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DISTINCTION BETWEEN CLEAN AND UNCLEAN BEASTS.

BY ELDER JAMES WHITE.

THE distinction between clean and unclean beasts dates back as far as the flood. The patriarch Noah, after preparing the ark, was commanded, "Come thou and all thy house into the ark; for thee have I seen righteous before me in this generation. Of every clean beast thou shalt take to thee by sevens, the male and his female; and of beasts that are not clean by two, the male and his female. Of fowls also of the air by sevens, the male and the female, to keep seed alive upon the face of all the earth. For yet seven days, and I will cause it to rain upon the earth forty days and forty nights; and every living substance that I have made will I destroy from off the face of the earth." Gen. 7:1-4.

It is supposed that space in Noah's ark was very valuable, and that a single pair of the unclean beasts was sufficient, that the kind might be propagated for scavengers. Of the swine, therefore, there were but two, while of the clean beasts there were seven, three pairs and one for a burnt-offering unto the Lord. "And Noah builded an altar unto the Lord; and took of every clean beast, and of every clean fowl, and offered burnt-offerings on the altar. And the Lord smelled a sweet savour; and the Lord said in his heart, I will not again curse the ground any more for man's sake." Gen. 8:20, 21.

If it be urged that the distinction between clean and unclean beasts is Jewish, then we reply that the word Jew came from Judah more

than one thousand years after the flood. It is true that this distinction is perpetuated in the Jewish economy. Not, however, because it is true in the case of the Jew that there were beasts clean to him alone, and others unclean to him.

The law regulating the matter of clean and unclean beasts had its foundation in the fact that some were unclean of themselves, and totally unfit as sacrifices to the Lord. The clean beasts were used in the Jewish economy as sacrifices, pointing forward to the world's Redeemer.

We affirm that the law perpetuating the distinction between clean and unclean beasts was not done away by the death of the Son of God. This leads us to consider what was, and what was not, abolished at the cross.

The death of Christ was the dividing line between the Jewish and the Christian ages, the type and the antitype, the shadow and the substance. Speaking of the last week of the seventy, which reached down to the events of the first advent of Christ, the angel said to Daniel, "In the midst of the week he shall cause the sacrifice and the oblation to cease." Dan. 9:27. The typical sacrifices, pointing forward to the great Sacrifice for the sins of men of all ages, virtually ceased at the cross.

In the Pentateuch there is one kind of laws, properly termed moral, which relate to man's duty to God, to his fellows, and to himself. These grow out of existing relations between God and man, and man and his fellow-man. And these must continue so long as the relations exist. Of this class of moral precepts, the ten commandments are pre-eminent. They are the grand constitution of God's moral gov-

ernment of fallen men. And, in strict accordance with this constitution, the Old Testament abounds in moral teachings and minor precepts, inculcating justice, mercy, cleanliness, health, and the love of God. These cannot cease while God's moral government in this mortal state shall remain. Change of dispensations can no more affect these than it can change the character of God, or that of fallen men.

The books of Moses contain another kind of ordinances, which are simply shadowy ceremonies given to serve a certain purpose, during a limited period of time. These were the shadows, or types, pertaining to the Jewish religious services, which find their substance, or anti-type, in the good things of the Christian age.

"The law," says Paul, "having a shadow of good things to come." Heb. 10: 1. The apostle illustrates the subject with the familiar figure of a shadow, and the body which casts the shadow, as in the case of a monument, tree, or building. The death of Christ, his priesthood, or ministry, and the good things he does for his people in this age, cast their shadows back into the Jewish age, as the monument before the rising sun casts its long shadow back to the west. The Jewish sacrifices, where blood was shed, were the shadow, the death of Christ the body that cast the shadow. The Jewish priesthood was the shadow, the priesthood of the Son of God in Heaven in this dispensation is the body that cast the shadow. And as we would follow down the shadow to the base of the monument, where the shadow must cease, so the Jews, in their services, followed down to the death, resurrection, and ascension of Christ, where these shadowy ordinances ceased by limitation. This is expressed by the apostle in these words, "Blotting out the handwriting of ordinances that was against us, which was contrary to us, and took it out of the way, nailing it to his cross." "Let no man therefore judge you in meat, or in drink, or in respect of an holy day, or of the new moon, or of the sabbath days, which are a shadow of things to come; but the body is of Christ." Col. 2: 14-17.

The cessation of shadowy ordinances of the class of these mentioned, the apostle expresses by the terms, "blotting out," and "nailing it to his cross." And let the reader mark well this qualifying passage, "which are a shadow of things to come; but the body is of Christ,"

This shows that shadowy ordinances *only* were done away at the crucifixion of Christ. These shadows having served the purpose for which they were designed, could exist no longer, being superseded by the body that cast them.

The ordinance forbidding the use of swine as food, does not belong to this class of ordinances. These were shadows of things to come. But the ordinance relative to swine's flesh is no more a shadow than the precept, "Thou shalt not bear false witness." The death of the Son of God, and the change of dispensations, could therefore no more abolish the precept forbidding the use of the swine as food, than it could change the precepts forbidding adultery and murder.

DANGER FROM IMPURE MILK.

At the recent Sanitary Convention held at Detroit, Mich., Dr. G. A. Watkins of that city read a paper on the "Supply of Milk in Cities," which contained several points of interest. After stating that the daily consumption of milk in Detroit amounts to 10,000 gallons a day, he remarked:—

"Just how much of this supply is pure and wholesome, and how much is adulterated and unfit for use, must be left to the consumer to judge. There is no doubt, however, that much of the mortality among children can be set down as resulting from the use of adulterated milk, or, what is just as bad, milk made from unwholesome food. The milk that a cow gives is largely determined by the food she eats, and, in order to get good, wholesome milk, you must feed good, wholesome food. If you feed swill, you must expect swill milk.

"It is very common in cities to see persons acting in the double capacity of garbage gatherers and milk venders. Barrels of swill and cans of milk pass your doors daily in the same wagon.

"These people are very kind and very useful. They take away your kitchen refuse to-day to accommodate you, and to-morrow they return it to you as food for your children, having first passed it through a poor, filthy bovine distillery called a cow, and thus converted it into pure milk. This innocent economy in parents may save one or two cents a quart on milk, but in return, it

brings doctors' bills, disease, and sometimes death. People as a rule pay little or no attention to the source of their supply of milk, whether the venders are honest or responsible or not; whether their premises are filthy or clean; whether their cows are fed on swill-slops and straw or corn meal and hay; and, in fact, whether it comes from cows, goats, pumps, or penstocks, only so that it is white, won't sour, and, above all, is cheap, they will buy it, feed it to their children and be contented. If their child is extremely strong, and succeeds in keeping soul and body together on the cheap, unwholesome food forced upon it by its parents, all is well; and if it is sick, they lay it to the resistless, ever acting, unseen forces of nature, over which no one save the Almighty can have control. If the learned and good family physician has no remedies of sufficient curative power to extract or counteract the poison that is administered every day, and its sufferings are ended by death, they bow in broken-hearted submission to the hand of fate, and lay the cause of their affliction to an all-wise overruling Providence.

"I believe that disease, like everything else, has its cause, and in cases like this where the cause is not removed, physicians cannot cure, and Providence would have to perform a miracle to save."

The special evil to which the Doctor called attention, that of feeding cows upon bad food, is not confined to cities. We have often known farmers to feed their cows on the swill and slops from the house; and it is a very common thing to keep cows shut up in the summer time for weeks in a lot where their only chance to quench their thirst is from a stagnant, slime-covered mud-pool. Milk from such cows cannot but produce disease, as the Doctor pointed out.

What Made the Difference.—A physician, in giving his experience as a total abstainer before the Ladies' Temperance Conference held in England last November, stated that "he once lived for twelve months in the neighborhood of two villages, one of which had a Christian, the other a Mussulman population. Both were healthily situated, and the inhabitants of both were about equal in

wealth, occupations, and other circumstances. But while the Mussulman village abounded in hale, hearty, vigorous old men, few of the Christians seemed to overpass fifty or fifty-five. And no cause for this difference could be observed by himself or others, except that while the Mussulmans were rigid abstainers, the Christians all drank freely, and many of them were drunkards."

THE OLD OAKEN BUCKET.

(AS REVISED AND EDITED BY A "SANITARIAN.")

WITH what anguish of mind I remember my childhood,
Recalled in the light of a knowledge since gained;
The malarious farm, the wet, fungus-grown wildwood;
The chills then contracted that since have remained;
The scum-covered duck-pond, the pig-stye close by it,
The ditch where the sour-smelling house-drainage fell;
The damp, shaded dwelling, the foul barnyard nigh it—
But worse than all else was that terrible well;
And the old oaken bucket, the mold-crust-ed bucket,
The moss-covered bucket that hung in the well.

Just think of it! Moss on the vessel that lifted
The water I drank in the days called to mind,
Ere I knew what professors and scientists gifted
In the water of wells by analysis find,
The rotting wood fiber, the oxide of iron,
The algae, the frog of unusual size,
The water, impure as the verses of Byron,
Are things I remember with tears in my eyes.

And to tell the sad truth—though I shudder to think it—
I considered that water uncommonly clear,
And often at noon, when I went there to drink it,
I enjoyed it as much as I now enjoy beer (?).
How ardent I seized it with hands that were grimy,
And quick to the mud-covered bottom it fell;
Then soon, with its nitrates and nitrites, and slimy
With matter organic, it rose from the well.

Oh! had I but realized, in time to avoid them,
The dangers that lurked in that pestilent draught,
I'd have tested for organic germs and destroyed them
With potassic permanganate ere I had quaffed;
Or, perchance, I'd have boiled it and afterward strained it
Through filters of charcoal and gravel combined,
Or, after distilling, condensed and regained it
In potable form, with its filth left behind.

How little I knew of the dread typhoid fever
Which lurked in the water I ventured to drink;
But since I've become a devoted believer
In the teachings of science, I shudder to think.
And now, far removed from the scenes I'm describing,
The story for warning to others I tell,
As memory reverts to my youthful imbibing,
And I gag at the thought of that horrible well,
And the old oaken bucket, the fungus-grown bucket,—
In fact, the slop-bucket—that hung in the well.

—J. C. BAYLES, in *the Sanitarian*.

—Mr. Gough said that "when he was told that whisky had saved thousands of lives, he was minded to tell the story of the school-boy who finished a childish essay on the pin, with the observation that pins, too, 'had saved thousands of lives.' 'How so?' asked the school-master. 'Why, by not swallowing them,' was the young humorist's reply."

TEA AND COFFEE.

UNDER this head we shall consider tea, coffee, and cocoa, or chocolate.

Tea consists of the dried leaves of a plant which is native to China, but is also grown in India and various other parts of the world, to which it has been introduced. The active principle of tea is *theine*, a narcotic alkaloid, of which it contains three to six per cent. The other most abundant constituent ingredient is tannin, of which it contains about twenty-six per cent. The remainder is made up of gum, vegetable fiber, sugar, fat, starch, and an aromatic oil to which its varying flavor is chiefly due.

Coffee is the roasted berry of a plant native to Arabia and Abyssinia, known as *Coffea Arabica*, which is closely allied to the plant from which Peruvian Bark is obtained, the source of quinine. Its active principle is *caffeine*, which is identical with *theine*, of which it contains about one-third as much as tea. It also contains tannin, though in less quantity than tea, together with gum, sugar, caseine, fat, and the other ingredients also found in tea.

Chocolate is obtained from the seeds of the cocoa palm, native of Mexico, the pods of a ground nut, a shrub, native of Zanzibar, and other sources. The substances from which it is produced are ground to a powder, then mixed into a paste with sugar, and dried in cakes. Cocoa, or cocoa nibs, consist of the nuts coarsely broken. The active principle of cocoa or chocolate is *theobromine*, the proportion of which is, according to the analyses of Dr. Stenhouse, five per cent. Theobromine is closely related, chemically, to theine, with which it is practically identical. The remaining constituents are chiefly fat, starch, sugar, coloring matter, and woody fiber.

Maté, or Paraguay tea, and *chaat*, or Abyssinian tea, are the leaves of trees or plants which possess active principles essentially the same in nature and properties as theine.

History of the Use of Tea and Coffee.—The use of tea and coffee, as well as of the other beverages named, among civilized nations, is confined to modern times. It is said that coffee has been in use in Arabia, its native home, a thousand years, and that tea has

been used in China and Japan about the same length of time. It was not until the middle of the sixteenth century, however, that coffee was first introduced into Europe by the establishment of a coffee-house in Constantinople, and another century passed before it was introduced into England. Its introduction into Constantinople was vigorously opposed by the priests, who asserted that its use was contrary to the teachings of Mahomet; but the desire for stimulation soon triumphed over religious scruples, and the Turks are now known as among the most inveterate coffee-users in the world. Its use was also opposed at its first introduction into more civilized lands, though far less vigorously than was the use of tobacco. From their full introduction to civilized nations only about two centuries ago, these beverages have gradually come into more and more extensive use, especially during the last half century. The annual consumption of tea and coffee and their congeners at the present day is estimated by competent authorities to be as follows: Tea, 3,000,000,000 lbs.; coffee, 1,000,000,000 lbs.; cocoa and chocolate, 100,000,000 lbs. *Maté* is used by at least 40,000,000 people, being the common beverage of the natives of South America, where the tree from which it is obtained grows abundantly without cultivation. It is probable that fully one-half the human race, if not a larger proportion, make use of one or more of these beverages. In England, tea is the favorite drink, 100,000,000 lbs. being annually imported into that country. It is also the favorite beverage in Russia and Holland. In Turkey, Sweden, France, and Germany, coffee is the favorite. In the latter country the average amount of coffee used is fourteen pounds for each person.

Effects of Theine upon Man and Lower Animals.—Numerous experiments upon the direct effects of theine,—as also its allied substances, caffeine and theobromine,—conducted by Dr. E. Smith, Dr. Richardson, and others, show that in small or ordinary doses it causes an increased action of the heart, an increased elimination of carbonic acid through the lungs, loss of heat, and increased activity of the kidneys. In larger doses it produces nausea, vertigo, and finally, insensibility and death. Dr. Edward Smith, after drinking an

infusion made from two ounces of coffee, which probably contained about seven grains of caffeine, fell to the floor unconscious. A prominent official in the British army, now doing service in Africa, recently lost his favorite horse in a manner which is both singular and instructive. A cook left a few pounds of tea in the sack which had contained it, which was filled with corn by a Kafir groom who knew nothing of the presence of the tea. Upon serving out the corn to a troop of horses, of course the last one received the larger share of the tea, which was eaten greedily with the corn. The result is thus described:—

“The animal plunged and kicked, and ran backwards, at intervals galloping madly around, finally falling into a donga, where it lay dashing its head on the rocks, and was dispatched by an assegai thrust through the heart. The post-mortem appearances indicated extreme cerebral congestion.”

Coffee also lessens the action of the skin.

Evil Effects of Using Tea and Coffee.—The evil effects of the use of these popular beverages has made too evident their injurious character to allow of room to doubt their deleterious influence, notwithstanding the apologies offered for their use by those who are accustomed to employ them. These evil effects we will attempt to point out as briefly as possible.

1. They Waste Vital Force.—By the experiments of Dr. Smith, M. Gazeau, and many others, it is shown that the consumption of the body is greater under the influence of tea or coffee than at other times, since the amount of carbonic acid eliminated is greater than natural, the amount of carbonic acid sent out from the lungs being the best known measure of the rate of waste of the body. The amount of extra waste thus occasioned is shown by Dr. Smith's experiments to be from one-fourth to one-tenth that of the whole waste of the body, whence Dr. Smith very consistently remarks that it is especially adapted to “those who usually eat too much.” This is a tacit confession that at the least the use of tea is an expensive and wasteful habit.

The fact that the activity of the kidneys is increased, brings to light another means

by which force is wasted, while, as is confessed, no return is made for the expenditure.

2. Tea and Coffee Injure Digestion.—When taken upon an empty stomach, these beverages produce, as is well known, serious irritation of the digestive organs. When taken with the food, impairment of digestion is produced in several ways: (a) By taking into the stomach too large a quantity of liquid; (b) By relaxing the stomach by the use of liquids of too high a temperature, by which, also, the activity of the gastric juice is impaired; (c) By precipitating the pepsin with the tannin which they contain. Chocolate is further injurious to digestion on account of the large amount of fatty substance which it contains.

That the use of tea and coffee is a common cause of dyspepsia is an observation made by all experienced physicians. At the last meeting of the British Medical Association, an eminent physician from Australia testified that dyspepsia from the use of tea and coffee is very common in that country. We have seen, personally, many scores of cases of which the use of these fascinating beverages was one of the chief causes.

3. The Use of Tea and Coffee Affects Injuriously the Nervous System.—This statement would seem to be satisfactorily established by its well-known temporary effects. It is well known that whatever excites vital action above the normal standard without supplying an extra amount of force to support the extra expenditure, invariably produces, as a secondary result, depression of vital action below the normal standard, or what is known as a reaction. That this is one of the secondary effects of the use of strong tea, is well known. Tea may be used so weak that the reaction is not noticed, but no doubt it is still felt in some degree by the organic system, if not by the nerves of animal life. This continued alternation of excitement and reaction must certainly result in injury to the nervous system, increasing the liability to nervous diseases of a functional character, such as neuralgia, neurasthenia, hysteria, etc.

J. H. K.

Cheerfulness makes the mind clearer, gives tone to thought, and adds beauty to the countenance.

MALARIAL POISON.

No subject is of greater practical importance to sanitarians than this. No malign influence which affects human life and health is more wide-spread than this; none gives rise to more inveterate or more varied morbid conditions. What is its nature? Is it a germ or a gas? an entity or an influence?

For the settlement of this interesting question scientific experimentation must be resorted to, all sources of error being eliminated. This has not yet been done.

There are those who claim to have seen the malarial germ, and to have demonstrated its existence and studied its natural history with the microscope; but their observations are not confirmed, even after the lapse of half a score or more of years since the asserted discovery.

Again, there are those who believe that all the facts known respecting this cause of disease can be accounted for without the hypothesis of germs. A recent writer in the *Pacific Medical and Surgical Journal* asserts that "while the facts of malarial disease cannot be explained on the theory of a poison in the atmosphere, they all harmonize with the theory that malarial disease is a chill following exposure to cold." The writer mentioned quotes from "Reynolds' System of Medicine" the statement that intermittent fevers are caused by the suppression of "cutaneous secretions under sudden impression of cold." He further suggests that if this theory be true, "it may be that scrubbing with the flesh-brush and kneading the surface of the body—the most thorough system known is that practiced by the natives of the Hawaiian Islands and there called *lomi-lomi*—would serve both as preventives and curatives."

Practical experience in the treatment of quite a large number of cases of this disease has convinced us that the conclusion of the writer of the article referred to is certainly correct as to prevention and cure, whether his theory of the disease be true or not. We have found no remedies so efficient as thorough-going anti-periodics, as the wet-sheet pack, and the Russian, Turkish, hot-air, and vapor baths. In numerous instances we have succeeded in effecting cures in cases in which

quinine had been employed for a great length of time and in very large doses, without permanent benefit.

However we are not quite prepared to abandon all hope of the ultimate demonstration of the truth of the germ theory of this disease; and we can readily harmonize all the observed facts respecting the effects of suppression of the cutaneous excretions, chill from exposure, etc., with that theory. At any rate, so long as there are such facts as the following to be considered, which cannot well be explained without the germ theory, or something equivalent, we shall look for still further developments in the same direction; we quote from the *Popular Science Monthly*:—

"The majority of writers hold the opinion that *the air of marshes* is the sole cause of intermittent fever. But there exists strong evidence going to show that water, too, is a carrier of the poison. Take, for instance, two or three cases cited in the *Lancet*; and first, the case recorded by Boudin, of three vessels sailing from Algiers to Marseilles, conveying eight hundred soldiers, who on shore had all been exposed to the same atmospheric conditions. Two of these vessels were supplied with good water, but the third with water from a marsh. The two former arrived at Marseilles without a sick man, but the third ship lost thirteen men, and had one hundred and twenty sick, ninety-eight of whom were affected with malaria.

"Again, there is the outbreak of ague at Tilbury Fort in 1872, cited in Parkes's 'Hygiene,' where thirty-four men out of a garrison of one hundred and three were seized with ague, while the people at the railway station and the coast-guard men and their families just outside the fort entirely escaped. The troops had been supplied with water stored in tanks, collected from the rain-water of the roofs, while the people outside obtained theirs from a spring, the atmospheric conditions in both cases being identical."

Average Height of the Human Family.—

The tallest human beings are the Patagonians and Polynesians; the smallest, the Boschimans of South Africa. The average height of the whole human family is five feet three inches.

CAUSES OF DYSPEPSIA.*

BY THE EDITOR.

DEFICIENT FOOD ELEMENTS.—While the food may be abundant in gross quantity, it may be deficient in some one or more of the various important elements which go to make up the food. If the food is deficient in farinaceous and fatty elements, the individual will soon show signs of suffering in consequence. A lack of the nitrogenous elements will occasion still more marked effects, the stomach losing its tone and vigor, giving rise to acidity, flatulency, and various associated disturbances. The deficiency of the coarser, innutritious elements of the food is also very soon felt by diminished activity of the stomach and bowels, both in secretion and in muscular action. Hence the great importance of choosing carefully and judiciously the articles of food to be taken, especially when a regular dietary is to be followed. Such a selection should be made as will supply to the system all the elements of nutrition in proper quantity. To employ a dietary in which any one of the nutritive elements is deficient, although the quantity of the food may be all that the digestive organs can digest, is as really starvation, and will as certainly occasion the same results ultimately, as total deprivation of food. To attempt to live on white bread and butter and strong tea or coffee, is as certain to impoverish the blood as refraining from eating altogether, the only difference being in the length of time required to bring about the result. Thousands of pale-faced, anæmic, thin-blooded, nerveless, dyspeptic women owe all their troubles to an impoverished diet. Tea drunkenness, in which an individual attempts to subsist on the Chinese herb almost wholly, is a not uncommon thing; and in consequence of its pernicious influence, the sagacious physician not infrequently finds as well marked cases of scurvy among ladies of the higher classes of society as among the poorly fed sailors of the whaling vessel after a long voyage with prolonged confinement to a monotonous saline diet. Young ladies who attempt to exist with little other food than tea, pastry, and confectionery, need not wonder that they grow to be lank and sallow and hollow-eyed dyspeptics. Under such a regimen, the most hardy quadruped would succumb.

Many parents weaken the digestive organs of their little ones for life by feeding them when very young upon such insufficient diet as corn-starch or arrow-root gruel, and similar preparations, and when they become older, upon fine-flour bread. Repeated experiment has shown that a dog will die of starvation in a month when fed upon white or fine-flour bread alone. Fed upon bread made of the whole grain, or graham bread, dogs as well as other animals suffer no deterioration in weight or in strength. The difference between fine flour and graham flour is largely in the proportion of gluten which they contain. Fine flour is made from the innermost portion of the grain, which is almost pure starch, thus excluding the brain, nerve, and muscle nourishing elements which are found chiefly in the portions of the kernel which lie next the outer husk. Whole-wheat flour also contains portions of innutritious matter which, under most conditions, are advantageous, encouraging both secretion and muscular activity of the bowels, and thus preventing constipation, which is often a forerunner of more serious disease of the digestive organs. As will be hereafter explained, there are cases in which the coarser portions of the bran are injurious by causing irritation; but these cases do not often occur.

While it is necessary to have all of the elements of the food in proper proportion, it is of first importance that the nitrogenous elements should be sufficient in quantity, even if it should be necessary to take an excess of the farinaceous elements to secure the proper amount, since it is of these elements that the vital portions of the body are formed. The following table shows the respective amounts of different articles of food required to furnish the requisite quantity of nitrogenous matter for one day:—

	OUNCES.		POUNDS.
Lean Meat,.....	15.6	Rice,.....	3.0
Eggs,.....	21.2	Potatoes,.....	8.8
Peas,.....	11.2	Carrots,.....	14.2
Oatmeal,.....	23.6	Turnips,.....	15.4
Baker's Bread,.....	36.7	Cabbage,.....	15.4
Wheat Flour (fine),.....	27.5	Parsnips,.....	16.9
Graham Flour,.....	25.5		PINTS.
Indian Meal,.....	26.8	Beer,.....	185
Rye Meal,.....	37.1	Milk,.....	4.5

By reference to the above table any one will be able to so combine various articles of food as to secure the proper amount of nitrogenous matter without overloading the digestive organs, and yet give to the food the bulk necessary for good digestion. Evidently, it would

* Digestion and Dyspepsia: Good Health Pub. Co.

overtax the stomach to digest turnips in sufficient quantities to supply the wants of the body, while lean meat would afford an insufficient amount of bulk, as well as being deficient in carbonaceous matter. By a combination of such nitrogenous seeds as peas and beans, or of oatmeal or wheat meal, with potatoes or other vegetables, the difficulty may be overcome, as it may also be by combining meat or eggs with the carbonaceous grains and vegetables.

The proportion of carbonaceous and nitrogenous food elements required for the maintenance of health is about one part of the latter to seven of the former. The following table, including a few of the more important articles of food, will give a clear idea of the relative proportion of the two elements in the articles mentioned:—

ALBUM. OR CARBONA- NITROG. CEUS.	ALBUM. OR CARBONA- NITROG. CEUS.
Lean Beef,.....1..... 5	Wheat Meal
Eggs,.....1..... 1.9	or Bread,.....1..... 7.0
Peas,.....1..... 2.7	Rye Meal,.....1..... 9.8
Milk,.....1..... 3.6	Potatoes,.....1..... 10.7
Fat Beef,.....1..... 5.0	Carrots,.....1..... 11.5
Oatmeal,.....1..... 6.1	Barley Meal,.....1..... 12.7
Indian Meal,.....1..... 7.7	Rice,.....1..... 13.0

THE QUALITY OF FOOD.—Man, like other animals, is made of what he eats; hence the German proverb is literally true, that “as a man eateth, so is he,” and we may well credit the assertion of an eminent author that the general tendency of thought in any nation may be determined by the character of the national diet. True as this principle is when applied to the body in general, it is especially true as referring to the stomach. No organ is so directly and so profoundly affected by the quality of the food as the stomach. Hence we may well consider with care the various ways in which the digestive organs may become impaired through defects in the quality of the food.

BAD COOKERY.—As a potent cause of dyspepsia, bad cookery deserves first mention in this connection. The real object of cooking is to render the elements of food more digestible. It is intended, indeed, to be a sort of partial preliminary digestion of the food; but the numerous devices of cooks and caterers, complex compounds, and indigestible mixtures, have so far subverted the original design of the process as to render cooking a means of making food indigestible as often as otherwise. Altogether too little attention is paid to the subject of cookery as a science. In the majority of cases the task of preparing food for the palate—the

stomach is seldom thought of—is intrusted to ignorant servant girls or colored cooks who compound mixtures by “the rule of thumb,” and without any reference whatever to the physiological wants of the body. We are glad to see a slight indication of reform in this direction in the establishment of schools of cookery in the larger cities, and lectureships on the subject in some of our female seminaries. To become a good cook requires as much native genius and far more practical experience than to become a musician or a school teacher, or even to enter some of the learned professions. The position of cook ought to be made so respectable and lucrative that it will attract persons of sufficient mental capacity and culture to make the art subservient to the purposes for which it was first employed and designed. A bad cook in a family is a worse enemy to the health, the comfort, and even the morals of the household, than would be a swamp generating malaria a half mile away, a cesspool fever-nest at the back door, small-pox across the street, or a Chinese Joss house in the next block. Give us good cooks, intelligent cooks, cooks who are thoroughly educated, and we will guarantee the cure of nine-tenths of all the dyspeptics without money and without medical advice.

FRIED FOOD.—Of all dietetic abominations for which bad cookery is responsible, fried dishes are the most pernicious. Meats, fried, fricasseed, or otherwise cooked in fat, fried bread, fried vegetables, doughnuts, griddle cakes, and all other similar combinations of melted fat with other elements of food, are most difficult articles of digestion. None but the most stalwart stomach can master such indigestibles. The gastric juice has little more action upon fats than water. Hence, a portion of meat or other food saturated with fat is as completely protected from the action of the gastric juice as is a foot within a well-oiled boot from the snow and water outside. It is marvelous indeed that any stomach, under any circumstances, can digest such food, and it is far from remarkable that many stomachs after a time rebel.

It is principally for this same reason that “rich” cake, “shortened” pie-crust, and pastry generally, as well as warm bread and butter, so notoriously disagree with weak stomachs, and are the efficient cause in producing disease of the digestive organs. The digestion of the

food being interfered with by its covering of fat, fermentation takes place. The changes occasioned in the fat develop in the stomach extremely irritating and injurious acids, which irritate the mucous membrane of the stomach, causing congestion, and sometimes even inflammation.

ALEXANDER SELKIRK AND THE USE OF SALT.

[From numerous personal observations, as well as from the experience and testimony of others, we have long been convinced that the great quantity of salt consumed by most persons is a decided detriment rather than an advantage, as is generally supposed. It has been claimed and taught by physiologists for many years that salt is an indispensable article of diet; notwithstanding this fact, however, we believe that experience will not support the view. We do not often advise the entire disuse of salt by persons who have been long accustomed to its use, but continually urge the greatest moderation in its use, believing that the less the better for most persons, and have often seen excellent results from its discontinuance or from a decided decrease in the quantity used. The following account of the experience of Alexander Selkirk, with comments, sent us by an old contributor, is interesting and valuable as reliable testimony on this subject.—*Ep.*]

Who has not read the entertaining story of Robinson Crusoe? Though the tale is a fiction, yet it was founded upon an actual fact. One Alexander Selkirk, who was born in Largo, Scotland, in 1676, was left alone upon the island of Juan Fernandez, off the west coast of South America, in the year 1704. Here he lived entirely alone on this desolate island for about five years. His biographer states that at first "his greatest inconvenience was the want of salt and bread." But at length he came to relish his food without salt. "The island abounds in goats, which he shot while his powder lasted, and afterward caught by speed of foot. At first, he could only overtake kids; but latterly, so much did his frugal life, joined to air and exercise, improve his strength and habits of body, he could, in a few minutes, run down the strongest goat on the island, and, tossing

it over his shoulders, carry it with ease to his tent." At the end of five years, a vessel came to the island, and the captain, wanting some meat, sent with Selkirk his swiftest runners and a bull-dog; but the latter were soon left far behind and tired out, while Selkirk, to the astonishment of the whole crew, brought two goats upon his back to the tents." "At length, all being ready, they set sail, when a new series of difficulties of another kind annoyed Selkirk, similar to those he had felt at his arrival upon the island. The salt food he could not relish for a long time, having so long discontinued the use of it."

This simple fact shows two things: 1. The use of salt is not necessary for health or for the greatest development of strength; 2. The taste for salt in our food is not a natural one. It is acquired by long use. Otherwise salt would be very offensive to the taste. This case furnishes as good proof of this as could be asked.

D. M. CANRIGHT.

THE DIET OF VARIOUS NATIONS.

THE following extracts relating to the food of various nations are of interest as showing the preponderance of the use of vegetable food, and the evil effects of a large use of animal food:—

THE ICELANDERS.—"The diet of the Icelanders consists almost solely of animal food, of which fish, either fresh or dried, form by far the largest proportion. During the summer they have milk and butter in considerable abundance; but of bread and every other vegetable food there is the utmost scarcity, and among the lower classes an almost entire privation. . . . As an effect of these circumstances in the mode of life of the Icelanders, cutaneous diseases, arising from a cachectic state of the body, are exceedingly frequent among them, and appear under some of their worst forms. Scurvy and leprosy are common in the island, occurring especially on the western coast, where the inhabitants depend chiefly upon fishing, and where the pastures are inferior in extent and produce. . . . Scurvy is observed to occur with greatest frequency at those periods when there has been a deficiency of food among the inhabitants, or when the snow and frost of winter succeed immediately to a

wet autumnal season. For its cure a vegetable diet is employed, in as far as the circumstances of the Icelanders will allow of such means. Fruits of every kind are altogether wanting to them; but some advantage is derived from the employment of the *Cochlearia (officinalis et Danica)*, of the trefoil (*Trifolium repens*), of the berries and tops of the juniper (*Juniperus communis*), and of the *Sedum acre*, plants which are all indigenous in the island. Inflammatory affections of the abdominal viscera are likewise very common among the Icelanders, chiefly, perhaps, in consequence of the peculiar diet to which they are accustomed.

"The diet of the Icelanders likewise gives much disposition to worms, and the ascarides are observed to be particularly frequent."—*Mackenzie's Travels in Iceland*.

MEXICANS.—"The Indians of New Spain (those, at least, subject to European domination) generally attain to a pretty advanced age. As peaceable cultivators and inhabitants of villages, they are not exposed to the accidents attending the wandering life of the hunters and warriors of the Mississippi and of the savannas of the Rio Gila. Accustomed to uniform nourishment of an almost entirely vegetable nature, that of their maize and cereal gramina, the Indians would undoubtedly attain very great longevity if their constitutions were not weakened by drunkenness. Their intoxicating liquors are rum, a fermentation of maize and the root of the *Jatropha*, and especially the wine of the country, made of the juice of the *Agave Americana*, called *pulque*."—*Humboldt*.

"The usual food of the laboring classes, throughout such States as I visited, is the thin cake of crushed maize, which I have described under the name of tortilla; and it is remarkable that, notwithstanding the great abundance of cattle in many places, the traveler can rarely obtain meat in the little huts which he finds on his road. Chilis are eaten abundantly with the tortillas, being stewed in a kind of sauce, into which the cakes are dipped."—*Lyon's Residence in Mexico*.

THE NATIVES OF AUSTRALIA.—"Their food consists of fish when near the coasts; but when in the woods, of opossums, bandicoots, and almost any animal they can catch, and

also a kind of *grub*, which they find in decayed wood. Sometimes they spear a kangaroo. They roast all the fish and animals on the ashes, skin and all, just as they catch them. When it is pretty well done they divide it among themselves by tearing it with their teeth and fingers, and, excepting the bones, they devour every part, including the entrails."—*Robert Dawson*.

"Amongst the almost unlimited catalogue of edible articles used by the natives of Australia, the following may be classed as chief: All salt and fresh water fish and shellfish, of which in the large rivers there are vast numbers and many species; fresh-water turtle; frogs of different kinds; rats and mice; lizards and most kinds of snakes and reptiles; grubs of all kinds; moths of several varieties; fungi and many sorts of roots; the leaves and tops of a variety of plants; the leaf and fruit of the *Mesembryanthemum*; various kinds of fruits and berries; the bark from the roots of many trees and shrubs; the seeds of leguminous plants; gum from several species of acacia; different sorts of manna; honey from the native bee, and also from the flowers of the *Banksia* by soaking them in water; the tender leaves of the grass-tree; the larvæ of insects; white ants; eggs of birds; turtles or lizards; many kinds of kangaroo; opossums, squirrels, sloths, and wallabies; ducks, geese, teal, cockatoos, parrots, wild dogs, and wombats; the native companion, the wild turkey, the swan, the pelican, the leipoa, and an endless variety of water-fowl and other descriptions of birds."—*Eyre*.

[It should be mentioned in this connection, as showing the relation of food to physical and mental development, that the native Australian is regarded as being the lowest creature that wears the form of man.]

THE INHABITANTS OF OTAHEITE.—"Their food consists of pork, poultry, dog's flesh, and fish; bread-fruit, bananas, plantains, yams, apples, and a sour fruit which, though not pleasant by itself, gives an agreeable relish to roasted bread-fruit, with which it is frequently beaten up."—*Wallis's Voyage, 1767 (Hawkesworth's Voyages, vol. i. p. 483.)*

"I cannot much commend the flavor of their fowls, but we all agreed that a South

Sea dog was little inferior to an English lamb; their excellence is probably owing to their being kept up and fed wholly upon vegetables."

"Their common diet is made up of at least nine-tenths of vegetable food."—*Cook's Voyages*.

FEEJEE ISLANDS.—"What all voyagers have said of the cocoa-nut tree we found to be true, only, instead of its uses being exaggerated, as some have supposed, they are, in my opinion, underrated. A native may well ask if a land contains cocoa-nuts, for if it does he is assured that it will afford him abundance to supply his wants."—*Wilkes, U. S. Exploring Expedition*.

TANNA (one of the New Hebrides).—"The produce of the island is bread-fruit, plantains, cocoa-nuts, a fruit like a nectarine, yams, tarra (a sort of potato), sugar-cane, wild figs, and some other fruits and nuts."

"I believe these people live chiefly on the produce of the land, and that the sea contributes but little to their subsistence. Whether this arises from the coast not abounding with fish, or from their being bad fishermen, I know not; both causes, perhaps, concur."—*Cook's Voyages*.

SANDWICH ISLANDS.—"The principal food of the lower class of the population, and, in fact, the favorite food of all classes, is *poi*." This "is a sort of paste made from the root of the kalo (*Arum esculentum*), a water plant, cultivated to a great extent throughout all the islands." "The kalo is much used by the foreign residents as a substitute for potatoes, or rather for bread, being for this purpose either boiled or fried."—*Sir George Simpson*.

[The foregoing excellent article is taken from "Pavy on Food and Dietetics."]

ANCIENT HYGIENE.

It would be matter for a very interesting inquiry, says the *Popular Science Monthly*, to ascertain how it happens that, with regard to many abstruse questions of practical science, hygiene for instance, the ancient Hebrews, Romans, Greeks, etc., reached results which, for correctness, put to shame the ignorance of later times. An illustration of

this truth is given in a memoir by Dr. John Spear, lately published in the *Lancet*. He first speaks of the precautions to be taken in selecting sites for human habitations. From the "Mishna" we learn how carefully all unclean things were removed from the vicinity of Jerusalem and the temple; and the investigations of Signor Perotti in the site of the ancient Jewish capital have shown how complete were the systems of sewers and the means of sewage precipitation and disposal.

We find again that the Latin author Vitruvius, in his work "De Architectura," supposed to have been written in the reign of Augustus, in giving directions for securing healthy sites for towns, lays special stress on the necessity of a porous soil, and, in order to secure the ventilation of that soil, on perfect subsoil drainage. The views of Hippocrates on this subject, as also of Pliny and of other classic writers, might be studied at the present day with profit. Thus it would appear that the memorable researches of Pettenkofer, in a great measure, serve only to make us acquainted with the laws which were perfectly well known to the men of olden time.

Then, as to practice: in the ancient cities of the world—Rome, Carthage, Herculaneum, Nineveh, and Alexandria—we know how well pollution of the soil was guarded against. What most judiciously executed works for this and other sanitary objects existed, recent discoveries have revealed. Probably in all these places, too, and certainly in Rome, interment within the city walls was forbidden. "It is worthy of note," says Dr. Spear, "that at this period of history pestilences and epidemics were not of common occurrence, and when they appeared, they were usually clearly traceable to famine or to war. But to this enlightened and golden age succeeded one of darkness and torpor. Sanitary measures were forgotten or ignored; filth accumulated in crowded towns; the practice of intramural sepulture became general. The soil, the air, the water, we read, were impregnated with decomposing matters. As a result we have recorded those most destructive pestilences of the middle ages. The plague, the black-death, fever, and small-pox, swept over the land. . . . Pestilences were ascribed to the pleasure of Almighty God."

LITERARY MISCELLANY.

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

SPEECH.

As bees mixed nectar draw from fragrant flowers,
So men from friendship, wisdom, and delight.
Good sense will stagnate; thoughts shut up want air,
And spoil, like bales unopened to the sun.
Had thought been all, sweet speech had been denied;
Speech, thought's canal! speech, thought's criterion
too!
Thought in the mine may come forth gold or dross;
When coined in words, we know its real worth.
If sterling, store it for thy future use;
'Twill buy thee benefit, perhaps renown.
Thought, too, delivered, is the more possessed:
Teaching, we learn, and, giving we retain
The births of intellect; when dumb, forgot.
Speech ventilates our intellectual fire;
Speech furnishes our mental magazine;
Brightens for ornament, and whets for use.—*Young.*

THE MOTHER'S INFLUENCE.

BY MRS. E. G. WHITE.

CHRISTIAN mothers, we are in God's great school as learners, and there is a diversity of ways in which we are trained, as the several departments of our work bring into exercise the discipline we need. God trains his people and prepares them for usefulness. Spiritual strength must be acquired daily in order to meet the various circumstances under which we are placed.

Christian parents should begin the education of their children in their infancy. They should, in view of their God-given responsibilities, pray most earnestly to know the will of God, and for strength to do it. The wife of Manoah prayed, "Let the man of God which thou didst send come again unto us, and teach us what we shall do unto the child that shall be born." In answer to her earnest prayer the angel visits them again, and the inquiry is made, "How shall we order the child, and how shall we do unto him?" If this prayer should go forth from the unfeigned lips of mothers, they would find that help would be given them from God. The mother especially should be fitted for her appointed work of patient labor. It is her privilege and sacred duty to train all

who are under her care and her influence, by her teachings and her example, for lives of usefulness. Every woman has an influence with those with whom she associates. That influence may be either good or bad. The mother is exercising her influence continually. Every glance of her eye, every word her lips utter, every act of her life, carries with it an influence which has power to affect the character and future destiny of her children. This influence may gladden the heart, or bring discouragement, and deform the character.

In view of these facts, mothers should take time for reflection and prayer. They should earnestly seek wisdom from God. With a determined purpose let every mother say, "I will strictly guard my influence. I will attend to the duty of self-culture, and the culture of my children. My outward adorning and the gratification of appetite shall be held in strict control. I have high and sacred duties to perform in the education of my children." She should inquire in the fear of God, "Will my children be a blessing or a curse to society? Will they be subjects for the future kingdom?"

The training which the mother of Samuel gave her son, developed in him sterling moral worth, which connected him with God. If the mother of Washington had been a frivolous character, devoting the talents of her mind to the matters of dress and what she should eat and drink, her son George would not have become a man of firm will and moral power. His mother gave him the lessons which he carried into practical life. She inspired him with principles of stern integrity that would not be bribed.

John Quincy Adams once paid the following precious tribute to his mother: "It is due to gratitude and nature that I should acknowledge and avow that such as I have been, whatever it was, such as I am, whatever it is, and such as I hope to be in all futurity, must be ascribed, under Providence, to the precepts and example of my mother." The German philosopher Kant remarked, "I shall never for-

get that it was my mother who caused the good which is in me to fructify."

"Behold, for an example, a splendid scene enacted at the close of the Revolutionary war. Cornwallis and his army had been captured; the Revolution was successful. The great chief and officers of the victorious armies were assembled at a festival in honor of the victory. The spacious saloon was crowded. . . . Presently the doors of the saloon open to admit a personage, whose entrance awakens universal attention. His figure is noble and commanding; his bearing dignified, without haughtiness; his expression lofty, but mild. He treads the floor with unaffected yet unsurpassed majesty. His presence kindles every eye and heart with rapturous enthusiasm. He is regarded with reverence, yet with affection—as a superior, and yet as a friend. He presents to their gaze the rare sight of a Christian soldier and an unambitious statesman. . . . He is the man whose enduring fortitude, military prowess, and overawing influence, had sustained the spirit of the Revolution, crowned it with success, and earned for himself the glorious pre-eminence of being the 'first in war, first in peace, and first in the hearts of his countrymen,' for that personage was George Washington!"

"Never, perhaps, was homage more sincerely or heartily rendered to a man than by the brave and beautiful in that hall, and never was it more deserved. Nor is it possible to conceive of a purer, sweeter human joy, than that which swelled his bosom. There was another heart, however, that shared in the homage and the joy of that occasion; leaning on the arm of the hero, in simple stateliness of mien, there walked the mother of Washington. She had trained him in his boyhood—taught him the principles, and developed the qualities which lay at the foundation of his greatness. It was her hands which had molded his character to symmetry and moral beauty. Her prayers, her influence, and her instructions had repressed the growth of evil qualities, and cultivated that divine life in his soul which led him to take counsel of the God of battles,—the Ruler of nations. Her early influence over her son was understood and silently acknowledged in that gay assembly. Yea, her son had owned it, was proud of it. He laid his lofty honors at her feet, and prized her smile above the noisy voice

of fame. Did she then experience a pleasure aught inferior to his? Who shall decide which bosom was the happiest on that triumphant day? The joy of Washington was great; the joy of his mother was at least equal. Would she have accomplished more, or tasted a sweeter pleasure, if, forsaking her sphere, she had mingled directly in the councils of the States and the movements of the camp? Impossible! She helped to achieve the Revolution—she shared the richest enjoyments of its success; but she did it through her heroic son—just as God would have every woman win her honors and rewards."

I would impress upon mothers that women are accountable for the talents God has intrusted to them. They may engage in missionary work at home, in their families. Their influence is fully equal to that of the husband and father. The most elevated work for woman is the molding of the character of her children after the divine pattern. She should gain their affections; she should cherish love; for with these precious traits of character she can have a transforming influence upon the family circle. If she makes a success here, she has gained the victory. Society will feel her influence in the deportment and moral worth of her children. The church will bless her because she has educated and developed talent which will be of the highest value. She gives to the church, men and women who will not flinch from duty however taxing. If Christian mothers had always done their work with fidelity, there would not now be so many church trials on account of disorderly members. Mothers are forming the characters which compose the church of God. When I see a church in trial, its members self-willed, heady, high-minded, self-sufficient, not subject to the voice of the church, I am led to fear that their mothers were unfaithful in their early training.

ANCIENT TIME-MEASURERS.

THE earliest artificial time-measurer was the sun-dial, which was devised as early in the world's history as 742 B. C., although the first of which we have any definite description was the *hemicycle* of Berosus, a Chaldean astronomer, two hundred years later. Many of these dials consisted of an upright staff, fixed in a basin around the edges of which were marked

the portions of the day. This, when placed in a sunny spot in a proper position, indicated the time by its shadow. It is even supposed that the obelisks of the Egyptians served as time-indicators in the same manner.

But the hours never wait for the sun to shine, and these dials were not suitable for the continuous notation of time's flight; therefore the Egyptians devised the expedient of measuring time by the flow of water. The water-clock was a jar containing water which slowly escaped by a hole in the bottom. "A miniature boat floated upon the surface of the water, and as this sank, an oar, projecting from the boat, pointed to the hours marked upon the inside of the jar." These primitive clocks must have been, however, unreliable time-keepers, since the emptying of the vessel was accelerated or diminished according to the quantity of water. Plato took the idea of the water-clock from Egypt to Greece; and constructed one that played upon flutes instead of striking the hour.

The celebrated horological machine presented by Haroun-al-Raschid, in 807, to Charlemagne, was undoubtedly a water-clock. "It was of bronze gilt, and twelve doors in the dial opened to show the hours, while brass balls to the number of the hour fell out and struck the time upon a bell. The doors remained open, and at noon twelve miniature knights rode forth and round the dial, having made a circuit of which, they retired, and the doors closed behind them."

The sand-glass was the next invention for measuring time. Although but another application of the principle of the water-clock, it was more certain in its action, as under proper conditions sand will run out more uniformly than water.

Alfred the Great measured time by burning daily six candles; they were made of wax, a foot in length, and would burn for four hours each, it being the duty of two monks to tend them and act as snuffiers.

In the thirteenth century, a Saracen mechanic devised a clock registering time by means of wheels and weights. During the reign of Edward I., Richard de Wallingford constructed a clock, showing the hours, the motion of the sun, changes of the moon, and ebb and flow of tides, which he called "Albion," *i. e.*, all by *one*.

What is now known as a clock was origin-

ally called a *horologe*, and the term clock (from the French *cloche*, a bell) was applied, down to the fourteenth century, to the tower bell rung to announce the hour.

E. E. K.

LITTLE MARY'S ILLNESS, AND WHAT CAME OF IT.

THERE was great consternation in Mrs. Willis's house when the doctor came to see her eldest child, Mary, who had been ailing for a few days, and said that the poor little girl had the fever. The news spread like wildfire in the not over-clean neighborhood, and mothers warned their children against going near Mrs. Willis's house, as if it were stricken with the plague.

Mrs. Willis herself was in great distress and perplexity. She felt sure that her three other children would catch the dreadful disease; she thought it likely that she might take it herself, and she had a great horror at the thought of illness and death. She was a bad manager at any time, and now that she had a sick child to attend to she didn't know what to do.

She wished with all her heart that she was good friends with her next-door neighbor, Mrs. Symonds, who was such a clean, thrifty body, and such an excellent manager. But one day, a long time ago, when Mrs. Symonds spoke quietly to Mrs. Willis about the little Willises going into her garden and pulling up the flowers, Mrs. Willis stormed away at her, told her she was stuck-up, and thought herself and her children better than any one else; and, in fact, insulted the worthy woman very much indeed. Since that time, Mrs. Willis had carefully refrained from speaking to her. Sometimes, when she knew that Mrs. Symonds was within hearing, she would call out to her children to keep right away from the "lady's" garden-gate, for fear she should put it about the neighborhood that they had been stealing again—which, I assure you, Mrs. Symonds had never done; she had too much regard for her home and family, to go gossiping into neighbors' houses.

She did not heed these taunts and insults, but went on in her own excellent way, a pattern to all around her.

The fact was, Mrs. Willis was envious of her. Her home was so neat and clean, her children so tidy and healthy-looking, she could

not understand how it was they were so. "Ah!" she would say to herself, as she looked round on her own dirty, slovenly, puny, sickly children, "some folks are lucky, but I never was."

You were mistaken, Mrs. Willis, in supposing that it was luck, or any other foolish thing, that kept your neighbor's family tidy and healthy. It was industry and proper management.

Now, when all the neighbors were in a flutter of fear about the fever being at Mrs. Willis's house, Mrs. Symonds was perfectly calm and fearless.

When she heard of it she said to her husband, "Sometimes it pleases God to send afflictions upon us, no matter what precautions we may take to keep them off. But we can use means to keep disease away; and I always try, by cleanliness, pure air, and wholesome food, to keep my children proof against attacks of disease. I have n't any fear about this fever. Thank God for giving the dear children robust health; I am sure they will be slow to take any complaint whatever."

It was morning. Mrs. Symonds's children were just gone to school, and she was upstairs making the bed in the back bed-room. She could hear the sick child moaning in the next house, and the sound gave her kind, motherly heart pain.

She smothered all thoughts of the insults that Mrs. Willis had heaped upon her, and said to herself, "I ought to go in and see if I can do anything to help." So when she had set her house in perfect order, she went to the next house, and tapped quietly at the door. It was a warm May morning, yet the three windows in the front of the house were all shut. A little girl came to the door, her hair hanging in tangled masses about her face, which was smeared with dirt, her shoulders sticking out of her ragged frock, and without shoes and stockings on. A great noise came from the inner room, where two other children were rolling and quarreling on the floor.

"Is mother in, Lucy?" said Mrs. Symonds to the child. She immediately scampered away with her little bare feet, and shouted noisily up the stairs, "Mother, mother, here's Mrs. Symonds wants you!"

Mrs. Willis felt in no mood to quarrel with and insult her good neighbor now. She came

downstairs. Her dirty, sallow face bore traces of tears. The fact was, she hung helplessly about her sick child the whole day.

"I hear your Mary is very ill," said Mrs. Symonds; "can I do anything to help you?"

"Do you know she's got the fever?" said Mrs. Willis.

"Yes, but I'm not afraid," answered Mrs. Symonds.

Mrs. Willis fidgeted a moment, and looked ashamed of herself as she stammered, "Very—very well then, please to come in, and thank you."

As she walked up the stairs, Mrs. Symonds felt stifled, the air was so close and offensive. Even at the risk of offending her neighbor, she said softly, "Oh, Mrs. Willis, how can you breathe in this house? it is so dreadfully close."

And when she got into the sick-room, she went straight to the window, unbolted it, and opened it top and bottom.

"You'll kill the child!" said Mrs. Willis, in amazement.

"Nay, but this bad air is killing her; it is dreadful." And Mrs. Symonds lingered by the window a minute to get a breath of the pure blessed air of heaven which was now pouring into the sick-room, purifying it, and cleansing it of its deathly vapors.

"There isn't a strong wind to-day," she said, turning to the sick-bed, "so it can't hurt Mary. Poor child!" she added, taking her burning hand, "how do you feel?"

The child turned her hot head on the uncovered pillow, and moaned as she stared at Mrs. Symonds.

"Oh, she ain't conscious," said Mrs. Willis, sitting down on the bed, and holding her apron to her eyes. "It's awful to be here and see her a-going on. I wish I was a hundred miles away, unless I could do anything to relieve and cure her."

"But, Mrs. Willis, you can do a great deal to relieve her, though I would not say you could cure her," said Mrs. Symonds.

"Well, do tell-me what, if you know," said Mrs. Willis. At that moment a pealing scream was heard from the children below. Little Mary started up in her bed, and cried, "Save them! save them!"

"Lie down, Mary," said Mrs. Symonds, soothingly, "there's nothing the matter."

"She don't know what she's saying," said Mrs. Willis. "As for them young 'uns, I'll break their young necks if they don't keep quiet."

"The house should be as still as possible," said Mrs. Symonds; "could n't you go down and hush them a bit?"

"I'll go and turn 'em out," said Mrs. Willis, as she hurried out of the room.

The pure air seemed to have refreshed Mary. She lay quiet and stared at Mrs. Symonds. The kind woman looked around the dirty, disorderly room, thinking how matters might be mended for the poor sick child. Mrs. Willis soon came back. She had not done crying. "I've sent 'em off into the field opposite," she said, "but everybody runs away from 'em as if they had the plague. Oh dear me! to think of my eldest having this fever; and the other children 'll be sure to catch it."

"Oh no, not *sure* to," said Mrs. Symonds, in a low, hopeful tone; "you must take means to prevent it, Mrs. Willis. But now let us think of poor Mary a little, and see what we can do for her. Do n't cry; crying will do no good. This is a time for *doing*, not for crying. *In the first place*, have you some clean sheets for the bed?—these are not very clean."

"I should think they was n't; they've been on nigh a month, and the children do get 'em so dirty; but I thought as it was fever, it was best not to get any more sheets in here."

"Oh, Mrs. Willis," said Mrs. Symonds, still speaking in very low tones, "Mary will never get better if you talk so. Let her have the sheets, please."

"Very well, I'll go and put 'em to the fire to air."

"Wait a minute," said Mrs. Symonds. "Will you bring the mop up, quite damp, next time you come? If this room could be well washed, it would be so healthy and refreshing for Mary; but we can get up all the dust and dirt with a wet mop, and that will make it a good deal better. Look what a lot of dust and down have gathered under the bed!"

"La, bless me!" said Mrs. Willis, as she stooped down to see, "just think o' that; and this room was well swept a week ago."

"A week ago!" thought Mrs. Symonds, "then no wonder at its being in such a state." Never a morning passed without the damp mop going under Mrs. Symonds's beds to gather up the dust; and she well scrubbed her rooms every week.

Mrs. Willis left the room, and soon returned with the mop. This Mrs. Symonds took, and very gently began her work, without making any noise to distress Mary, who now and then closed her eyes, but still continued moaning.

Before she had got over half the room, the mop was in such a dirty, clogged-up state, that she had to go down and shake it in a bucket of water. While she was downstairs she took occasion to open the kitchen and the front-room windows top and bottom, and she also left the back door open.

When she had finished Mary's bed-room she said, "Now does n't this room seem lighter and sweeter?"

"It certainly does," said Mrs. Willis. "I'll go and fetch the sheets now."

They soon got them on the bed, and an old, clean cover on the pillow; and poor little Mary looked so comfortable. She closed her bright eyes, and presently dropped off to sleep, and her mother and Mrs. Symonds went quietly out of the room.

(To be Continued.)

SELF-RELIANCE.

OF all the elements of success, none is more vital than self-reliance,—a determination to be one's own helper, and not to look to others for support. It is the secret of all individual growth and vigor, the master-key that unlocks all difficulties in every profession or calling. Help yourself, and Heaven will help you, should be the motto of every man who would make himself useful in the world. It is not in the sheltered garden or the hot-house, but on the rugged Alpine cliffs, where the storms beat most violently, that the toughest plants are reared. It is not by the use of corks and life-preservers that you can best learn to swim, but by plunging courageously into the wave and buffeting it, like Cassius and Cæsar, "with lusty sinews."

The man who dares not follow his own independent judgment, but runs perpetually to others for advice, becomes at last a moral

weakling and an intellectual dwarf. God never intended that strong, independent beings should be reared by clinging to others, like the ivy to the oak, for support. The difficulties, hardships, and trials of life—the obstacles one encounters—are positive blessings. They knit his muscles more firmly and teach him self-reliance. All difficulties come to us, as Bunyan says of temptation, like the lion which met Samson; the first time we encounter them they roar and gnash their teeth, but once subdued we find a nest of honey in them.

It is said that when Fuseli presided at the Academy of Art in London, he read while his pupils drew, and rarely opened his lips. "I believe he was right," says his great pupil, Leslie; "for those students who are born with powers that will make them eminent, it is sufficient to place works before them." The great art of education, it has been wisely said, is "to teach others to teach themselves."

The moral feebleness of our time is equaled by the intellectual. Men are gradually ceasing to think; they have their thinking done for them—done by machines. As the native in some parts of the world carries the traveler in a chair on his back over the mountains, so the teacher carries the pupil up the Alpine peaks of knowledge; as the priest in Siberia puts his devotions into a mill, and grinds out prayers, so we expect our preacher to do our praying for us; as the steam car whisks us, asleep or awake, to the city or capital, so we expect the book over which we doze to bear us to the metropolis of science.

Our strength is measured by our plastic power. Let every one take earnestly hold of life, scorning all props and buttresses, all crutches and life-preservers. Instead of sighing for an education, capital, or friends, and declaring that "if he only had these, he would be somebody," let him remember that, as Horace Greeley says, he is looking through the wrong end of the telescope; that if he only *were* somebody, he would speedily have all the boons whose absence he is bewailing. Let him strive to be a creator rather than an inheritor,—to bequeath rather than to borrow. Instead of wielding the rusted sword of valorous forefathers, let him forge his own weapons, and, conscious of the intelligence in him and the Providence over him, let him fight his own

battles with his own good lance. This lesson of self-reliance once learned and acted on, and every man will discover within himself, under God, the elements and capacities of usefulness. —*Abridged from Getting On in the World.*

SMALL THINGS OF LIFE.

It is to be observed that even as the world judges, small things constitute almost the whole of life. The great days of the year, for example, are few, and when they come they seldom bring anything great to us. And the matter of all common days is made up of little things, or ordinary and State transactions. Scarcely once in a year does anything really remarkable befall us. If I were to begin and give an inventory of the things you do in a single day, your muscular motions, each of which is accomplished by a separate act of will, the objects you see, the words you utter, the contrivances you frame, your thoughts, passions, gratifications, and trials, many of you would not be able to hear it recited with sobriety. But three hundred and sixty-five such days make up a year, and a year is a twentieth, fiftieth, or seventieth part of your life. And thus, with the exception of some few striking passages, or great and critical occasions, perhaps not more than five or six in all, your life is made up of common and, as men are wont to judge, unimportant things. But yet, at the end, you have done an amazing work, and fixed an amazing result. You stand at the bar of God, and look back on a life made up of small things—but yet a life how momentous for good or evil! —*Dr. Bushnell.*

Educational Progress Dependent upon Physical Conditions.—Prof. J. Baldwin, President of the Missouri State Normal School, in a series of articles in the *American Journal of Education* asserts that better physical conditions are required as the first condition of educational progress. He says:—

"Good parentage, careful rearing, and hygienic living are simply imperative. The duty of physical health and vigor should be inculcated around every fireside, taught in every school-room, pressed by every journal, proclaimed from every platform, thundered from every pulpit.

"*Temperance is a sine qua non.* Temper-

ance is self-control, subjecting the animal to the man. Temperance tends to health and leisure. Intemperance is the curse of our race, and must be removed.

"The liquor traffic with its train of evils must be prohibited. The cost is fearful. In our country and Great Britain, the direct and indirect cost of alcoholic drinks exceeds the cost of food and clothing. Worse, the liquor traffic brutalizes, destroys physical vigor, burns out manhood, and leaves the body a fit dwelling place for fiends.

"The tobacco traffic with its benumbing and degrading effects must be abolished. We need not argue. The startling facts stare us in the face. The liquor traffic and the tobacco traffic *must go*. Abolish these and you change seas of human woe to mountains of human joy. You *double* the physical vigor of the race. You save time and money enough to feed, clothe, and give a college education to every child in the land. *Alcohol and tobacco must go.*"

"Right living is inexpensive, and gives at once health and time for culture. This is no Utopian dream, but simple common sense. To make educational progress and the elevation of the race possible, we must begin at the foundation, and better the physical conditions of the masses."

A Curious Work of Art.—The Marquis de Veere once gave each of his household a sufficient quantity of the richest white silk damask for a suit. Charles V. was about to make him a visit, and the marquis wished his court to make a splendid appearance when assisting him to receive the emperor. His painter, Mabuse, who was always in debt, was granted the privilege of seeing to the making of his own suit of clothes. Mabuse, however, sold the damask for a good price, and having made a paper suit, painted it so perfectly to represent the damask that when he appeared in it all were deceived.

When the marquis called the emperor's attention to the beautiful clothing of his court, and asked which suit he most admired, the emperor at once selected that of Mabuse. The joke was then explained to the emperor, but he would not believe that the suit was not of real damask until he had touched it with his hands.—*Harper's Young People.*

POPULAR SCIENCE.

ASTRONOMICAL POSSIBILITIES.

PROF. PROCTOR asserts in his volume entitled "The Flowers of the Sky," that "It is no longer a mere fancy that each star is a sun—science has made this an assured fact, which no astronomer thinks of doubting. We know that in certain general respects each star resembles our sun. Each is glowing like our sun with intense heat. We know that in each star processes resembling in violence those taking place in our sun must be continually in progress, and that such processes must be accompanied by a noise and tumult, compared with which all the forms of uproar known upon our earth are absolute silence. The crash of the thunderbolt, the bellowing of the volcano, the awful groaning of the earthquake, the roar of the hurricane, any of these, or all combined, are as nothing compared to the tumult raging over every square mile, every square yard of each one among the stars."

Mr. Proctor describes the wonderful phenomena which occurred a few years ago in the constellations, Northern Crown and Cygnus, in the former of which a star too faint to be seen by the naked eye suddenly shone out almost as bright as the most brilliant of the stars, and then faded away again, while in the constellation Cygnus, a new star made its appearance, also fading again so as to be perceptible only with the telescope. Concerning the import of these changes, the astronomer remarks as follows:—

"A change in our own sun, such as affected the star in Cygnus, or the other star in the Northern Crown, would unquestionably destroy every living thing on the face of the earth; nor could any even escape that may exist on the other planets of the solar system. The star in the Northern Crown shone out with more than eight hundred times its former luster; the star in Cygnus with from five hundred to as many thousand times its former luster, according as we take the highest possible estimate of its brightness before the catastrophe, or consider that it may have been very much brighter. Now, if our sun were to increase tenfold in

brightness, all the higher forms of animal life, and nearly all vegetable life, would inevitably be destroyed on this earth. A few stubborn animalcules might survive, and, possibly, a few of the lowest forms of vegetation, but naught else. If the sun increased a hundred-fold in luster, his heat would sterilize the whole earth. The same would happen in other planets."

Prof. Proctor's prediction sounds very much like that made a long time ago according to which "the heavens shall pass away with a great noise, and the elements shall melt with fervent heat."

An Ant Battle.—A correspondent of the *American Naturalist* for March gives the following curious account of a battle between two colonies of red ants, which furnishes another proof of the existence of intelligence and reasoning powers in the lowest orders of animals:—

"The victorious army were medium in size and numbered many thousands; those captured were a much larger ant, but not so numerous. The large ants after a desperate resistance were forced out of their fort, four or five small ants holding on to the antennæ and legs of prisoners. The captives were usually taken a few inches from the fort and liberated. All the ants returned to the fight except one, who would stand facing his captive for a few moments, then taking hold of the antennæ of the prisoner give three or four pulls; after waiting a short time the pulling was repeated with more determination; the big ant not responding, he was savagely jerked, then he would lean forward, and a drop of sweet issuing from his mouth, the little ant would approach and drink the nectar, then pick up his captive and hurry home. This was repeated many times during the battle. Some of the prisoners gave up their sweets without so much pulling. I think this battle was for no other purpose than to secure the sweets supposed to be in the stomachs of the captives. These ants were kept prisoners just one week, when they were liberated, marched off in a body and never returned. They were probably kept confined until their sweets were exhausted and then allowed to go free."

—It is estimated that the average density of the earth is 5.6 that of water.

Potato Ivory.—A French firm has discovered a means of converting potatoes into a substance resembling ivory and useful for the same purposes. Artificial corals are made from carrots by the same process.

Artificial Diamonds.—An examination by English scientists of the artificial diamonds about which so much ado has been made at intervals during the last few years, has demonstrated that they are not diamonds, and in very few particulars resemble the precious gems, being simply minute, and almost microscopic crystals of a silicious character.

Grass Paper.—The world will never lack for paper, as this article is now manufactured out of almost every vegetable substance that grows. The latest discovery in this direction is a means of making the finest writing paper from common marsh grass, which is treated when green. This paper is said to equal and even excel in fineness of texture the best linen paper.

Edison's New Electric Lamp.—The *Telegraph* thus describes the new electric lamp, invented by Mr. Edison, the renowned inventive genius who presides at Menlo Park:—

"The merits of the new Edison lamp are almost startling. It is a plain glass globe, costing twenty-five cents, and about the size of an orange. In the bottom is fitted a metallic stopper, through which the copper wires pass, and a strip of carbonized paper, shaped like a horse-shoe, connects the wire. The electricity is turned on by an operation as simple as the turning on of gas, and the carbon becomes and remains luminous, giving a soft, brilliant powerful light, and the wick endures, no limit to its endurance having been found. No matches are required to strike a light, and should the glass globe break, the light is at once extinguished without harm. As there is no combustion, there is no smoke. When the light comes into popular use, it is calculated that it will greatly reduce the liability of fires and consequently the rates of insurance."

GOOD HEALTH.

BATTLE CREEK, MICH., APRIL, 1880.

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

TERMS, \$1.00 A YEAR.

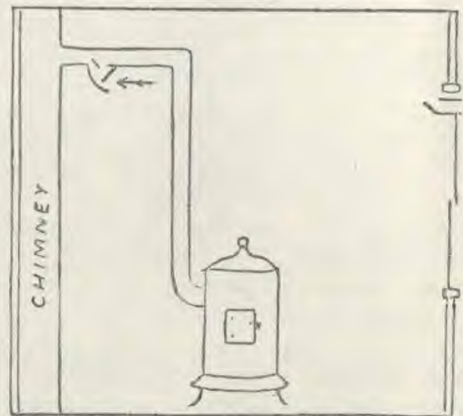
HOW TO VENTILATE.

As promised last month we will endeavor to point out in this article the best and simplest modes of ventilating dwelling-houses. Numberless devices have been patented for this purpose, but as a general thing, the more elaborate and complicated they are, the more untrustworthy. The simplest means are not only the most easy of application, but in the great majority of cases are the most efficient. The value of the chimney as a ventilator is much greater than is always appreciated. The old-fashioned fire-place was a most thorough means of ventilation; and even the most modern stove, which requires a much smaller quantity of air, is by no means worthless as a ventilator as well as a means of heating. It is possible, however, to utilize the chimney in other and more efficient ways.

There are several methods of accomplishing this; one is to carry the smoke pipe up the whole length of the chimney. By this means the hot smoke and gases in the pipe will heat the surrounding air in the chimney, and create a draft which may be utilized very readily by connecting the chimney with the room to be ventilated. This is probably the best and most economical means of ventilating a small building. By placing the chimney in the center of the house, and leading all the smoke pipes of the house into one central pipe running through the center of the chimney, a good draft may be produced; and by connecting each room with the chimney by means of proper ducts, the most thorough ventilation of the whole house may be secured.

Another means of accomplishing the same thing is to have another opening into the chimney besides that for the stove pipe, through which foul air may be allowed to en-

ter. The objections to this plan are chiefly two: 1. It detracts from the draft of the stove and soon causes it to smoke, and hence can only be employed in stoves which have a draft much stronger than is necessary to carry away the smoke; 2. As down drafts sometimes occur in the chimney, smoke is liable to enter the room through the ventilator. The latter difficulty can be effectually remedied by placing at the ventilator opening a valve which will allow air to enter the chimney, but closes tightly as soon as there is any movement in the opposite direction. We have arranged a very convenient form of ventilator to operate on this principle which may be attached to the stove pipe, and thus save the trouble of making an extra opening into the chimney. The construction of this ventilator may be seen in the accompanying diagram.



This ventilator can be attached to any stove which has a strong draft, and it works admirably well. We have tried it for more than a year, and with perfect satisfaction. It should be mentioned, however, that it is necessary to close the damper in the ventilator before opening the stove door to replen-

ish the supply of fuel, in order to prevent the smoke from escaping into the room from the stove.

Like all other modes of ventilation dependent on the draft of a chimney or shaft, this mode of ventilation is good only when the chimney is heated, or while the fire is burning. Hence a constant fire should be maintained whenever it is in use, night and day. While there are some objections to this plan of ventilation, its simplicity and ready applicability to houses in which the common stove is used, as a means of securing good ventilation, are so great as to recommend it most strongly to the common people. In order to increase the efficiency of the ventilator described, and to complement its action in the removal of foul air by the ready introduction of pure air in such a manner as to secure immunity from drafts with an abundant supply of pure air, a simple plan is the following:—

Have constructed a box about six inches deep, three inches wide, and of a length exactly equal to the width of the window casing inside. Instead of making the box with a tight bottom, make the bottom consist of a wire cloth with rather coarse meshes. Put on the top a hinged lid with some simple arrangement at the side by which the lid may be raised or lowered at pleasure, and fastened at any point. The apparatus is now complete; and all that is needed to secure the admission of air without drafts, even in very cold weather, is to place this box in the top of the window opening, lowering the upper sash a little for the purpose. The box should be placed with the bottom outward, being allowed to project a little beyond the sash, and with the opening of the lid directed toward the ceiling. By this means the current of air which enters the room will be so modified as to prevent unpleasant and harmful drafts. The wire screen will break its force, and divide it into a great number of small currents. The hinged cover will direct the air upward toward the ceiling, whence it will be directed toward the floor, and as it settles it will be warmed by the air of the room, which is always warmer near the ceiling than elsewhere in the room. This will bring the cool air about the head, where it is needed, and will prevent the accumulation of cold air around

the feet, which most need extra warmth on account of their remoteness from the center of the body.

By opening or closing the cover, the size of the opening may be regulated to suit all sorts of weather. When the weather is extremely cold, or a very strong wind is blowing, a mere crack may be sufficient to give entrance to all the air needed. When possible, one or more windows should be provided with such openings on different sides of the room, by which means disturbances caused by changes in the wind could be easily corrected.

The box can be readily adapted to windows of different sizes, by making it shorter than the width of the casing, and placing in each end a movable piece which can be slid out to close any space left at the ends. The opening made between the two sashes by the lowering of the upper sash may be closed by listing or cotton, or by a long strip of pasteboard covered with felt and fitted to the sash. This will not be needed except in the very coldest weather, as the air which enters through the sash will be given an upward direction, and so will not be likely to be felt.

SANITARY PHYSICIANS.

THE great demand of the present day is sanitary physicians, men who will make it their business to keep guard over the health of their patrons, and prevent disease, rather than simply to wait for the appearance of an epidemic, or some other malign influence, to bring patients. We heartily concur with the remarks on this subject of Dr. Gihon, at the last meeting of the American Public Health Association at Nashville, Tenn., though we should hardly have dared to speak so plainly. We quote as follows from the *Sanitarian*:—

“There is an army of doctors overspreading this country and annually recruited by thousands. Why not transform these men, of whom so many idly and hungrily await the prey stricken down for them by disease, into busy workers, keenly on the scent to avert that which now they cannot but welcome?”

“It is a noble calling to relieve pain and suffering, and to prolong the life of each feeble

invalid; but, at the same time, it is ignoble to feel that the physician can only fatten and live by the sorrows and agonies of his fellow-creatures. However earnest, zealous, and unselfish in his mission may be the young physician, when he first practices his vocation, soon domestic cares and family needs will make him watch with greedy eyes the advent of disease, which is to feed and clothe his children. With what sharper zeal, what higher pride, what nobler self-respect will he labor if to save mankind from the ravages of disease. Instead of looking with satisfaction upon his daily list of ten, twenty, forty sorrowful, haggard, crippled wretches, it will become his boast that in the community in which he lives there have been the fewest sick, the smallest death rate, the rosiest children, the happiest parents, the most hale and hearty octogenarians. It has been reputed against the medical officers of the corps to which I belong that they can know little about disease, since they live chiefly among healthy men, and I fear the longer their service the farther they are believed to be removed from acquaintanceship with the ills which afflict the body. This may be so, but I do not envy my civilian colleague, whose years have been passed amid scenes of suffering and bodily misery, more than half of which he knew to have been unnecessary and preventable, nor do I covet his wealth, so much of which has been wrung from hearts that have needlessly ached."

"Just as the surgeon, to-day, uses the knife when all else has failed and he is powerless to save; when the meddling man-midwife has sunk to the level of the old-time charlatan, who looked at tongue and pulse and asked about the bowels as a prelude to his routine dose, so will the intelligent physician in the future sadly have recourse to his scanty pharmacopeia only when he has not succeeded in keeping his charges well. There can never be too many sanitary doctors in the land—and, as they multiply, the dust will settle on the prescriber's bottles, the mold cover their undisturbed contents."

—The candidates for ancient athletic games were dieted on boiled grain, with warm water, cheese, dried figs, and no meat.

IRRATIONAL IDEAS OF DISEASE.

A LARGE share of the superfluous and harmful drugging to which the masses of the inhabitants of civilized lands subject themselves is due to the retention of the ancient errors respecting the nature of disease which were long ago exploded by the revelations of modern science. Notwithstanding the clear demonstration of the fact that disease is an action or condition of the body to be corrected, not an entity to be expelled, many people still retain the idea that disease is something within the body to be got out of it, and to be attacked, for that purpose, with remedies of a character corresponding to the nature and intensity of the disease; the more virulent the disease, the more harsh and violent the remedy.

More consistent with the ancient theory on which this notion of disease rests is the belief and practice of the Tartar physician. Dr. B. W. Richardson, one of the ablest medical writers of the day, thus graphically describes the Lama physician:—

"In the month of September, when the day breaks over his magnificent mountains, watch this man leaving his Lamasery to collect his remedies. A leathern bag and a teakettle carry all his wants. Armed with a pointed iron-capped staff and hook, like a Druid of our own old time, he marches forth with his train of pupils, and roaming the mountains, picks out of the laboratory of Nature his medicinal stores, from branch, from shrub, from root. With the declining sun he returns, laden with his spoils, next day culls them, dries them in the air, packs them, labels them, stores them in some safe garner of the quiet Lamasery, and, in his honest soul, believes that the wealth of the whole medical world is in his safe-keeping. Called to the couch of the sick or the dying, he is content to hear of pain, to read off signs of oppression, and, striking his fingers across the pulse of each wrist, as a musician doth the strings of his instrument, he is satisfied. The phenomena he sees are with him easily understood; they are the assaults of a demon who must be expelled. So many diseases, so many demons, and, let it not be doubted, so many remedies. From the wonderful pouch by the side of that physician, come forth those dried

plants he gathered on the mountain side, and down the throat of the afflicted certain of them go, in nauseous powder. Or, should the remedy not be in the pouch, this wonderful Lama physician, with more than homeopathic skill, writes the name of the remedy on a scrap of paper, moistens the paper with his lips, rolls it into a pill, and administers it to the faithful, who, straightway swallowing, with the earnest belief that the name is as good as the thing when it comes through proper hands, believes and lives, or believes and dies, as the case may be.

"But before the last event shall happen, be the patient rich enough to bear the operation, our good Lama has one or two other resources at hand, belonging to the imaginative, which resources are bold, and, in proportion as they are bold, effective. By that most convenient of theories, that every disease is a demon within the man, the good Lama has a power to which we civilized have no claim. Between the actual existence of a thing, and firm faith in that existence, whether it be or not, the gulf is narrow in all minds, absent in most; and so the Tartar patient is, to his physician, as good as a man who should have veritably a demon within him. Well, I put to you here, to all, what would you wish for most if you believed as firmly that you had a demon in your tooth, making it ache, as that you had a tooth to be made to ache? I suspect you would like to have that demon cleared out. Further, if you were a Lama physician, and knew the quality of the demon and his best mode of exit, you would, I think, attempt to remove him. Our Lama sympathizes. He says to his patient, 'I can get rid of this demon by certain magical prayers, but you, being a wealthy man, are afflicted with a very proud demon, in fact, quite a swell demon, and he will not go away unless you find him a thorough good horse to carry him off.' And so the horse is brought out, properly accoutered, the prayers are recited, and then, the demon getting inside the horse, and the physician outside, they go away together, and unless the demon leaves the horse, or the physician disposes of both, demon and physician remain as intimate as is proper so long as the horse lives. Where the demon goes afterward I cannot say; I suppose to his native place."

UNHYGIENIC TREATMENT OF THE INSANE.

WE have in several instances had convincing evidence that the modes of treatment in vogue at many insane asylums are by no means such as common sense, to say nothing of a scientific knowledge of mental physiology and pathology, would dictate. We cannot conceive that any good can come from the methods of violent restraint and punishment which are employed in many institutions for the insane. Persons who are affected with mental disease need quiet, cheerful surroundings rather than prison-like surveillance and severe treatment. The hopelessly insane and violent should of course be protected from injuring themselves or others; but those for whom there is a prospect of recovery should be placed under circumstances in which they will feel as little restraint as possible, though still under sufficient observation to prevent their doing harm to themselves or others. Too often, there is evident reason to believe, the insane are treated more like wild and ferocious beasts than like persons suffering with sick bodies and diseased minds.

Dr. Wm. A. Hammond, professor of nervous diseases in the University of New York, in a recent article in the *International Review* calls attention to the existing evils in the treatment of the insane which ought to arouse the attention of all who are able to exert any influence in securing prompt and thorough reform. We quote a few paragraphs as follows:—

"Within about a year four homicides occurred in the New York City lunatic asylum on Ward's Island. In one of these a patient was beaten to death by an attendant; in another, an attendant was killed by a patient; in the third, a patient was thrown off the wharf and drowned, by another patient; and in the fourth, one lunatic was ordered to give a hot bath to another, not only insane, but paralyzed. After getting him into the bathtub, he turned on the hot water and walked away, leaving the poor wretch actually to be boiled to death. In the asylum at St. Peter, Minnesota, a patient who refused to eat, had his mouth filled with food by a nurse, and the mess pushed down into his stomach with

the handle of a knife, while another nurse held him down. On one occasion he ran away, yelling that they wanted to kill him. He was caught and laid on a bench; one attendant held his hands, and sat across his body; another attendant and a patient helped to hold him; his mouth was plugged to prevent his closing it. The food (soup) was poured in from a pitcher; his breath was heard to 'gurgle' as the soup went into his wind-pipe, and in five minutes he was dead.

"Last winter, rumors in regard to the bad management of the Longview Asylum, in Ohio, became so prevalent that the legislature appointed a committee to investigate them. From the report made on the subject, I make the following extracts:—

"According to the testimony of several eye-witnesses, a punishment frequently and sometimes gleefully resorted to by attendants in this asylum is one known as "taking down." "Taking down," in the words of the testimony, consists in tripping or throwing the patient to the floor, holding her down (for "taking down" is a female punishment; the men being usually knocked down) with the knee on the chest, while another employé gags the patient, and still another holds the patient's hands. The patient is held down till she is quite weak and exhausted, becomes purple in the face, and the breath is almost gone.

"Another punishment is to make a "spread eagle" of a patient. This consists in stripping a patient to nakedness, and making attendants whip him with wet towels. This punishment is inflicted for refusal to work. It is described as very painful, and is practiced because it leaves no marks."

We earnestly hope that ere long more rational methods may be introduced into the treatment of these unfortunates. We doubt not that with a more rational mode of treatment and better hygiene, thousands could be cured, whereas now the percentage of cures is very small indeed. We are glad to know that all insane asylums are not like those described, and from personal acquaintance with the managers, believe that the two asylums in Michigan are exceptionally well managed. We have never known any charge of cruel treatment against these institutions to be sus-

tained, and believe that there is never any occasion given for complaints on such grounds. We have no doubt, however, that the future will develop methods of treatment much superior to many of those now in vogue, even in the best institutions, and that much better results will be attained by the employment of better remedies.

Died of Foul Air.—The *Washington Critic* of to-day (March 15) announces that Capt. James Morrow, Superintendent of the folding-room of the House of Representatives, died yesterday of an illness produced by the bad ventilation. The same paragraph states that eight other persons employed in the same room are ill from the same cause. This is only an exaggerated case. Hundreds die daily from the same cause; and no doubt at this moment thousands of persons are ill with various maladies, the sole cause of which is a deficient supply of pure, fresh air. On the tombstone of Capt. Morrow should be engraved, "Died for want of pure air;" and the same inscription might surmount with equal propriety the graves of at least one-twentieth of the twenty millions who annually die, nearly all prematurely, and in consequence of the violation of the laws of life and health.

Tobacco as a Remedy for Obesity.—We are glad to be able to cite an excellent testimony against the use of tobacco for obesity, from an eminent medical scientist, Prof. Immermann, of Basel, which will be regarded with greater interest as coming from a German, whose nationality is certainly not remarkable for antipathy to the weed. After condemning the use of alcohol in obesity, the learned doctor remarks as follows:—

"In connection with what we have just remarked with respect to alcohol, let us here add a few words about another article of luxury, namely, tobacco. When English and American physicians have celebrated *tobacco-chewing* as a very efficacious prophylactic against corpulence, and prescribed it, we can by no means coincide in such a recommendation in any case, since this nauseous habit can scarcely in our opinion act in a limiting

manner upon the deposition of fat otherwise than by undermining the appetite, and by setting up a chronic dyspepsia, provoking a certain degree of marasmus. The same holds good, and perhaps in a still higher degree, of other customs and vices, such as the habitual use of the preparations of *coca* and *hashish* and of *opium-smoking*, and above all, of that senseless and injurious *misuse of morphia in subcutaneous injection*, which latter fashionable vice is, as we know, at the present day so much in vogue that in some places, and especially in medical circles, it is looked upon as quite the mode to be a slave to it."

An Interesting Discovery in Physiology.—The importance of thorough mastication of food has always been insisted upon by wise physicians as shown by experience to be essential to the health of the digestive organs; it has been claimed by physiologists, however, that as the saliva is an alkaline fluid while the gastric juice is acid, the former is neutralized in the stomach, and thus ceases to act upon the starchy elements of the food. From this it has been argued, and with considerable force, that mastication is essential only for the comminution of the food, and that substances which can be swallowed without chewing need little or no mastication. It has even been claimed that mastication of the food is detrimental. These arguments are completely answered, however, by the interesting fact recently proven by M. Defresne that while saliva is neutralized and rendered inert in pure gastric juice, this is not the case in gastric juice which is mixed with the various elements of food, particularly with the acids of fruits. Practically, then, and under all ordinary circumstances, the saliva continues its action upon the starchy elements of food throughout the whole process of digestion.

—Degrees were recently given to 203 graduates of the medical department of the New York University. Harper's Bazar thus comments upon the fact. "Now if some of these young doctors would introduce a new kind of practice, and for a reasonable consideration—say, a fixed yearly payment—undertake to keep people well, it would be worth while." To which sentiment we heartily subscribe.

LETTER FROM A WORKER.

WE have been so much cheered and encouraged by the numerous letters from earnest workers in the cause of hygienic reform that we venture to give, for the benefit of our readers, the following letter from one of the most indefatigable and efficient laborers in the hygienic field with whom we are acquainted:—

DEAR DOCTOR: I thought a little report of my doings here might be of interest to you, and perhaps some encouragement also. I came here the latter part of December, and went to work with GOOD HEALTH, and have secured now between 240 and 250 subscribers, and I have only been over seven half streets. I am making thorough work, and on some streets I get a subscriber at nearly every house. I expect to obtain 1,000 subscribers in Springfield. I have the co-operation of a goodly number of the best educated and most wealthy citizens.

I expect to continue right along in the interest of your institutions, knowing nothing else but GOOD HEALTH, and that magnified, until it breaks some of the bands of sickness and distress among the people. The "G. H." is the best it ever has been, and is appreciated by the people.

I believe your work on Digestion and Dyspepsia is unequalled by any other in print. I have sold several, and have loaned quite a number more. I never saw such a willingness to take hold of any work before by the masses of the people as is manifested in this. I am receiving new subscribers from the territory over which I have been, which is a very encouraging feature of the work. Neighbors are loaning their works to others, and encouraging them to subscribe. Some are already subscribing for their friends at a distance. Ministers and physicians take it, and so do all the best in society.

I am glad you expect to finish your new work soon. I speak for a copy as soon as it can be had.

There is considerable sickness here also this winter, on account of the unsanitary condition of the town, diphtheria being the most common.

There is a great desire on the part of quite a number of prominent citizens to put this town in a better sanitary condition.

Yours cordially,
G. S. HONEYWELL,

9980 Market St., Springfield, Ohio.

Sleeping Doses.—An English physician, in writing about sleeplessness, remarks that the state produced by narcotics is not sleep, but a condition of narcotism that counterfeits sleep.

“When a man says, ‘I want a quiet night, I will take a sleeping draught,’ he speaks in parables. To express the fact plainly, he should say, ‘I want a quiet night; I cannot obtain it by going to sleep, or, I am afraid to trust to the chances of natural rest, so I will poison myself a little, just enough to make me unconscious, or to slightly paralyze

my nerve centers, not enough to kill.’ If this fact could be kept clearly before the mind, the reckless use of drugs which produce a state that mocks sleep would be limited. The state of inaction which is brought about by natural sleep is very different from that which is produced by paralysis of any degree.”

Another physician very truly says that one hour of good natural sleep is worth more than a whole night of stupor under the influence of a sleeping dose.

QUESTION † DEPARTMENT.

In this Department will be considered all questions of General Interest pertaining to the subject of Hygiene.

Poisonous Flannel.—A correspondent writes: “In your Household Manual, red flannel is classed with other articles under the head of color poisoning. For the benefit of those who have purchased it ignorantly, please in your next number of GOOD HEALTH tell how the evil may be remedied. Will thorough washing render it harmless for undergarments?”

Flannel colored with aniline dyes has frequently been found to be poisonous on account of the presence of arsenic. Not long since a man died in consequence of arsenical poisoning produced by wearing boots which were lined with flannel containing this mineral poison. Pure aniline colors do not contain arsenic, and investigations of the cause of the poisoning in these cases have shown that the presence of arsenic is occasioned by its use as a mordant in the process of coloring, it not being perfectly removed by washing. We see no reason why thorough and repeated washing should not remove the poison entirely. We recommend every one purchasing colored flannels to adopt this plan as a precaution unless the goods have been shown by chemical tests to be entirely free from arsenic.

How to Get Lean.—Another correspondent writes, “My wife is quite fat, and wants to be leaner.” We suppose that a prescription for the cure of obesity is desired.

Corpulency is not a very common complaint in this country, the opposite condition being most frequently met with. The most

essential measure for the cure of a severe case of obesity is regulation of the patient's regimen. As much physical exercise should be taken daily as can be endured, a vigorous course in this direction being systematically carried out. The diet should be made as meager as possible without diminishing the strength too greatly. Persons who have been accustomed to eating large quantities of food will be astonished to see how small an amount is really necessary to sustain life and maintain bodily strength. Of still greater importance is the regulation of the quality of the diet. It is well known that certain kinds of food have a marked tendency to produce fat, while others nourish the muscular and nerve tissues and do not promote the increase of fat. All fattening foods should of course be avoided. We quote as follows respecting the regulation of the diet from the work on hygiene and domestic medicine which we have in preparation: “The following articles of food on account of their tendency to increase fat should be entirely forbidden: butter, cream, fats of every description, rich sauces, pork, goose, duck, most kinds of game, salads, pastry, ices, raisins, dates, figs, all kinds of sweet and preserved fruits, nuts of every description, and, in fact, nearly all kinds of starchy, fatty, and saccharine articles of food.

“The following articles may be eaten occasionally, but should be taken very sparingly indeed: new or unskimmed milk, eggs, potatoes, carrots, parsnips, and most other vegetables, rice, buckwheat, mutton, and beef-steak.

"The articles in the following list, and those of a similar character, should form almost exclusively the diet of a person suffering with obesity: all kinds of green vegetables, such as asparagus, cabbage, green peas, beans, and spinach, and acid fruits, such as lemons, sour oranges, sour apples, and currants. Of the grains, cracked wheat, graham flour, rye, and oatmeal, in moderate quantities, may be eaten. Meat should be used in moderation, the best varieties being venison, chicken, trout, and lean beef wholly free from fat. All the articles of food mentioned should be cooked entirely without the use of either fat or sugar. Very moderate quantities of salt should be employed. Tea, coffee, chocolate, and cocoa should be entirely interdicted."

Varicose Veins.—The same subscriber states that he is suffering from enlargement of the veins of the legs, and wishes to know how to prevent an extension of the disease, and, if possible, to effect a cure.

The old remedy for varicose veins, and until recently the best known, was the elastic silk stocking. By means of this appliance the weakened walls of the dilated veins are supported so that the accumulation of blood in the lower extremities is prevented, and thus the disease is prevented from spreading. The disadvantage of the silk stocking is that it very soon becomes loose, and is then of little value. A cheaper and much more efficient remedy is the elastic rubber bandage, which consists of a thin rubber band three or four yards in length and from two and one-half to three inches in width. This is applied to the affected limb like an ordinary bandage, beginning at the foot and extending the bandage upward as far as the disease extends. Care should be taken not to apply it too tight, as the circulation in the foot might be disturbed and injured by it.

A safe rule to follow is to apply the bandage so that it will be comfortable; and evenly applied, it relieves the uncomfortable sensation which accompanies this unpleasant disease. The bandage should not be stretched while being applied, only just sufficient to hold it in place, as the pressure of the blood in the blood-vessels when the foot is placed upon the floor will produce sufficient tension. The bandage may be placed upon the limb in

the morning and removed at night, or it may be worn continually. If the bandage is worn steadily it will prevent an extension of the disease, and after a long time may effect a cure. It effectually relieves all the unpleasant symptoms even if it does not effect a cure, and is generally acknowledged to be the best remedy known. When the rubber bandage cannot be obtained, a flannel bandage snugly applied will answer the same purpose though in a much less efficient degree.

What Can a Nervous Dyspeptic do for Himself?

A subscriber whom we suspect to be a sufferer from this very unpleasant disease, makes the above inquiry. We could not answer this question fully without employing much greater space than would be appropriate in this department, and hence must refer the questioner to a little work for sale at this office entitled "Digestion and Dyspepsia," in which will be found a full consideration of the subject. We will say briefly, however, that the essential things for the cure of nervous dyspepsia are that the patient should eat simple, wholesome food, sleep as many hours as possible, exercise in the sunshine and open air as much as the strength will allow, and above all cultivate courage and cheerfulness. On account of the nervous system being so much involved in this disease, it is of all forms the most difficult for the patient to treat himself. A person who is a sufferer from nervous dyspepsia ought by all means to place himself under the care of an intelligent physician.

Nervous Debility.—A lady wishes to know what a person suffering with nervous debility can do for herself at home. In many cases this disease is absolutely incurable at home, simply because it is impossible to remove the exciting cause, which is always the first step in a successful mode of treatment. One of the most common causes of nervous debility in women is the anxiety and amount of work incident to housekeeping or caring for a family of children. In these cases, of course, it is absolutely essential that the tired brain and exhausted nervous system should have an opportunity for rest and recuperation. Exercise in the fresh air and sunshine, wholesome food, and all other hygienic means, if well employed, will of course do good, but in many cases a more or less prolonged absence from home is essential to a cure.

FARM AND HOUSEHOLD.

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

HOUSEHOLD PERILS.

A FEW chemicals for use in the household are very advantageous and labor-saving, but they need to be handled with care. The *Boston Journal of Chemistry* recently published some important cautions concerning some of the more frequently used of these agents, which we quote in this connection as follows:—

“So many serious accidents have occurred in families, and so many narrow escapes have been experienced in the use or management of dangerous articles or substances which find their way into households, that we are led briefly to point out the nature of the substances, and suggest methods whereby the dangers may be greatly lessened. There are two or three volatile liquids used in families, which are particularly dangerous, and must be employed, if at all, with special care. Benzine, ether, and strong ammonia constitute this class of agents. The two first named liquids are employed in cleansing gloves and other wearing apparel, and in removing oil stains from carpets, curtains, etc. The liquids are highly volatile, and flash into vapor as soon as the cork of the vial containing them is removed. Their vapors are very combustible, and will inflame at long distances from ignited candles or gas flames, and consequently they should never be used in the evening when the house is lighted. Explosions of a very dangerous nature will occur, if the vapor of these liquids is permitted to escape into rooms in considerable quantity. In view of the great hazard of handling these liquids, cautious housekeepers will not allow them to be brought into their dwellings, and this course is commendable.

“As regards ammonia, or water of ammonia, it is a very powerful agent, especially the stronger kinds sold by druggists. An accident in its use has recently come under our notice, in which a young lady lost her life from taking a few drops through mistake. Breathing the gas under certain circumstances causes serious harm to the membranes of the mouth and

nose. It is an agent much used at the present time for cleansing purposes, and it is unobjectionable if proper care is used in its employment. The vials holding it should be kept apart from others containing medicines, etc., and rubber stoppers to the vials should be used.

“Oxalic acid is considerably employed in families for cleaning brass and copper utensils. The substance is highly poisonous, and must be kept and used with great caution. In crystalline structure it closely resembles sulphate of magnesia, or Epsom salts, and therefore frequent mistakes are made and lives lost. Every agent which goes into families among inexperienced persons, should be kept in a safe place, labeled properly, and used with care.”

The Pear Blight.—A correspondent in the *Country Gentleman*, giving his experience with this troublesome affection of pear-trees, says: “I am engaged largely in raising fruit, having on my farm between 15,000 and 20,000 fruit-trees, and of these about 10,000 are pear-trees of different varieties. When I first entered into fruit culture, I manured heavily, according to directions in catalogues and books. The trees were set out on a level plain, which was heavily coated with manure, and when setting out the trees, in every hole I deposited a quantity of manure. The consequence was that in four or five years about half my trees were dead, although as soon as I saw the slightest sign of the blight, it was immediately cut off; sawing off the diseased limbs being the only cure, if there is any, for a tree affected with the blight. I have now come to the conclusion that the less manure the first year, the better for the tree. The manure forces the tree too rapidly for its health. I have tried the experiment, and know its merits. About three years ago I planted two small orchards; one I manured very heavily, and gave the other only a little charcoal dust. In the first orchard about half the trees have died; in the other I have lost only three trees. I am firmly

convinced that the less manure the better for trees on good land. There was no difference in the soil, each being a rich clay. I also find that of the different varieties of pears, the Seckel, Duchesse d' Angouleme, Bartlett, and Sheldon are the least liable to blight."

To Remove Grease Spots.—Benzine is very useful to remove grease and oil spots. It should, however, be distributed in a circle around the grease spot and made to approach it gradually, because if applied in the center of the grease spot it will drive the grease farther out upon the clean cloth. A blotting-paper should be brought in contact with the spot immediately upon the application of the benzine, to absorb the fat.

Another method is to apply a hot iron on one side of the cloth, and a blotting-paper to the other; the efficiency of which depends upon the fact that the surface tension of substances diminishes with rise of temperature. If, then, the temperature on the two sides of the cloth be different, the oil will seek the cooler side.

To Wash Colored Silk Handkerchiefs.—Use a clean suds of tepid water, in which a little carbonate of ammonia has been dissolved. Rub the handkerchiefs lightly in the hands till all the spots have disappeared; then rinse in tepid water and squeeze them as dry as possible; but do not twist or press them hard in wringing. Take hold of the two corners of each and shake and snap until most of the water is expelled. Roll in a soft towel, lightly, laying the handkerchiefs flat on the towel; let them remain a few moments, then iron.

Keep the Stable Clean.—We quote from an exchange the following important suggestions relative to the care of cows and the necessity of cleanliness in their surroundings: "We need to impress upon all dairymen some idea of what is necessarily classed under the head of cleanliness in the dairy. The stable must be clean, free from manure and all offensive odorous matter, and enough sawdust, dry dirt, lime, or other effective absorbent and deodorizer used to remove all disagreeable smells. The stable must be well ventilated, and the cows have plenty of fresh, pure air to breathe.

This must be, in summer or winter, as foul air, as well as foul food, will taint the whole system of the cow and impart its odor and flavor to the milk. Air, food, and drink must be pure, and the surroundings clean and sweet. If this is not the condition under which the cow is kept, then there is not sufficient cleanliness in this part of the dairy. Very seldom do we see a stable that even approximates this degree of cleanliness. Yet this is indispensable, as surely as the milk is made of, and flavored by, what the cow eats, drinks, and inhales, and as milk absorbs the odors of the atmosphere with which it comes in contact."

Ironing Shirts.—Few domestic duties are more troublesome or discouraging than the doing-up of fine shirts. Practice alone can make perfect in this art, but the following suggestions may assist the inexperienced: Upon washing-day, when the clothes are ready to hang out, dip the shirts into a boiled starch made by dissolving about two teaspoonfuls of clear starch to each shirt in a little cold water, to which add a small piece of tallow and a tablespoonful of salt and pour on boiling water till the starch is of the proper consistency. After the shirts are dried, and an hour or two before ironing, wring them out of a cold starch, roll up and put away to iron. The irons should be thoroughly clean and not hot enough to scorch. Have a piece of beeswax rolled in a thickness of cotton and rub over the iron. Stretch the bosom well on a board, and iron until dry.

To Wash Black Prints.—Wash thoroughly in a clean suds and rinse in clear water; then dissolve a bit of glue in a gallon of water and dip the goods in this; dry quickly and iron while damp.

Solution for Removing Paint.—Equal parts of quicklime, carbonate of soda, and soft water. Apply with a brush.

—In Germany, paper is now substituted for wood in the manufacture of lead-pencils. It is steeped in an adhesive liquid and rolled around the lead of the pencil to the requisite thickness. After drying, it is colored, and resembles an ordinary cedar pencil.

NEWS AND MISCELLANY.

—Musical notes were invented in 1380.

—The St. Gothard tunnel is completed.

—Paper was invented in China, 170 B. C.

—Clocks were first made in England in 1608.

—There are 82 Mormon Churches in Great Britain and Ireland.

—Great Britain has recognized the independence of Roumania.

—The first use of the cannon was at the siege of Algebras in the year 1342.

—During January the total production of coal oil per day was 66,000 barrels.

—The largest sugar-mill in the world is being erected at St. Charles parish, La.

—The three negroes who murdered Mr. Hirth, of Washington, are sentenced to be hanged, April 30.

Waltham, Mass., is a town of 83 years' standing, and has never had a church or post-office within its limits.

—The common price of wheat, in Greece, in the time of Demosthenes, was about 97 cents for four bushels.

—In the United States one hundred persons were executed by due course of the law, and seventy-five lynched, last year.

—A "Woman's Hospital" has been established at Wuchang, China, for the treatment of women and children.

The Secretary of the Navy has been authorized to send a naval vessel to Ireland with supplies for the suffering poor.

—The Smithsonian Institute received the announcement of the discovery of another planet by Palisa, at Pola, March 6, 1880.

—It is estimated that the annual income of the United States is \$5,000,000,000 in gold, which is the largest national income in the world.

—It is estimated that in each of the last three years about 7,000 persons have died of diphtheria in the one province of Pultava, Russia.

—It is said that the North British Railway Co. intends to apply to Parliament at the present session for permission to rebuild the Tay Bridge.

—English authorities state that three out of every five loaves of bread eaten in England in 1880 must come from the United States and Russia.

—An immense suspension bridge over the Firth of Forth, in Scotland, is projected. The engineer is Sir Thomas Bench, who designed the Tay Bridge.

—The reports of the New York City public schools announce that forty school buildings were supplied with ventilating arrangements during 1879.

—Stereotyping, which came into use in 1780, was invented almost simultaneously by C. Coldin, of New York, and W. Ged, of Edinburgh, Scotland.

—During the month of January, the delivery of postal cards reached an aggregate of 37,000,000, the largest number yet delivered in any one month.

—Mrs. Vosburgh, of Kalamazoo, Mich., has invented a danger signal for street crossings on railroads. She has applied for letters patent on it.

—Chas. Freeman, of Pocasset, Mass., who killed his little daughter while in a state of religious frenzy, last May, has been declared insane and sent to an asylum.

—The second highest bridge in the country is about being built across the Mississippi at Minneapolis. It is to be 1,150 feet long, with two spans of 325 feet each.

—Both houses of the New York Legislature have passed a bill authorizing the election of women as school trustees, and also permitting them to vote for such trustees.

—The official organ of the Chinese government, *The Peking Gazette*, is the oldest newspaper in existence, and it is highly probable that it was the first journal ever printed.

Mrs. Elizabeth Comstock, the Quaker missionary, states that of 115,000 prisoners whom she has visited, 105,000 were brought to prison through the agency of strong drink.

—In the translation of the Bible into Japanese it has been found necessary to transfer from the English only two words, for which no equivalent could be found—"hyssop" and "amen."

—A technical school is to be established in Philadelphia with experienced workmen as instructors. The course will consist of three terms of ten weeks each, including, in all, thirty lessons, thirty lectures, and sixty hours' practice.

—In Sweden the manufacture of thread for sewing purposes from wood has recently been begun. The manufacture has arrived at such a state of perfection that it can produce, at a much lower price, thread of as fine a quality as "Clarke's."

—Two-thirds of all England and Wales is owned by about 10,000 proprietors. Two-thirds of all the tillable land in Ireland is owned by less than 800 persons. The great majority of the agriculturists of these countries are therefore tenants-at-will.

—Another unsuccessful attempt was recently made to assassinate the Czar of Russia, by the explosion of a mine charged with dynamite, under the dining-room of the winter palace at St. Petersburg. He escaped by mere accident, several soldiers being killed.

—The national debt has been reduced \$725,000,000, or nearly one-third, in the last thirteen years, a circumstance unparalleled in the financial history of the world. It took England, with her vast wealth, sixty-five years to pay less than \$500,000,000 of her debt.

—The colonial possessions of Great Britain embrace about one-third of the surface of the globe, and nearly one-fourth of its population. About 3,000,000 square miles of these possessions are in America, 1,000,000 in Africa, 1,000,000 in Asia, and more than 2,500,000 in Australia.

—Pres. Hayes plainly indicated in a message to Congress, March 9, concerning the inter-oceanic canal, that M. De Lesseps can only go on with his project on one of two conditions. Either he must make arrangements satisfactory to the United States and obtain capital from persons who are willing to intrust their interest to our protection, or he must obtain the support of some European government sufficiently powerful to defy the opposition of this country.

LITERARY NOTICES.

BRAIN-WORK AND OVERWORK. By Prof. H. C. Wood, M. D. Philadelphia: Presly Blakiston.

This is the title of another number—the tenth—of a series of health primers issued by Mr. Blakiston. In this little volume Dr. Wood has given a concise resumé of the causes and means of prevention of nervous diseases arising from brain-work. He holds that nervous diseases are rapidly increasing, which he attributes chiefly to the use of alcohol, tea, coffee, tobacco, glutony and sexual excesses. The thorough acquaintance of the author with the properties of tea and coffee as well as other drugs, as is shown by his able work on materia medica, together with his great opportunities for observation afforded by his position as clinical professor of nervous diseases in the University of Pennsylvania, makes his testimony with reference to the use of tea, coffee, and alcohol particularly valuable. He asserts that when taken into the stomach, alcohol produces chronic inflammation of the coats of the blood-vessels, which results in the production of aneurism and apoplexy. Bright's disease he also mentions as a result of the use of alcohol. As an evidence of the great influence of this agent in producing nervous diseases, he states upon the authority of Dr. Hutchinson that between 1840 and 1846 in one-fourth of all the cases admitted to the great Glasgow asylum, alcohol was the cause of the mental disorder. He also states that "Hess found in a Swedish asylum that half the insane men had been drunkards." A still more striking illustration of the effects of alcohol is found in the fact stated that in consequence of the removal of half the tax on alcoholic drinks in Norway, the increase of mania was forty-one per cent; of melancholy, sixty-nine per cent; and of dementia, twenty-five per cent; while, in consequence of the hereditary influence of alcohol, idiocy increased one hundred and fifty per cent.

The Doctor takes very rational ground respecting other modes of intemperance as well as alcoholic intoxication, very truthfully remarking that "the man who gets an occasional jolly hour from a moderate potation is, perhaps, morally no more of a sinner than he who gets an occasional heavy night from over-indulgence at the table, and appears, also, to suffer no more of permanent physical ill." He regards over-eating as a very common practice, remarking that "almost every well-to-do person eats more than is necessary for the requirements of his system." Meat he regards as especially liable to over-work and irritate the kidneys. He states as his belief that "many seemingly inscrutable cases of chronic disease of the kidneys depend upon excessive flesh-eating." Tobacco, coffee, and tea he charges with being "potent for evil," and as exerting a very perceptible influence in producing "the nervous disorders of modern life." Tobacco, he asserts, is "a

substance which acts upon the human organization as a most deadly poison." He mentions cases in which he has been called in consultation, of severe habitual headache which had resisted the best treatment for years, but which were at once relieved by discontinuing the use of coffee.

We find much else to commend in this useful little volume, and nothing to which we could decidedly object except the apparent effort of the author, notwithstanding the remarks which have been quoted, to find some sort of an apology for the habitual use of the narcotics which he charges with being productive of so much harm. This appears to us to be in the highest degree inconsistent, and not at all in keeping with the candid and careful reasoning by which the greater portion of the work is characterized.

POPULAR SCIENCE MONTHLY. New York: D. Appleton & Co.

No journal comes to our table which is to us so replete with interest as this. As a popular scientific monthly, this magazine is undoubtedly superior to any other in the English language. Its articles are of a high tone, yet well calculated to interest and instruct the middle classes and unprofessional readers, as well as those who are familiar with the technology of science. It is, in our estimate, a complete success as a popular scientific magazine, and we are glad to see that its popularity is steadily increasing. It promises to maintain its position as the leading popular science magazine of the world. The subscription price of the journal is \$5.00 a year. Those who subscribe for the *Monthly* and *GOOD HEALTH* at the same time, through the publishers of this journal, can obtain both magazines for the same sum.

PUBLICATIONS RECEIVED.

OUR SCHOOL-HOUSES. By Prof. T. W. Chittenden, of Appleton, Wis.; reprint from the Fourth Annual Report of the Wisconsin State Board of Health.

THE ALIENIST AND NEUROLOGIST. A Quarterly Journal of Scientific, Clinical, and Forensic Psychiatry and Neurology. Edited by C. H. Hughes, M. D. St. Louis, Mo.

OUR PUBLIC SCHOOLS IN THEIR RELATIONS TO THE HEALTH OF PUPILS. By J. T. Reed, M. D. Appleton, Wis.

SECOND ANNUAL REPORT OF THE STATE BOARD OF HEALTH OF CONNECTICUT for 1877.

BREAD AND BREAD-MAKING. HOME LESSONS AND SEASONABLE SUGGESTIONS. Vegetarian Society: 56 Peter St., Manchester, England.

SANITARY MATTERS AT LARGE AND ELSEWHERE. By Mrs. L. C. P. Lewiston, Me.

UNION HANDBILLS. Published by the Woman's National Christian Temperance Union.

Publishers' Page.

The publishers are exceedingly gratified with the earnestness and energy manifested by the friends of the journal in their efforts to extend its circulation. Several thousand names of subscribers have been received since the first of January, and the names continue to come in almost as rapidly as ever. We hope the success with which the efforts of many individuals have been attended will stimulate them to continued efforts in this direction.

GOOD HEALTH has long been and is still the cheapest of all the health journals published, that is, more matter is offered for the subscription price than by any other publication. The object of this is to encourage the dissemination of the true principles of healthful living, and it is indeed gratifying to those who are particularly interested in the publication of the journal to know that their efforts have not been in vain. Through the medium of this periodical many thousand persons have become enlightened on the principles of sanitary and hygienic reform, and it is the earnest desire of all connected with the journal that its circulation may become more and more extended in order that its usefulness may be proportionately increased. If all who have been benefited by the perusal of its pages would feel themselves under obligations to bring the journal to the notice of their friends in order to secure for them the same benefits, nothing more could be asked in the way of labor for the extension of its circulation. We hope those of our friends who are already earnestly at work will continue their efforts, believing that they will be amply rewarded for so doing in witnessing the beneficial results of their labors.

In the next number we shall begin a series of articles on anatomy, physiology, and hygiene, which will be profusely illustrated with anatomical and physiological cuts, and will add greatly to the interest of the journal. We have long contemplated a series of articles of this character, but various causes have prevented the carrying out of the plan. Correct ideas of hygiene must be based upon a knowledge of the structure and functions of the human body, and hence all who are especially interested in hygienic subjects will be glad to improve this opportunity to inform themselves.

Several years ago, in answer to the earnest demand of many subscribers, the News and Household Departments were added to the journal. The want which then existed, however, seems to be at present in large degree supplied by other periodicals, especially the News Department. On account of the increasing interest in the subject of health and the accumulation of valuable matter on this subject, it now seems expedient that the two departments mentioned should be dropped in order to give space for other matter more closely related to the subject of hygiene.

We would be glad to hear from those interested on this subject. If no serious protest is offered against doing so, the News and Household Departments will be dropped with this number of the journal, the space occupied by them being supplied with interesting and valuable matter pertaining to the subject of hygiene.

Those who obtained trial trip subscribers should, at the expiration of the time for which the subscription was obtained, if possible, call upon the persons whose subscriptions they have obtained, and secure a renewal. By personal appeals of this sort many more persons can be induced to become permanent subscribers than would otherwise be likely to do so.

We are glad to announce to all interested in the subject that we have very nearly completed the manuscript for the large work on anatomy, physiology, hygiene, and domestic medicine, on which we have been engaged for some time. As the work is to be profusely illustrated with cuts and colored plates, we are now spending a few days in New York City arranging for the necessary engraving. The ample facilities for this kind of work which we find here will enable us to accomplish our object in a short time, so that the manuscript will be in the hands of the printers by the time this copy of the journal reaches our subscribers. The publishers, in anticipation of the work to be done, have made arrangements to push it to completion with all possible energy, so that the work will probably be ready for sale in eight or ten weeks. A more lengthy description of the work will be given in the next number of the journal. As we shall return home in a few days, all letters to us should hereafter be addressed to Battle Creek, as usual.

All persons who are full members of the American Health and Temperance Association will receive with this number an eight-page Quarterly devoted to the interests of the Association. All persons who are members of the Association and subscribers to GOOD HEALTH are entitled to the Quarterly, and may receive it by notifying the publishers of the fact of their membership, giving the name of the club or society of which they are members. This number of the Quarterly contains a large amount of intensely interesting matter, and every member of the Association ought to receive it. It is sent free to all who are subscribers to GOOD HEALTH.

Business is lively at the Sanitarium. The number of patients was never larger at this season of the year than at the present time. Everything moves along harmoniously and betokens a prosperous condition of affairs. According to the present prospect, the full capacity of the institution will be desired to meet the demands of its patronage during the present season. Chronic invalids cannot find anywhere better opportunities for regaining their health.