Memphis, Tenn., a few weeks ago. A circular containing these with many other important suggestions has been widely circulated in the States which are especially liable to yellow-fever epidemics, where they will undoubtedly be the means of saving many lives. We quote as follows:—

“DWELLINGS.—The prime conditions of health in a house depend upon *cleanliness, pure air, and unpolluted water*; the prompt and thorough removal of all refuse; and the perfect exclusion of all foul matters arising outside the house.

“Good ventilation is absolutely necessary. Rooms should be frequently aired, and a *daily* visit from Dr. Sunshine encouraged. Overcrowding is a fruitful source of air-pollution in dwellings.

“Zealous attention should be paid to cellars, pantries, and passages. Mold, dampness, and foul smells are never to be neglected. The sun's rays, free ventilation, and a lavish use of whitewash, are excellent scavengers.

“The floors of dwellings should be frequently washed. Choose for this purpose a dry day; doors and windows to be left open during and after the operation until thoroughly dry. The floors of dwellings should always be raised from three to four feet above ground, so as to insure perfect ventilation beneath, and the site should be higher than the surroundings, so as at all times to prevent dampness or presence of stagnant water.

“DISINFECTANTS AND DEODORANTS.—More than half of these agents are valueless in preventing disease, and dangerous as being productive of false security.

“Heat and *pure air* are the best of all disinfectants. Where other agents are necessary, the following list will be found useful:

“*Copperas* can be used almost anywhere, cheap and efficient. Especially useful in privies, etc. Ten pounds in a pailful of water; a teacupful in bed-pans, chambers, etc., after being used. A quart a day in

privies, urinals, etc., for ordinary purposes. In dangerous diseases, add from a pint to a quart to each discharge. The contents of a privy six feet in diameter and twelve feet deep, will require twenty pounds of copperas to disinfect it.

“*Quicklime* and *gypsum*, or *land-plaster*, are good absorbents, and may be used advantageously in damp places, cellars, gutters, etc. They should not, however, be used in drains, catch-basins, sewers, soil-pipes, etc.; nor where they are liable to be washed into such places, lest they, by decomposing soap-water, form lime-soap and obstruct the passages.

“*Charcoal* is one of the best deodorants, absorbing large volumes of gases. May be used in powder, mixed with lime or gypsum, and sprinkled freely in malodorous localities. Suspended in a basket, in cisterns, meat-safes, dairies, etc., it tends to keep the contents from absorbing foul odors. Charcoal should be frequently reheated to drive off the absorbed gases and renew its efficiency.

“*Carbolic Acid* and the coal-tar disinfectants are only admissible for out-door use, on account of their odor. Mixed with gypsum, they are valuable around stables, outbuildings, etc. A gill of carbolic acid in a pailful of water may be used to flush sewers, drains, etc., and in privy-vaults and catch-basins.

“*Chloride of Lime* is sufficiently well known not to need special mention here, except to say that its value is greatly over-rated. The addition of strong vinegar or dilute sulphuric acid (oil of vitriol) materially increases its efficiency.

“*Chloride of Zinc* may be used instead of copperas, and has the advantage of neither bleaching nor staining white or colored fabrics with which it may come in contact. On this account, it is especially useful in disinfecting clothing, bedding, etc.”

—According to the *New York Sun*, a very strange disease has recently attacked almost simultaneously more than thirty girls employed in a tobacco factory. It is supposed by some that yellow-fever germs may be the cause of the difficulty, the tobacco employed having been stored in New Orleans during the epidemic there last season.



**Drunkenness in Africa.**—A missionary in Africa calls attention to the fact that alcohol threatens to exterminate the native races of that country as it is now rapidly doing in the case of the native American tribes. He says, "Who wishes to introduce civilization into Africa? Let a *sine quâ non* of the enterprise be that its members be total abstainers. The west of Africa is ruined with rum; it is killing the Kaffir in the south, and even on the east coast, at Zanzibar, a vile liquor is distilled from the sugar-cane, which is retailed far and near, to the destruction of the Suahili race. The Manika tap the cocoa-nut tree, and sip its fermented juice with straws, till every village I passed through, even in early morn, seemed a pandemonium. On the shores of Nyanza, plantains are plentiful, and from them a wine is made which causes king and people to meet on the low level of intoxication."

**Keep Clean.**—While we are saying so much about disinfection, sewerage, the proper disposal of foul matter, ventilation, etc., we must not forget that one of the most important of all sanitary measures is personal cleanliness. Bathing, or skin disinfection, is a most important means of maintaining health. If a person carries around with him a layer of decomposing matter on the surface of his body, it is of little use for him to be so exceedingly particular about the disinfection of cesspools, drains, vaults, and other sources of putrescent animal or vegetable matter, as those sources of filth are quite inferior in importance to the one which he overlooks.

When the skin is very active, as during the months of July and August, a daily bath is indispensable to good health. It need not be a very elaborate one; indeed a simple towel bath, or rubbing the skin with a rough towel wrung out of tepid water, will answer the purpose generally, though a full bath, or better still, a Turkish or Russian bath, should be taken as often as once a week, to insure complete removal of the old skin with all effete matter adhering to it. When a person is not too greatly fatigued, a light hand or towel bath at night is a most excellent means of securing sound and refreshing sleep, besides clearing the skin from the accumulated impurities of the day.

**Diphtheria Contagious to Animals.**—It is well known that diphtheria is a contagious disease, but the fact cannot be too often impressed upon the public. The following incident is a curious illustration of the fact: According to an Eastern journal, a little child in Roxbury, Mass., was very sick with diphtheria. One day, a pet dog which was very fond of the little sufferer, found access to the room, and springing upon the bed lapped the face and mouth of the little boy, in token of its affection. The boy recovered; but the dog died in a few days with every symptom of diphtheria.

**A Commendable Action.**—At the recent meeting of the Eastern Association of S. D. Baptists, at Shiloh, N. J., the following preamble and resolution were adopted:—

"*Whereas*, The use of tobacco is on the increase in this country, especially among the youth, and as we believe it to be a useless drain upon the purse, destructive to health, an offense against good manners and the rights of society, blunting the moral sense, and always tending in its association to lead away from the cause of Christ: Therefore,

"*Resolved*, That we recommend to our ministry and Sabbath-school teachers, that they raise the warning voice against this evil, and that all our membership shall abstain from the manufacture and sale of this noxious weed and encourage others to do so."

If every denominational organization would take an equally firm and noble stand for reform in this direction, the cause of temperance would make more advancement in a week than it has made in the last half century.

**Arsenic in Water Colors.**—A draughtsman recently died suddenly, and the *post-mortem* examination showed that the cause of death was arsenic contained in certain of the colors which he had employed. It was especially found in sepia, burnt sienna, Vandyke brown, bister, bladder green, brown ochre, Indian red, and umber, raw and burnt. The unfortunate painter had been in the habit of placing his pencil between his lips after loading it with color, for the purpose of pointing it.



**Alexis St. Martin.**—It may be interesting to many of our readers to know that the famous Canadian, Alexis St. Martin, whose name has been immortalized by the classical studies made of the laws of digestion as illustrated in his stomach (it being laid open to study and observation by the remarkable gunshot wound which he suffered when a young man) although a very old man, still enjoys very fair health, living with a part of his family in Canada. The curious window left open in his stomach still remains, being now about an inch in diameter. Many years ago he used to perform for the amusement of his friends the trick of drinking a quart of milk and turning it out through the hole in his stomach.

**Rat Pies.**—It seems that that much-hated little vagrant, the house rat, is to hereafter stand in still greater peril of his life than heretofore, his natural enemies, the cat and the rat-terrier, being now called upon to share their prey with rat-loving epicures who have so far overcome all instinctive prejudices as to enable them to consider a dish of stewed rats or a rat pie as the greatest of all delicacies. The Rev. J. G. Wood, who not long since wrote a book to prove the immortality of puppies and rats, together with the other members of the brute creation, now professes particular delight in tickling his palate with rat haunches and spare-rib! Whether the reverend gentleman has been led to the advocacy of this singular dietary by a desire to aid in the liberation of what he believes to be their immortal, persecuted, much in-the-flesh tormented souls, or by the scarcity of other food, or by a disposition to economize, or simply from a peculiar propensity to disregard and ignore all natural instincts, or to regard them as weaknesses which should be overcome,—a disposition which too many scientists seem fond of exhibiting on every possible occasion,—we are wholly unable to determine; but we would recommend that the example set by Mr. Wood and his friends be not followed, especially in view of the fact that the rat, besides being by no means particular as to the quality of his food, is of all animals the most likely to communicate trichinosis to its consumers, as it is not only

very likely to be contaminated, but is the least likely to give, during life, indications of the presence of the disease, since cases have been known in which rats which seemed to be in perfect health were found to be swarming with trichinæ upon being killed and submitted to microscopic examination.

**Clergymen and Hygiene.**—No class of men can do so much in the education of the people upon hygienic and sanitary subjects as clergymen. In their visits from house to house among the members of their congregations, they become acquainted with the personal habits of the people, and, if prepared to do so, can give them most valuable practical advice respecting ventilation, disinfection, and other points of vital importance to the health of individuals, and thus to that of cities and nations. The proverb that "cleanliness is next to godliness" can be better enforced by the clergy than by any other class of men. Mr. Spurgeon, the great London preacher, once very wisely said to a large audience assembled to hear an address on fresh air, "You should have the grace of God, but you should also have oxygen. You cannot appreciate the one unless you obtain the other." The same noted clergyman when speaking in a crowded and unventilated house once ordered a pane of glass smashed out, it being found that the windows were fastened down, no provision whatever having been made for a supply of fresh air.

**Sulphur as a Disinfectant.**—While one of the most disagreeable, the fumes of burning sulphur constitute a very efficient means of disinfection of rooms which have been occupied by patients suffering with small-pox, diphtheria, scarlet fever, or any other contagious disease. When used for this purpose, all colored articles which are liable to be bleached or otherwise injured must be removed, then the room must be shut up tightly. Place the sulphur upon the under side of a hot stove cover laid in a pan of ashes, using sulphur in the proportion of one and one-half ounces to every one hundred cubic feet of air to be disinfected. Dr. Vanderpoel, Health Officer of the port of New York, has employed this means with great success in disinfecting ships.



**Diet Cure.**—We have heard much of the “milk cure” of typhoid fever, the “grape cure” of dyspepsia, the “blood cure” of consumption, the “whey cure,” the “meat cure,” and a great variety of other “diet cures;” and now we see announced that rheumatism can be cured and prevented by the use of a diet of lentils or celery. While doubting the special virtues of either lentils or celery as a remedy for rheumatism, we have no doubt that the liberal use of either one of those esculents would be vastly better than the many highly irritating, exciting, and inflaming articles of diet in very common use.

**The Weather and Pain.**—There are hundreds of invalids in this country who have no need of a barometer; their susceptible constitutions and over-sensitive nerves are as perfect indicators of impending weather changes as the most delicate barometers. All nervous invalids, rheumatics, and a great many dyspeptics are thus influenced by the weather. Many persons who are thus affected are not aware of it; but the observing physician soon discovers the disturbing element.

Dr. S. Weir Mitchell, of Philadelphia, has been making a systematic study of this subject, and finds that January, February, and March are the months which excite the most pain in these sufferers; while July, August, and September occasion the least.

**The Tyranny of Tobacco.**—Tobacco is a tyrant which discriminates not respecting its victims. Men of the strongest intellect and of most brilliant genius bow down in abject servitude before this hateful demagogue. The following paragraph telegraphed from Chicago to a well-known newspaper a few weeks ago presents as good an illustration of this fact as could be asked:—

“The announcement that Senator Carpenter has been advised by his physician to go to Florida for his health was a genuine surprise to his friends in Milwaukee. Few supposed him to be in other than the best health and spirits. A personal friend of the Senator said: ‘I tell you no man can smoke twenty Havana cigars a day, and keep up the practice, without encountering certain death. It is a

hazardous thing to do, and Matt Carpenter is doing it. You observe the consequence. Matt is a slave of tobacco, and it is killing him slowly, but surely. He is wasted so that his limbs have become emaciated to the semblance of pipe stems. They call it rheumatism, but it is tobacco and nothing else that has wasted him away to this extent, and it will continue its work until death steps in and claims another victim.’”

**Impure Air and Erysipelas.**—The *Sanitary Record* (London) asserts that “there is now no more doubt that erysipelas is originated by sewer-gas [foul air], than that typhoid fever is due more often than not to impure water.” This view seems to be well established by facts which cannot well be controverted, gathered from hospital experience and the testimony of health officers whose opportunities for observation have been very large.

**A Delicate Dish for Invalids.**—In cases of great debility of the digestive organs, in which the stomach refuses to digest almost every kind of food, the following dish which was once used by Voltaire to relieve a severe dyspepsia will in most cases be well received, and will be found very nourishing:—

“Beat up an egg in a bowl, and then add six tablespoonfuls of cold water, mixing the whole well together; then add two tablespoonfuls of farina of potatoes; let it be mixed thoroughly with the liquor in the bowl. Then pour in as much boiling water as will convert the whole into a jelly, and mix it well. It may be taken alone or with the addition of a little milk, in case of stomachic debility or consumptive disorders. The dish is light and easily digested, extremely wholesome and nourishing. Bread or biscuit may be taken with it as the stomach gets stronger.”

—A single pound of arsenic is sufficient to fatally poison nearly 3,000 persons; yet nearly two and one-third million pounds are imported into this country annually, much of which is used in the manufacture of wall-paper and in other ways equally dangerous to health.



**Best Diet for Prisoners.**—A committee of the English House of Peers recently appointed to consider the question of diet in prisons, strongly advocated "not only the great economical advantages, but also the superior nutritive value of a farinaceous diet over one of flesh." The opinion seems to be gaining ground that animal food in large quantities is not good, and that human life can be well supported without it. If the English authorities try the experiment in their prisons, as it would seem probable that they may do, judging from the report referred to, we shall soon have a good opportunity of testing the theory of the vegetarians, who claim that grains, fruits, and vegetables are the natural and the best food for man.

**Improper Dress a Cause of Spinal Curvature.**—A medical writer of considerable eminence traces the great multiplicity of cases of distortion of the spine to improper modes of dress. He maintains that tight-lacing and compression of the abdomen by the clothing is one of the chief factors in the production of curvatures of the spine among females. This opinion he strengthens by the fact that among the Arabs, Hindoos, and other nations, the females of which employ a loose form of dress, such deformities are almost unknown.

Another medical author calls attention to the fact that the position assumed by females in riding horseback has a strong influence in the same direction.

**A New Adulteration.**—No commercial article has more frequently been the subject of adulteration than coffee. Fortunately for the consumers, however, the adulterants employed have rarely, if ever, been of an injurious character, their only effect being to lessen the active properties of the article sophisticated. The most recent attempt of this sort discovered has come to light in England. It was observed that a foreigner was purchasing, in large quantities, date stones which were left as refuse from the manufacture of spirits from inferior dates, at a large distillery. Upon investigation, it was found that these date stones were shipped to Man-

chester, and after being roasted and ground, were sold as coffee—a fraud which could not be very damaging to the health, though it may not be very appetizing to coffee-drinkers.

**Sudden Death.**—Most cases of sudden death, except those resulting from accident, are supposed to be due to disease of the heart. An extended series of observations on this point recently conducted in Germany show that this is not the case, but that most of the immediate causes of sudden death are such as may be readily avoided by proper care on the part of the individual, such as congestion of the lungs, arising from cold extremities, sudden chilling, tight clothing, constipated bowels, running, or hasty walking. It is true, in fact, that a very small proportion of the cases of organic disease of the heart terminate in sudden death.

Many cases of sudden death are due to apoplexy, which is also attributable to the same causes mentioned, and so may be avoided.

**Don't Let them Learn to Smoke.**—If fathers and mothers wish their sons to grow up temperate men, let them take care that they do not learn to smoke or use tobacco in any other form. Mr. Samuel Morley, a celebrated English temperance worker, says respecting smoking,

"With drink, I wish it to be remembered, I class smoking, for these two go hand-in-hand. The close connection of the two habits is admitted by all, and we therefore urge that all possible means should be taken to prevent boys learning to smoke. If they do not acquire this practice they are less likely to acquire that of drinking, and better calculated to be useful to the temperance movement."

**Railway Life Insurance.**—The best means for insuring the lives of its passengers has been adopted by the Chicago and Northwestern Railway Company, who require a written pledge of every employee to abstain from using intoxicating drinks, even ale, beer, and wine, to keep out of all places where such drinks are sold, and to refrain from profane and abusive language.



**Office of the Teeth.**—Many people suppose that the teeth are only useful as masticators to grind or comminute the food, so as to render it easily soluble in the digestive juices. This is a very narrow view of the functions of the teeth, for in addition to their utility in contributing to beauty, they possess tactile properties in a very delicate degree, as is shown in the readiness with which anything of a gritty or insoluble character is detected by them. Thus they are of great service in protecting the more delicate structures of the digestive apparatus from injury. Hence the importance of caring for these organs in the most scrupulous manner.

**Trichinæ in Spain.**—It seems that the infection of pork by the now well-known trichinæ parasite is steadily becoming more and more general. Notwithstanding the efforts made in foreign countries to stay the progress of the disease, it is steadily gaining ground. We clip the following paragraph from the *Medical and Surgical Reporter* :—

“Pigs infected with trichinæ have been found in Spain, and at one dinner where trichinous pork was consumed, six out of twenty-eight guests died of trichinosis. The infected pigs were the product of the north of Spain. In Barcelona, such a panic has arisen that the consumption of pork has been almost entirely suspended. It is said that in Italy and Portugal the importation of bacon and pigs from the United States has been interdicted in consequence of its having been discovered that they contain trichinæ.”

**New Definition of Alcohol.**—An English member of Parliament described alcohol as “the devil in solution.” At the laying of the foundation stone of the Temperance Hospital, London, Sir Wilfrid Lawson said that what he wanted was “to get the devil into dissolution.”

**Rumsellers Mourning.**—An exchange says that the six hundred liquor dealers of New Haven, Conn., have draped their saloons in mourning because of the recent passage of the “local prohibition” act in that city. We are glad to learn that these agents of the “prince of the pit” are *beginning* to feel

bad; and would gently remind them that the time is coming when they will “weep and howl” not because they cannot ply their infamous trade, but because they have done so.

**Habit.**—“‘Habit’ is hard to overcome. If you take off the first letter it does not change ‘a bit.’ If you take off another you still have a ‘bit’ left. If you take off still another the whole of ‘it’ remains. If you take off another it is not ‘t’ totally used up. All of which goes to show that if you wish to be rid of a ‘habit’ you must throw it off altogether.”

The above is especially applicable to such habits as smoking, chewing, snuffing, drinking, using strong tea and coffee, etc.

**Tobacco for Boys.**—Everybody agrees that tobacco is bad for boys, that it stunts their growth, depraves their natures, dwarfs their intellects. The personal observation of every intelligent person asserts this, and the fact is fully confirmed by careful scientific investigations in France, where a law has been enacted prohibiting its use by students in the public schools. If it is bad for boys, may it not reasonably be concluded that it is bad for men also?

**Diphtheria and Rheumatism.**—An English physician calls attention to the fact that the occurrence of diphtheria predisposes a patient to rheumatism. Not one-half the pains is taken that should be for the prevention of this really serious disease. It is about as dangerous to life as small-pox, and one attack is no protection against another, but rather predisposes the individual to future attacks.

**Danger from Canned Beef.**—A local board of health in Baden has warned the citizens within its province that American canned beef is dangerous to health on account of containing lead derived from the tin cans in which it is put up. Perhaps it would be well for Americans to know this fact.

—An eminent physician has recently announced the theory that heart disease and cancer are, to a considerable extent, induced by climate.



**Recipe for Using Cucumbers.**—Questions respecting the use of cucumbers are so often asked that we cannot do better than to quote the answer of the famous Dr. Abernethy, which was, "Peel the cucumber, slice it, pepper it, put vinegar to it, then throw it out of the window." A careful observance of this recipe will prevent many cases of bowel disease in July and August.

**Accidents.**—Many people are almost superstitiously afraid of traveling on the railroad; and yet statistics show that railroad-traveling is really less dangerous than almost any other mode, when the amount of travel is taken into account. In England, a man runs a hundred times as much risk of being hung as of being killed by a railroad accident.

—Little tea is drunk in Germany, coffee and beer being the national drinks. If taken at all, it is as a medicine. A person asked to

take a cup of tea will respond, "No, thank you; I am quite well at present." We have no doubt there are as many tea-drunkards in this country as there are beer-drunkards in Germany.

—In the schools in Holland the teacher is supplied with an assistant whose duty it is to look after the personal appearance of the pupils, to keep them tidy, and to see that no contagious disease is brought into the school.

—More than 1,500,000 gallons of water were sold as milk in Boston in a single year. In many cases the use of impure water for adulteration gave rise to typhoid fever and other germ diseases.

—Dr. Richardson asserts, basing his statement on careful statistics, that moderate drinking is the cause of 117,000 deaths in Great Britain and Ireland annually.

## FARM AND HOUSEHOLD.

Devoted to Brief Hints for the Management of the Farm and Household.

—Kerosene rubbed over unused stoves will prevent their rusting.

—If shirt bosoms, or other articles, that have been scorched in ironing, are laid for a time in the bright sunshine, the discolored spot will disappear.

—Apple tea, which is very grateful to most sick persons, may be made as follows: Peel, core, and quarter one pound of apples; boil for half an hour in one quart of water; strain; add the juice of one lemon and sweeten a little. Strawberry or other fruit may be prepared in like manner. Black currant tea is much liked in England.—*Sel.*

**To Remove Grease from Silk.**—Rub a lump of moist magnesia over the spot; let it dry, then brush the powder off and the spot will disappear. The torn edge of a white card will do nearly as well; rub the spot with the soft internal part, and it will disappear without taking the gloss off the silk.

**Carbolic Acid for House Plants.**—A weak solution of carbolic acid will kill the worms which so often infest the roots of plants; it will also kill the lice upon the stalks without injury to the foliage. It should be applied with a feather.

**To Wash Towels with Colored Borders.**—To set the colors, let the towels soak in a pailful of cold water containing one teaspoonful of sugar of lead; let them remain ten minutes before washing. To make the colors look clear and bright, use pulverized borax in the wash-water, and but very little soap.

**Protection against Flies and Mosquitoes.**—A German traveler in the East says: "A tincture prepared by macerating one part of pyrethrum roseum in four parts of diluted alcohol, when diluted with ten times its bulk of water, and applied to any part of the body, gives perfect security against all vermin. I often passed the night in my boat



on the ill-reputed rivers of Siam without any other cover, even without the netting, and experienced not the slightest inconvenience. The 'buzzing,' at other times so great a disturber of sleep, becomes a harmless tune, and, in the feeling of security, a real cradle song. In the chase, moistening the beard and hands protects the hunter against flies for at least twelve hours, even in spite of the largely increased transpiration due to the climate."

**To Rid Cabbages of Bugs.**—Make a mixture of one-third slaked lime and two-thirds unleached ashes. Sprinkle the plants in the morning while the dew is still on them, and the bugs will disappear at once. It will be necessary to repeat the sprinkling in order to kill all the young that may hatch from the eggs deposited under the leaves. The plants should, in the meantime, be well cared for and kept free from weeds.

**Care of Fuchsias.**—After being exhausted with blooming, fuchsias should have the terminal shoots of all their branches clipped off. Set them aside, giving them but little water for two or three weeks; then re-pot in new soil with a portion of well decomposed leaf mold added, and a good supply of charcoal in the bottom of the pot for drainage. In a few weeks new shoots full of flower buds will put out rapidly.

**To Remove Match Scratches.**—Scratches which result from the careless striking of matches on painted wood-work may be removed by cutting a lemon in halves and applying the cut edge to the marks, rubbing for a moment quite hard; then wash off with a clean, moist cloth dipped in whiting. Rub well with this cloth, and dry thoroughly; unless the marks are burned in very deeply, they will be eradicated.

**To Do up Lace Curtains.**—An exchange offers the following useful method for doing up lace curtains:—

"Put the curtains to soak in lukewarm water, turning over and clapping between your hands two or three times during the twenty-four hours that they remain in the

water. Then if you have a wringer, fold smoothly and put through loosely; repeat for two or three days if very much soiled and smoked. The last time they are put to soak, add to every gallon of water two ounces of pulverized borax, after which put them on to boil in this water. When scalded a short time, rinse thoroughly, apply a thin starch containing a trifle of bluing. Now pin or sew to your carpets some sheets, which done, wring out the curtains, and pin right side down upon the sheets, putting pins in every two inches. Stretch evenly, but take care not to draw out of shape. Let them be until dry, when go over with a hot flat-iron, keeping a thin cloth or paper between the iron and curtain; then remove the pins, and your curtains are ready to hang."

**Patching.**—There is perhaps nothing more generally distasteful to ladies than the mending and patching which economy so often demands; as a help in the practice of this "household art," the following hints from a Massachusetts lady may be useful:—

"A round or 'crooked' patch will inevitably thrust itself into notice, as it is impossible to match the threads. Then a patch should never be 'laid on,' but always 'set in.' To this end, first cut away carefully by a thread all that is in the least worn, and turn back and baste down an even seam all around. The corners may be slashed slightly in a diagonal direction to keep them square. Then to this opening fit the patch exactly, with the edges turned and basted; and sew it in 'over and over' on the wrong side with thread of the precise shade and very fine, sewing alternate opposite sides to avoid trouble with the corners. The extra thickness caused by the folded corners of the patch itself should be cut out after sewing, and a little fine darning added to keep them secure. Now slightly dampen and press on the wrong side, and you have a neat piece of mending which cannot be seen a few feet away. Figures and striped goods must of course be carefully matched; heavy woollen fabrics, such as men and boys wear, need not have seams turned, the clean cut edge being strong enough to hold."



## NEWS AND MISCELLANY.

- Central Park has cost about \$15,000,000.
- Queen Victoria has reigned forty-two years.
- A severe type of cholera has appeared in Afghanistan.
- A grand canal between St. Petersburg and the sea is projected.
- An Arctic exploring yacht, *Jennette*, sailed from San Francisco, July 8.
- Valuable coal mines have been recently discovered in Washington Territory.
- Of the 1,015 convicts in the Texas penitentiary, 915 can neither read nor write.
- A new comet has been discovered by Prof. Swift, of Rochester, in the constellation Perseus.
- The smallest vessel ever attempting to sail around the world left Boston for Cape Town, July 7.
- In the Arctic region, when the thermometer is thirty degrees below zero, people can converse a mile apart.
- Alexander, the new Prince of Bulgaria, received his investiture from the Sultan, at Constantinople, July 5.
- Nearly 500,000 persons have been exiled from Russia to Siberia since the beginning of the present century.
- At Charleston, South Carolina, Independence day was celebrated this year for the first time in nineteen years.
- A law has been passed in Illinois prohibiting the sale of oleomargarine cheese and butter as the genuine article.
- Mrs. Washburn, the first missionary sent to the Indians west of the Mississippi, has recently died at the age of 83.
- Legal proceedings have been commenced by the nephews of Pius IX. against his executors, to have the will declared invalid.
- Arrangements will shortly be completed for lighting the entire Capitol at Washington with electric lamps of a new design.
- Bridgeport, Conn., celebrated the centennial anniversary of the burning of Fairfield by the British troops under Gen. Tryon, July 8.
- Advices from Rio Janeiro report the dismissal of the Minister of the Interior by the Emperor, because of differences with his colleagues.
- The contemplated International Industrial Exhibition which was appointed to take place at Moscow in 1880, has been postponed one year.
- Telephones are being made of use in warfare; twelve sets have been sent to Sir Garnet Wolseley for use at the seat of war in South Africa.
- The London Religious Tract Society recently celebrated its eightieth anniversary. It has circulated, since its formation, 1,850,000,000 tracts.
- The largest Sunday-school in the world is probably at Stockport, Chester County, England. There are 90,804 names of scholars on the register.

—The population of Nebraska has increased to nearly 100 times what it was twenty-five years ago. According to the recent census it now numbers 386,400.

—At Marash, in Central Turkey, there is a Young Men's Christian Association of 114 members; they have a library of 137 Turkish, American, and English books.

—The Rev. Dr. T. Dewitt Talmage is drawing immense crowds in London. He preached at Agricultural Hall, in that city, recently, to a congregation of 20,000 people.

—The Navy Department, in behalf of the National Board of Health, are considering the subject of a refrigerating ship, in which the atmosphere can be reduced to zero.

—Short dresses are now all the rage in Paris. This is glorious news to the American women who have grown left-handed in the back from stooping to pick up their trails.

—The first women employed in the National Treasury were appointed seventeen years ago. There are now 1,300 women employed in the U. S. departments at Washington.

—A swarm of butterflies two-thirds of a mile wide and several miles long recently invaded the Canton of Zurich, Switzerland. They have since appeared in Italy, Spain, and France.

—Persons who claim to have kept a record of fires state that for the first four months of 1879 there were more fires than in any corresponding four months for the last four years.

—The residence of the president of William and Mary College, which was burned recently, was the only house in Virginia built by a reigning sovereign. It was built by Louis XVI., in 1782.

—The heaviest storm ever known in the State of Minnesota occurred July 3. Five inches of rain fell in fifteen hours at St. Paul, the greatest amount since the signal service office was established.

—The manufacture of lager beer and ale in the United States, for the present year, ending with June 30, amounted to 10,000,000 barrels, or nearly two kegs to every man, woman, and child in the country.

—Salmon in the Scottish rivers are suffering from a pestilence. It begins as a skin disease and soon a white mold eats into the head of the fish, which rubs itself to pieces, in its agony, against gravel and rocks.

—According to a telegram received by Dr. Kedzie, the president of the Mich. State Board of Health, there have been several cases of death from yellow fever in Memphis, Tenn., but the disease has not assumed an epidemic form.

—The crop prospects of Italy, for the coming year, are below the average, and those of Russia were hardly ever so bad as at present, swarms of grasshoppers and corn beetles having nearly annihilated vegetation in Southern Russia.

—60,000 Poles recently made a pilgrimage to a miracle-working picture of the Virgin. While gathered about the tree on which the picture hung, a violent thunder storm arose, during which the tree was struck by lightning and destroyed, with fifteen persons.



## LITERARY NOTICES.

### TEMPERANCE LESSON SHEETS.

The executive committee of the National Women's Christian Temperance Union are preparing a series of temperance leaflets for use in Sunday-schools. Arrangements have been made so that "Leaflet No. 1" can be used by schools which employ the International Series, on Sept. 28. Price 50 cents per 100. To be obtained of Miss Julia Colman, 298 Eighth St., Brooklyn, N. Y.

### TEMPERANCE TEXTS.

We have received a package of beautiful colored cards each of which bears a temperance text. They are well adapted to use in Sabbath-schools. They are also furnished by Miss Julia Colman at 25 cents a package, or \$1.00 a hundred.

### WHAT TO DO IN CASE OF ACCIDENT. New York: Industrial Publication Co.

A useful little book that ought to be read and thoroughly mastered by all. An accurate knowledge of the many useful subjects presented in this book would save much suffering and many lives.

### BEE-KEEPERS' EXCHANGE. Canajoharie, N. Y.

The fifth number of this journal is before us. It is a wide-awake, illustrated monthly, and cannot fail to benefit every progressive bee-keeper. Among its contents, we notice a full description, with seven engravings, of a very simple and useful bee-hive, also the first of a series of original articles, entitled "Notes on Bee Culture," by the editor.

We recommend this new monthly to the notice of our bee-keeping readers. It is published at 75 cents per year, and we doubt not the editor's "Notes on Bee Culture" are alone worth four times that amount. A sample copy will be sent free.

### DETERIORATION AND RACE EDUCATION. Boston: Lee & Shepard.

We have not space to give in this department anything like a thorough review of this most able work, which is evidently the result of many years of assiduous labor. The aim of the author is to show that the much-boasted civilization of our age, notwithstanding its many advantages and excellences, contains elements which are steadily at work at the very foundations of human existence, slowly undermining the constitution of the race, and resulting in its progressive deterioration. While agreeing that the great advances made in science, agriculture, and in numerous other directions between the sixteenth and the nineteenth century, resulted in a distinct increase in the average longevity of the race, he shows beyond room for question, by the most reliable statistics, that between the first years of the century

and the present time there has been a steady decrease in the average length of life, a marked increase of insanity, consumption, epilepsy, imbecility, deaf-mutism, scrofula, and many other diseases, together with a decided increase in pauperism and crime.

After setting forth these facts, the author points out very clearly many of the causes of this deterioration, and insists that the only remedy consists in "race education." The work is an exceedingly valuable one, and no one interested in the general welfare of the race can afford to be without the work.

### THE HERALD OF HEALTH. Bloomington, Ill.

A journal devoted to sanitary science, now at the beginning of its second volume. We have noted with interest the earnest efforts of its editor and publisher to introduce his new journal at a time when many really excellent magazines are obliged to suspend publication for want of support, and have been greatly pleased to see the success which has attended his efforts. Although unpretentious in appearance, each number of the journal contains an amount of useful information on the subject well worth the price of the journal. So far as we have had time to examine the journal, its positions are usually sound on all practical subjects. We wish it continued success.

### HEARING AND HOW TO KEEP IT. By C. H. Burnett, M. D.

### LONG LIFE AND HOW TO REACH IT. By J. G. Richardson, M. D. Philadelphia: Lindsay & Blakiston.

These two little volumes are Nos. 1 and 2 of the American Health Primers, a series of volumes now being issued by the enterprising publishing house above named. The volumes are neatly bound, and in clear, readable type. If the remaining numbers are as well gotten up and contain an equal amount of choice information on the important subject of individual health, the enterprise will certainly be a most gratifying success.

### TWENTY-FIRST ANNUAL REPORT OF THE WASHINGTONIAN HOME. Boston.

This excellent institution for the treatment of inebriates is so widely and favorably known that we can add no commendation of special value; but we are pleased to see its well deserved success. Its accomplished superintendent, Dr. Day, has been indefatigable in his labors, and his efforts have been abundantly crowned with success. We see by the report that nearly 6,000 patients have been treated at the institution since its organization. In the rules of the institution the Superintendent remarks as follows respecting the use of tobacco:—

"The use of tobacco depresses the vital forces, destroys the appetite for wholesome food, and fosters a desire for stimulating drinks; it deranges the whole nervous system, and depresses the spirits; it darkens the soul, and hedges up the way to a spiritual life; and when you ask us the most sure way to begin the work of reform, we would bid you ABANDON THE USE OF TOBACCO, AT ONCE AND FOREVER."



## Publishers' Page.

Our European patrons who do not care to run the risk of sending money to so great a distance for small packages of books, periodicals, etc., may send subscriptions or orders for books to Geo. F. Allan, newsdealer, 84 Mitchell St., Glasgow, Scotland, or to J. N. Loughborough, Southampton, England.

It is intended to give in each number of the journal, hereafter, an illustrated article on some practical subject under the head of physiology or hygiene. Unfortunately, the engraver who is preparing the cut intended to accompany the article on the physiology of digestion in the present number, has failed to forward it in time to get it into this number; but as the article is to be continued, it can appear in the next issue.

Miss Julia Colman, an earnest and efficient worker in the cause of temperance and a very able writer on hygiene, is collecting facts respecting the evil effects arising from the use of hard cider. Those who have facts in their possession bearing upon this question will confer a favor upon her and contribute to the advancement of the temperance cause by forwarding the same to Miss Colman at 298 Eighth St., Brooklyn, N. Y.

Through the earnest and efficient labors of Eld. and Mrs. White at the recent camp-meetings attended by them in Wisconsin and Minnesota, aided by Eld. Geo. I. Butler in Kansas, Missouri, and Iowa, the temperance work is progressing nobly. Iowa already has the largest membership of any State, nearly 1,000 members being now enrolled in that State alone. Other States have done almost as well, and we shall soon be able to report a membership of many thousands, with State and local organizations all over the country.

The Health and Temperance Club of Battle Creek is taking measures to effect a system of sanitary protection among its members. At the last meeting of the club, Dr. J. H. Kellogg, Dr. W. B. Sprague, and Robert Sawyer were appointed a committee to prepare a schedule of plans to be adopted, and to report at a meeting to be held Wednesday evening, July 23, at which time the chairman of the committee will deliver a lecture on the subject of "Germs: What they Do, and How to Kill Them," including practical illustrations of the principles of disinfection of the air, of liquids, and of solid matters. The stereopticon or magic lantern will be used in illustrating the subject, together with various chemical experiments, drawings, charts, etc.

The School of Hygiene, organized two years ago, has thus far proven a complete success, and promises to be still more popular the coming season. Pupils are already coming in, and many are making arrangements to come at the beginning of the term. The next course in this school will be the best that has yet been held, and will comprise a variety of the most interesting topics, prominent among which may be mentioned the anatomy, physiology, and hygiene of digestion and of respiration, and collateral subjects, including a thorough study of dietetics, the adultera-

tion of food, contamination of water, ventilation, etc., etc. Every young man and woman of ability, who wishes to become fitted for a field of usefulness, could be benefited by such a course of study as will be pursued in this department. Those interested should send for circulars.

**SANITARY CONVENTIONS.**—The State Board of Health of Michigan propose to hold two sanitary conventions next winter at prominent centers in the State, probably at Detroit and Grand Rapids. A good representation of prominent sanitarians is expected from other States, in addition to those who may be interested in the subject in our own State. It is also proposed to give an opportunity for the exhibition of sanitary appliances of all sorts, thus making the conventions of great practical interest to both the common people, by bringing to their attention matters of the most vital interest to them, and to manufacturers and dealers in sanitary appliances, by bringing their wares before the people in a manner the best calculated to secure their attention and to enlist their interest. Those interested in this subject, either as sanitarians or as manufacturers or dealers, are requested by the Board to correspond with their secretary, Dr. H. B. Baker, Lansing, Mich.

The editor of the *National Live Stock Journal* in a recent issue of his very excellent magazine makes the following very complimentary notice of the Sanitarium:—

"In every section of the country, and in hundreds of families where the *Journal* is read, are cases of chronic and complicated diseases and nervous prostrations that baffle the skill of physicians with only the ordinary facilities for treatment. The Sanitarium at Battle Creek is designed especially to meet the wants of such cases. With every facility that money and intelligence can command; with the most approved modes of treatment that skillful physicians can contrive; and with every reasonable attention to the comfort and convenience of visitors, added to the strictest integrity in its business management, we know of no institution of the kind that can compare with it. It was projected by a number of public-spirited individuals, as a great public good, and is owned by a corporate body of over 700 stockholders, all of whom have assigned their dividends to the institution, the object being to furnish boarding and treatment to the afflicted, whether rich or poor, at the lowest possible figure. We are able to speak thus definitely of this institution and its management from personal knowledge, and we cannot too strongly urge those who are interested, to send for circular giving full particulars."

### OFFICERS OF THE AMERICAN HEALTH AND TEMPERANCE ASSOCIATION.

President, Dr. J. H. Kellogg; Vice-President, Prof. S. Brownsberger. A. M.; Secretary, Dr. W. B. Sprague; Treasurer, Dr. W. J. Fairfield; Corresponding Secretaries, Miss M. L. Huntley, Mrs. Ella E. Kellogg, A. B. Oyen, A. Swedberg, C. A. Nielsen.

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Eld. James White, Chairman, Eld. S. N. Haskell, W. C. White, Dr. W. B. Sprague, Dr. J. H. Kellogg.

**AGENTS WANTED.**—A few good agents are wanted to sell one of the best paying books in the market. Good canvassers make from \$5.00 to \$10.00 a day with it. Exclusive territory given. Ladies can do as well as men if competent. Send for circular at once.