

# THE HEALTH REFORMER.

*Nature's Laws, God's Laws; Obey and Live.*

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## Open Air and Health.

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[THE following excellent article was translated from a German Health Almanac for the *Popular Science Monthly*, from which we quote.—ED.]

I spare the reader the diffuseness of an introduction, by telling him of a scene in an omnibus, which hinged on the question whether the conductor should open or shut the windows. On the left was seated a corpulent lady with full face, shrill voice, and labored respiration. The lady on the right was of lean, slender, dried-up figure; on entering the omnibus she had coughed; after taking her seat she held her handkerchief to her mouth and fairly changed color when the one opposite, wheezing, took her place and called out for "Air, air!" exclaiming that she would surely be smothered if the window were to remain closed. "But I," objected the other, "should get my death of cold if the window were opened." The conductor, who for some time stood undecided what to do, received this piece of Solomonic advice from one of the passengers: "Open the window," said he, in a deep voice, "and then one of them will die; then close it, and the other will die, and so at last we shall have peace."

This ending of the scene I state for completeness' sake only, and I add to it, by way of transition to the subject of the present essay, a conversation with a farmer which grew out of the occurrence.

On expressing to this sun-bronzed young man my regret that, in this self-styled "age of intelligence," the fear of colds and of draughts should be steadily increasing, and that it should really be producing the very effects it is meant to guard us against, namely, coughs and colds, he fully agreed with me, but took credit to himself for having risen above such notions. "We farmers," said he, "no longer believe that rust in grain comes

from cold; for we know that it results from the development of noxious germs which, emitted by barberry bushes and decaying stalks, are carried about by the wind."

This idea was of interest to me; for the farmer's account of the origin of "rust" put me in mind of certain throat and lung complaints that, developing unnoticed, gradually lead to positive disease, and the causes of which we physicians are daily more and more clearly tracing to inhalation of impure, vitiated air; hence, instead of speaking of consumptive lungs or tuberculous lungs, we should, rather, speak of "decayed" lungs or "dust" lungs. Stone-cutters are not assured by life-insurance companies, because it is known that the stone-dust settles in their lungs, undermining them, producing ulcerations, and reducing the average life of the men to thirty-six years.

Many other "dusty occupations," so to speak, are less dangerous, but of certain callings and of certain classes of working-men we often hear it said that they are seldom free from "dry" cough. The reader, though he or she may have little to do with dust, will perhaps have taken home from the ball a very fair case of "dust-lung" caused by the dust of the dancing-floor. If they will not believe this, let them examine their expectoration the day after the ball. He who has good lungs may without fear inhale dust; he will dance most of it out again; but not so a delicate girl whose lungs are compressed in a tight corset: when with dust-laden mucus she spits blood, do not say she has "taken cold." No, it is heating that has caused the difficulty.

Heating, too, and not cold, far less "trouble with teeth," is to blame when the first-born child of inexperienced young married people becomes feverish, or has a cough, and these symptoms are only aggravated when the innocent victim is treated with "teas" and mixtures, kept in an overheated room, and loaded down with bed-clothes.



That our children were intended by Nature to live in fresh, open air, and that the old wives' regimen of keeping warm, living indoors, and of warm drinks, is the cause of the fearful mortality of young children, is a truth which was not unknown one hundred years ago, but which must still be repeated over and over again.

It has long been held that closed windows are the principal cause of consumption. I would make the proposition more general, by substituting "defective ventilation" for "closed windows." It is very pleasant to be sheltered by four walls against wind, rain, and cold; but, now that we employ window glass, coal for heating, and iron stoves, and rent is becoming higher, while rooms, especially sleeping-rooms, are growing smaller, we have all the greater reason to keep open ventilating apertures, since our lungs cannot live with less than six hundred cubic feet of fresh, pure air per hour. The man who has but once made trial for one week of sleeping with the window open will never give up the practice.

I once spoke to a lady about this matter, but she replied by telling me the story of a "thoughtless person" who, having left the window open through the night, awoke in the morning blind. She had also read in some newspaper that a man had a stroke of apoplexy produced by the same cause. I was amazed. But, calling to mind that this lady's husband had served in the army, I remarked: "Your husband lay for so long in the open air in the rain-drenched trenches at Strasburg; did he ever write to you that he had taken cold, or that any of the men had ever overnight been struck blind, or had met with any other misfortune? Did he ever contract a catarrh? Did he ever write for licorice? Your brother-in-law tramped in the deep snow to Besoul, your cousin learned at Le Mans what is the meaning of a fall of freezing rain, and thousands of our countrymen have had like experiences; still, coughs and rheumatism were not frequent, and most of the men came back strong and healthy!"

More rational opinions are gradually making their way, and, in one particular at least, a beginning is being made of a revolution; namely, the system of treatment followed in "climatic" sanitariums, and establishments for the cure of disease by air, difference of elevation, etc. The proprietors of such places, it is true, speak of the "specific" virtues of their climate; but, inasmuch as chemistry shows that atmospheric air all over the earth has the same constitution, the specific virtue must reside in the special purity of the air,—a thing wanting in cities, but found in all

villages, provided they do not possess large factories.

Further, it is an error to suppose that in the South—Florida, Colorado, or in the Tyrol, or by the lake of Geneva—it is as warm as in a hot-house. In those regions, too, it is now and then cold; yet it is easier to be out-of-doors there, for usually the sun shines and the landscape is beautiful. But, since we cannot send all the sick to the South, we must devise some substitute at home, the benefits of which may be enjoyed even by the poorest. Then, too, when we consider that the majority of those who have spent the winter in a southern climate return as—embalmed corpses, because it is only when it is too late that people make up their minds to make the costly voyage, there is reason to expect better results from timely recourse at home to "air-cure." With the means of treatment in hand, disease might be nipped in the bud, and lung complaints in general would be rarer.

And this result we may hope to attain. That pulmonary consumption is only an acquired disease we know from the fact that it first appears in the apices of the lungs,—a portion of the organ which is not affected by hereditary pathological processes. The diathesis only is hereditary, and this diathesis consists simply of a general debility, which, however, can be overcome. But the thing that is transmitted hereditarily is habits of life—the vocation descending from father to son.

McCormac tells of a family in which father, mother, and six children died of consumption; the seventh son alone survived, he having quit the paternal house and calling, and gone to sea. Many instances of a like kind might be cited. This case is easily understood when we consider that here the parents and the six children who died had followed a sedentary trade; that they lived in narrow quarters, the air of which was quickly vitiated by the large number of persons breathing it; that they slept in a dusty room, with windows closed, lest they should take cold. They fell sick one after another; but the seventh son, who quit the unhealthy locality, had exercise, inhaled fresh air, became vigorous and healthy, and escaped from consumption.

This simple explanation appears strange to those who believe in "tuberculosis." If this disease has grown to be the curse of modern society, the scholastic interpretation of it has to bear no small part of the blame. The doctrine of the heredity of consumption leads to the belief that the consumptive patient is fated to die of his complaint, and that his death is merely a question of time. He him-



self often draws the conclusion that the best thing for him to do is to enjoy life as best he may while it lasts. On the other hand, we must condemn the heedlessness of those who, so long as danger is not proximate, fear the expenditure of time and money. These same people, when hemorrhage suddenly appears, quite lose their heads, and adopt the most preposterous methods, whose only result is to cause new hemorrhages, and to produce a regular case of consumption: whereas many of the old physicians recommend horseback exercise as the best cure for those suffering from hemorrhage of the lungs, we now often see patients shut up in a hot, dusty room, not allowed to talk, and almost forbidden to breathe.

It is a peculiarity of consumption that it may appear in association with all diseases in which recovery is slow. In the first place, it accompanies inflammation of the lungs, unless the patient, while recovering, is permitted to breathe plenty of pure air. But it also makes its appearance in typhus, diabetes, and meningitis, when the patient is kept for a long time in a close room. So, too, delicate persons—those supposed to tend toward consumption—will all the sooner become indeed “tuberculed,” the more they are coddled, protected against cold, and treated with warm drinks and so-called “invigorants.” Pulmonary hemorrhage is in itself not a symptom of “tuberculosis,” but it is made so by wrong treatment.

The foregoing practical considerations will enable the reader better to appreciate the theoretical observations which follow.

The lungs, like all mucous surfaces, secrete mucus even in their healthy state; this collects while we remain quiet, but is thrown out when we move. Every adult person clears his throat in the morning. One who has been sitting for a long time must cough when he goes out-of-doors. Bodily movement is the best “solvent” for a cough. When one’s life is sedentary, mucus collects first of all in the apices of the lungs, and it is more difficultly broken up there by bodily movement, because the apices are the uppermost parts of the lungs, and the impetus of the cough must drive the expectorated mucus around the corners of the lungs. The apices are a veritable receptacle for mucus, which, if not removed, dries up, grows hard, and causes ulceration. In one hundred autopsies we find as many as ninety cases where the apices are more or less shrunken, scarred, and obstructed, and this without reference to the cause of death.

The apices, furthermore, are regular dust and gas traps, especially the right apex,

which usually is the first to be affected by consumption, because the air-passage leading to it is wider and less crooked than that leading to the left apex. All impurities inhaled into the lungs, and especially all dust, first make their way to the apices, and there settle, unless they are kept in motion by bodily exercise. Elimination, too, is more difficult in the apices than in the inferior lobes. In coughing, the latter are aided by the abdominal pressure; while the apices, on the contrary, have to depend on their own contractility, which is weaker in proportion as they have been out of exercise, or as their cell-walls have grown together.

In addition to these causes, heavy clothing, which, like the yoke for carrying water, bears on the collar-bone, diminishes the power of respiration in the apices; a modern winter-overcoat weighs as much as eight or nine pounds. If, in addition to this, we have the usual two turns of a comforter around the neck, then the neck is bound fast, and we have all the conditions necessary for producing a diseased condition of the apices. Under such circumstances it would require considerable exertion in coughing to clear the apices. Hence the troublesome dry cough, which often ends in vomiting, yet does not loosen the mucus in the lungs. No benefit is to be got in such cases from lozenges, drops, extracts; the most that can be expected from such remedies is that they may moisten the throat rendered dry by the effort of coughing. But then they fill the stomach with phlegm. For small children such substances are an actual poison, producing sour stomach, diarrhea, and fever.

(To be Continued)

### Cellars.

[At this season of the year, when the preliminaries of house-building are usually begun, the following excellent article from the *Sanitarian* will be especially timely.—ED.]

Cleanliness, dryness, light, and ventilation are the cardinal conditions of healthful human habitations; but with these conditions cellars, as ordinarily constructed, are in deadly conflict. “Did the reader ever, when a child, see the cellar afloat at some old home in the country? You creep part way down the cellar-stairs, with only the light of a single tallow candle, and behold by its dim glimmer an expanse of dark water, boundless as the sea. On its surface, in dire confusion, float barrels and boxes, butter-firkins and washtubs, boards, planks, hoops and staves



without number, interspersed with apples, turnips, and cabbages, while half-drowned rats and mice scramble up the stairway for dear life, and drive you affrighted back to the kitchen."

Lest this picture should appear to be an exaggeration, we venture to invite the survivors of such scenes in those same New England homes to revive their memories. This they can do, even if the old houses have rotted away, for there is a singularly dangerous propensity on the part of country people to occupy the old cellars as new buildingsites. But it is not our purpose to reflect upon the specially dangerous propensities of country people; they are quite as wise in this respect as their more "set-up" city cousins. Nearly twenty years ago we had occasion, in seeking out the cause of prevailing disease, to descend the cellar-stairs of a brick house in the middle of a block, only two blocks distant from our then residence in Brooklyn. On reaching the bottom step, we deemed it prudent to feel the mud, and pierced it with a cane to the depth of seventeen inches. Fifteen years subsequently, this same house (a central one of a block of five constructed alike) was discovered to be the center of a malignant fever which created much alarm in the neighborhood.

Less than two years ago we were called upon by a merchant to examine a new "first-class" house, on the fashionable high ground of New York (Fifty-fifth Street, near Madison Avenue), with a view to a purchase, if, in our judgment, it was deemed healthful. It was built on "solid rock," we were assured, and therefore "must have a good cellar." In the immediate neighborhood we noticed other foundations in process of preparation. The "solid rock," which was being leveled down to the required depth for cellar floors, we observed to be traversed by fissures. The first noticeable feature in the cellar of the house under examination was a damp floor, although Portland-cemented. We were not long in discovering a mark on the wall, showing that water had stood in it to the depth of four or five inches, and on further search we found a recently-laid and carefully-covered tile-drain, provided to carry off the subsequent overflow from the same inexhaustible source of overflow and dampness,—the surface soakage of higher ground in the neighborhood. My friend did not buy the house. A better counterpart to the scene so well described by Judge French can be found almost any day after a heavy rain in the cellars of many mercantile houses in the lower part of New York; and the cellars of the "first-class" dwellings in which their

families reside, on both sides the river, are frequently no better; for these, though not all, by any means, built on "solid rock," or afloat with soil leakage, are subject to the no less dangerous ground air and pestiferous sewer gases, equally due to criminal ignorance or negligence.

It is an accepted fact that *soil moisture*—even of clean water—is a prolific source of pulmonary consumption. Notwithstanding, it is the common practice to build houses, in both city and country, regardless of this fatal condition. Not only is culpable carelessness common in the selection of house sites in this respect, but good sites are frequently spoiled by the ignorance or blindness of those who use them. The site, instead of being thoroughly drained and fortified with a damp-proof covering, is usually built upon without any preparation whatever. It is not at all uncommon to rebuild over old cellars; and in some cases holes in the ground, valleys or "sunken lots" are chosen as eligible and economical sites. The cellar walls are built "solid," of porous bricks, which will ordinarily hold one-eighth of their weight in moisture. The descending ground in the rear is taken advantage of for a light basement kitchen, and often, also, dining-room, without any cellar, and floors only a few inches from the ground. And finally, when the house is finished, the basement course is banked up with damp earth to make the cellar "warm." Within a month we have visited such a house, a suburban one, now in process of erection, and hastening to completion for early occupancy. The result will be, as in all such houses, persistent dampness. Such cellars are virtual drain-holes for soil moisture for many yards round. Besides this, the water from the roof, and that which drives against the sides in rain-storms, sinks down in close contact with the walls, and percolates unseen under the foundation, is taken up in vapor by the warmer atmosphere within, and pervades every part.

But suppose it be an *old* country cellar,—one that has been used many years for the storage of vegetables, butter, cheese, beef, and bacon, and with its dark corners full of rubbish piled up in wasting decay; the soil moisture and ground-air, percolating under and through the walls, gaining strength the while, winds its way through all the crevices of the floor, fills all the carpets, rugs, beds, and clothing, and is breathed day and night by all who dwell therein. The *consequences* are common knowledge, and for these we have the doctors.

Another builder selects, it may be, a good site, on an elevation, with a good surface



drainage. He builds a "first class house," with cellar walls of bluestone or glazed brick, laid in cement, and, may be, has the bottom of the same material. He has an eye to imperviousness, and tries to secure it. In neither case is any attention paid to light, more than sufficient to make a gloomy store-room for winter vegetables and fuel. Ventilation has not been thought of in either case; it is considered of no consequence. Such a house, finished in April and occupied on the first day of the next month, is delightfully cool and pleasant for the summer months. But, following the fashion, its occupants close it the latter part of summer, and betake themselves to the country. They return in October to dampness and mold, with which they content themselves, however, in the prospect of dissipating the moisture when the fires are lighted. Icy December comes in, the fashionable radiators are heated to the utmost, but every morning the windows are reeking with a sweating sickness; the cold, impervious, and non-absorbent cellar walls continually abstract the warmth of the air which they inclose, condense the moisture on their surface, and drip as do the subjects of a pernicious fever, which is scarcely more sapping to the human constitution.

A correspondent of the Massachusetts State Board of Health gives a sketch of the cellar of a house in Hadley, built by a clergyman. It was provided with an open well, and sink-drain, with its deposit-box in close proximity thereto, affording facility to discharge its gases in the well as the most convenient place. The cellar was used, as country cellars commonly are, for the storage of provisions of every kind, and the windows were never opened. The only escape for the soil moisture and ground-air, except that which was absorbed by the drinking water, was through the crevices of the floor into the rooms above. After a few months' residence in the house, the clergyman's wife died of fever. He soon married again, and the second wife also died of fever within a year from the time of marriage. His children were sick. He occupied the house about two years, and was succeeded by a man named B—. His wife was soon taken ill, and barely escaped with her life.

A physician then took the house! and his wife soon after died of fever. Another physician took the house, and within a few months came near dying of erysipelas. He deserved it. The house meanwhile received no treatment; the doctors, according to their usual wont, even in their own families, were satisfied to deal with the consequences, and

leave the causes to do their worst. Next after the doctors, a school-teacher took the house, and made a few changes "for convenience," apparently, for substantially it remained the same, and he, too, escaped as by the skin of his teeth. Finally, after the foreclosure of many lives, "the sickness and fatality" of the property became so marked that it became unsalable. When last sold, every sort of prediction was made as to the risk of occupancy; but by a thorough attention to sanitary conditions, no such risks have been encountered.

This could be matched by city houses which have fallen under our observation. One we knew of on Brooklyn Heights, and not long ago, notorious for its unhealthfulness. *It was built over an old privy vault!* And only a few weeks ago a clergyman, Rev. Mr. Crowthers, and four children, were killed by the pent-up, poisonous air of a Brooklyn cellar. Many we know of in both New York and Brooklyn, built in ground filled in with street dirt, ashes, and house garbage; palatial some of them are, in both dimensions and appointments; but the leprosy which cleaved unto Gehazi for his too great haste to get rich was not more pertinacious than that which is fastened to these dwelling-places, erected under the same propensities as those which governed him.

And the diseases which follow, though perhaps less loathsome, are even more deadly. Observation shows that more than half the diseases and mortality which afflict families and communities in the United States are caused by soil moisture, ground-air, and the gases of decay. Consumption alone, which kills over 70,000 people annually in the United States,—and about one-seventh of all who die,—is chiefly due to these causes; typhoid fever, which kills 25,000 annually, is wholly due to them; and diphtheria, which kills 10,000 annually, is no less certainly due to the same causes, than typhoid fever; diarrheal, and other diseases increase the number of deaths throughout the country due to this same category of causes, to not less than 250,000 annually. That a large proportion of these deaths is due to *bad cellars* no one can question who will take the pains to examine into their condition.

But what is the remedy? It is stated in the opening sentence of this article: *Cleanliness, dryness, light, and ventilation.* If these conditions have not been kept in view from the time of the selection of a building-site to the completion of the domicile, they should be instituted as far as practicable subsequently, and the sooner the better. Of sites, that is best which is cleanest, and which may be



most effectually drained. Soils greatly differ in this respect. They are usually classed into, 1. Those which are impervious, and resist absorption,—rocks; 2. Those which are pervious and retentive, absorb and give off water slowly,—clays; and, 3. Those which are freely pervious, which absorb and give off water rapidly,—sand, gravel, and chalk, and mixed soils of different degrees of porosity. Without drainage, all soils hold water in proportion to their interstitial spaces; and all soils thus filled with water instead of air, not only impart dampness to the walls with which they are in contact, but the ground-air which they give off is highly injurious, inasmuch as it is more or less impregnated with the gases of decay. Even “impermeable” granite soils contain some water,—about a pint to the cubic yard. Loose sand will contain from forty to fifty gallons per cubic yard; common sand-stone twenty-seven gallons; clays will hold from thirty to fifty per cent. of their own weight.

There is also a great difference in the capillary attraction of different soils, all being more or less susceptible to it. Sand, for example, will be completely dry on the surface within a foot or so of underlying water. Clay, on the other hand, gives off water much less freely, but continuously for a long period of time, and, in the end, a much larger amount than sand, in which the water freely moves. Moreover, owing to the retentive quality of the clay, organic substances existing in them undergo decomposition, and add their mephitic gases to the soil moisture: these conditions render such soils in a high degree insalubrious.

Of damp-proof courses several kinds are in use; for example, a double course of slate, or one course of slate bedded in cement, is sometimes laid along the top of the walls when they have emerged above the ground line; layers of sheet-lead have also been used for the purpose. Another plan is to pay over the tops of the walls with a coat of hot asphalt and tar, or bitumen mixed with sand. There is also a kind of so-called asphalt damp proof course sold in sheets ready for laying on the walls, but this alone is inefficient. A course or two of enameled bricks, or glazed bricks, are also sometimes used. Vitrified stone-ware tile, made in thicknesses from one to one and a half inches, and perforated in order to ventilate the space between the ground and the joists of the floor, is an excellent but costly means, also useful in preventing dry-rot in the timbers. But it is evident all these devices, excepting the asphalt and bitumen, are adapted only to the process of con-

struction, inapplicable to amends in default of proper construction. Moreover, for this, lead, which appears to be the best article for the purpose, is evidently too costly for common use. The vitrified stone-ware tile is also expensive, besides being, like slate, liable to break. Hydraulic cement and brick masonry, two articles in most common use, are but very partially efficient against moisture, and wholly inefficient against ground-air, on account of their porosity.

Being concerned for our own cellar recently—situated on the best of sandy soil (Garden City)—well lighted and ventilated, we have taken some pains to inquire into the best means of repair against soil moisture and ground-air. We satisfied ourselves that, all things considered, a lining made of felt and asphaltic cement was the easiest of application, the most economical, and the most efficacious means we could use. The manner of application consists in laying alternate layers of felt saturated in bitumen and asphaltic cement laid on boiling hot, which has the effect of consolidating the several layers (four), into a thoroughly impervious and compact lining of about an inch in thickness, corresponding to all irregularities of the under surface, while it possesses sufficient adhesiveness and elasticity to prevent displacement or cracking. The surface is smooth, quickly becomes thoroughly dry and cleanly. It appears to be adaptable to all conditions of repair against soil moisture and ground-air, and its thorough imperviousness, cleanliness, and antiseptic qualities are unquestionable. We believe it to be equally adaptable to construction, and superior to any means hitherto devised.

**A New Remedy for Wakefulness.**—To those whose brains will not subside when the time for rest has arrived, Dr. John L. Cook, of Henderson, Kentucky, proposes a very simple method of securing prompt and refreshing sleep without the aid of drugs. When the mind is active, the circulation in the brain is correspondingly active; we breathe more frequently, and the movements of the heart are more rapid and vigorous. On the other hand, when the mind is at rest, as in healthy sleep, the circulation in the brain is notably diminished, the heart-beats are less rapid and forcible, and the breathing is perceptibly slower. In the wakeful state, the mind, as a rule, is intensely occupied, whence we may infer an increased amount of blood in the brain. Dr. Cook's suggestion is to withdraw a portion of this from the head,



or lower the brain-circulation, by taking deep and slow inspirations—say twelve or fifteen a minute. By this means the action of the heart will become slower and feebler, less blood is thrown into the brain, and very soon a quiet feeling, ending in sleep, is induced. As by a slight effort of the will any one may try this, we leave the question of its value to the test of actual experiment.—*Sel.*

### Causes of Heart Disease.

THE origin of heart disease is frequently to be found in hereditary predisposition; but in many cases it is directly traceable to causes which are easily removable and preventable. In round numbers, ten thousand deaths are annually caused by heart disease in England alone. The ætiology and geographical distribution of this most agonizing disease have been carefully investigated by Mr. Haviland, Dr. Black, and others, and the valuable knowledge as to its nature acquired within the last ten years should have led long ago to a marked decrease of the disease, had that knowledge been utilized in a fairly intelligent manner. It is certain that impure air exercises a most baneful influence upon the heart, and that confinement in badly ventilated houses, cellar dwellings, schools, workshops, and factories, is a cause of a great portion of the heart disease unhappily so prevalent in this country. The impure atmosphere of crowded dwellings seems to have a similar deleterious action on the chief organ of circulation to that which it exerts on the respiratory apparatus, and thus we find identical conditions favoring the development of both diseases in one and the same locality. The thorough and effective ventilation of our rooms and houses, our courts and alleys, which proves a preventive in the latter disease, will assuredly hinder the prevalence of the former. In some cases disease of the heart is produced by violent and continued exertion, such as that of lifting heavy weights and violent rowing; but the demon drink is a far more frequent producer of cardiac mischief than is overwork, and by its indirect effects on the muscular structure of the heart, it predisposes, especially in advanced life, to fatty degeneration of the organ itself, and of its great blood-vessels. The law which shall effectually control the liquor traffic, may be reasonably expected to diminish the mortality under this head.—*Public Health.*

—Dr. Richardson says that ninety years should be the measure of human life, and that, by attention to the laws of health, such an age might be attained.

**Recent Observations of Stomach-Digestion.**—A man in Paris, having an impermeable stricture of the gullet, was saved, by the operation of gastrotomy, from death by starvation. The patient's gullet is so completely blocked that when a small quantity of potassium ferrocyanide in solution is swallowed, no trace of the salt can be detected in the stomach; hence the gastric juice is absolutely free from any admixture of saliva. The food is reduced to a pulp and injected by a syringe into the artificial opening in the abdominal wall; it remains in the stomach for three or four hours; when milk is introduced, it disappears in from one and a half to two hours. The chyme does not pass gradually, as is commonly supposed, into the small intestine: during the first three hours after its introduction into the stomach its volume does not appear to diminish; then within about fifteen minutes, the entire mass is driven through the pyloric orifice. At the end of four hours the stomach is nearly always empty, but hunger does not begin to be felt till two hours later.—*Sel.*

**Ground-Air.**—The house, being warmer inside than the external air, acts like a heated chimney on its surroundings, and chiefly on the ground upon which it stands, and the air therein, which we will call the ground-air. The warm air in the chimney is pressed into and up the chimney by the cold air surrounding the same. The chimney cannot act without heat, and the heat is only the means of disturbing the equilibrium of the columns of air inside and outside the chimney. The warm air inside is lighter than the cold air outside; and this being so, the former must float upward through the chimney, just like oil in water. It continues to do so as long as fresh cold air comes into its neighborhood from outside. As soon as we interrupt this arrival, the draught into the chimney is at an end. Any other way of looking at the action of chimneys leads to erroneous views, which have many times stopped the progress of the art of heating and ventilating.

Thus our heated houses ventilate themselves not only through the walls, but also through the ground on which the house stands. If there is any gas or other smelling substance in the surrounding ground-air, it will enter the current of this ventilation. I have witnessed a case in Munich, where not the least smell of gas could be detected in the street, but a great quantity of gas found its way into the ground-floor room of a house where no gas was laid on. In another case, the gas always penetrated into the best



heated room and produced an illness of its inmates, which was taken for typhoid fever.

The movement of gas through the ground into the house may give us warning that the ground-air is in continual intercourse with our houses, and may become the introducer of many kinds of lodgers. These lodgers may either be found out, or cause injury at once, like gas; or they may, without betraying their presence in any way, become enemies, or associate themselves with other injurious elements, and increase their activity. The evil resulting therefrom continues till the store of these creatures of the ground-air is consumed. Our senses may remain unaware of noxious things, which we take in, in one shape or another, through air, water, or food.—*Pop. Sci. Monthly.*

**Moon-struck.**—The ancients were firm believers in the malign influence of the moon upon human beings, especially upon the mind. The term lunatic, together with other words of a common origin, furnishes a good illustration of this ancient superstition, the word being derived from two Latin words meaning, literally, moon-struck. It was supposed that an insane person was suffering from the injurious influence of Luna (the moon), and so he was said to be "moon-struck," or lunatic. The *Sanitarian* quotes from *Nature* the following very ingenious explanation of what may have given rise to this superstition, which is still held by many people, though long since repudiated by scientists:—

"It has often been observed that when the moon is full, or near its full time, there are rarely any clouds about; and if there be clouds before the full moon rises, they are soon dissipated; and therefore a perfectly clear sky, with a bright full moon, is frequently observed. A clear sky admits of rapid radiation of heat from the surface of the earth, and any person exposed to such radiation is sure to be chilled by rapid loss of heat. There is reason to believe that, under the circumstances, paralysis of one side of the face is sometimes likely to occur from chill, as one side of the face is more likely to be exposed to rapid radiation, and consequent loss of its heat. This chill is more likely to occur when the sky is perfectly clear.

"I have often slept in the open air in India on a clear summer night, when there was no moon; and although the first part of the night may have been hot, yet toward three o'clock in the morning the chill has been so great that I have often been awakened by an

ache in the forehead, which I as often have counteracted by wrapping a handkerchief around my head and drawing the blanket over my face. As the chill is likely to be greatest on a very clear night, and the clearest nights are likely to be those on which there is a bright moonshine, it is very possible that neuralgia, paralysis, or other similar injury, caused by sleeping in the open air, has been attributed to the moon, when the proximate cause may really have been the *chill*, and the moon only a remote cause acting by dissipating the clouds and haze (if it do so) and leaving a perfectly clear sky for the play of radiation into space."

**Foul Air the Great Cause of Consumption.**—The air we breathe, which a great English physician calls gaseous food, may become impure to the degree of being *indigestible* to our lungs, and utterly unfit for the performance of functions which are quite as important as those of our solid and fluid victuals. Dull headaches, nausea, loss of appetite and of the sense of smell, and the sadness produced by the unsatisfied hunger after oxygen, are only incidental and secondary evils; the great principal curse of the troglodyte habit is its influence on the respiratory organs.

In 1853, when Hanover and other parts of Northern Germany were visited by a very malignant kind of small-pox, the great anatomist, Langenbeck, tried to discover "the peculiarity of organic structure which disposes one man to catch the disease, while his neighbor escapes. . . . I have cut up more human bodies than the Old Man of the Mountains, with all his accomplices," he writes from Göttingen in his semi-annual report, "and, speaking only of my primary object, I must confess that I am no wiser than before. But though the mystery of small-pox has eluded my search, my labors have not been in vain; they have revealed to me something else,—the origin of consumption.

"I am sure now of what I suspected long ago; viz., that pulmonary diseases have very little to do with intemperance or with erotic excesses, and much less with cold weather, but are nearly exclusively (if we except tuberculous tendencies inherited from *both* parents, I say *quite* exclusively) produced by the breathing of foul air. The lungs of all persons, minors included, who had worked for some years in close workshops and dusty factories, showed the germs of the fatal disease; while confirmed inebriates, who had passed their days in the open air, had preserved their respiratory organs intact, what-



ever inroads their excesses had made on the rest of their system. If I should go into practice, and undertake the cure of a consumptive, I would begin by driving him out into the *Deister* (a densely wooded mountain range of Harover), and prevent him from entering a house for a year or two."—*Pop. Sci. Monthly*.

**Poisoned at Sea.**—By the arrival at Southampton of a Scotch seaman named William Inman, an extraordinary story of poisoning at sea has been revealed. It is alleged that while the barque *Crown Prince*, commanded by Captain Robert Cochrane, and belonging to St. Johns, N. B., was on a voyage, in November last, from the Peruvian coast to Falmouth, the food supplied to the crew was unfit for use; that in consequence all of the fore-castle hands, fourteen in number, became ill, and that six of the sailors died. The *Crown Prince* arrived with a fresh crew in the Clyde a few days ago, and after communication with the marine authorities, the captain has been committed, pending inquiry.

Inman states that the vessel left Pabellon de Pica, in the south of Peru, on the 4th of October last, bound home, the crew, all told, numbering twenty-one. On November 19, when off Cape Horn, a new cask of pork was taken out. On the 20th, part of it was boiled into soup, of which the fourteen fore-castle hands partook on the 21st, and on the following day they all became ill, vomiting, and showing other signs of extreme illness. On the 24th, ten of the men were completely prostrated, and the next day all the men were down except Inman, who, though very ill, was able to assist the officers to shorten sail.

During the next fortnight, the ship lying to under the two lower topsails, the sufferings of the men were fearful. Inman could not sleep at night owing to the intense pain, and his head often swelled to a great size. His limbs were so weak that he could scarcely crawl along the deck. At the end of the fortnight, three of the crew, Tom Beaufort, a Londoner, Andrew Anderson, a Swede, and William Williams, a Polander, went mad and ran about the deck quite delirious. This so frightened the captain, whom Inman describes as a cautious seaman and a kind-hearted man, that he tried to make for the Falkland Islands, distant two hundred miles. Port Stanley, the principal harbor in the Falklands, was reached December 7. As the anchor was let go, the Polander, Williams, died in horrible agony. The day after, the Swede died, and two days later the Londoner succumbed to his sufferings. A week after the remainder

of the crew had gone to the hospital at Port Stanley, an Irishman named Sullivan and a Dutchman died. On January 12, Harris Edwards, a native of Margate, shared the same fate.

The doctor stated that these men had all been poisoned by putrid pork. On April 2, last, Inman left Port Stanley for Montevideo, accompanied by two shipmates, John Lord of Waterford, and Alexander Buckley, an Englishman. Subsequently they sailed on board the royal mail steamer *Tagus*, and have arrived safely at Southampton. When they quitted Port Stanley, four of their comrades were still in hospital. Inman is unable to walk without the aid of a staff, and does not expect to be fit for work for several months. —*Lloyd's Weekly* (London).

**Adapt your Shoes to your Feet.**—Why it should be desired to have a small, weak foot, any more than a small and weak brain, is not easy to conceive. For the purpose of having such small feet, not a few wear boots one or two sizes too small, and about two-thirds of the width of the foot as it would be at the ball if allowed to spread as it does when standing without the confinement of the boot. As a natural and necessary result of such pinching confinement, the foot becomes deformed and larger than it would naturally grow, with enlarged joints, the toes turned from a line parallel with the foot, to say nothing of the troublesome corns so annoying and crippling to a large class of young women. The worst results of this crippling custom of wearing small and narrow boots is felt by children when allowed to outgrow their boots. It is poor economy to allow the young to wear boots when the feet have become too large for them, since deformity of the feet is easily produced at this time. When the boot is too short for the wearer and the heel too high, the ingrowing of the nails is a perfectly natural result.

**Treating Blisters by Osmosis.**—M. Ungerer recently saw an extensive scald, which had for twelve hours been treated with cold water without relief from the agonizing pain, or reduction of the swelling. The experiment of immersing the limb in a saturated solution of salt was followed by most surprising relief. The abatement of the pain was immediate, and in four hours both the pain and the swelling were gone. The next day the hand differed from the other only by a very slight swelling and redness.

He who does nothing has hard work.



# LITERARY MISCELLANY.

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

## A GRAND OLD POEM.

Who shall judge a man from manners?

Who shall know him by his dress?  
Paupers may be fit for princes,  
Princes fit for something less;  
Crumpled shirt and dirty jacket  
May beclothe the golden ore  
Of the deepest thought and feeling—  
Satin vests could do no more.

There are springs of crystal nectar  
Ever welling out of stone;  
There are purple buds and golden,  
Hidden, crushed, and overgrown;  
God, who counts by souls, not dresses,  
Loves and prospers you and me,  
While he values thrones the highest  
But as pebbles in the sea.

Man, upraised above his fellows,  
Oft forgets his fellows then;  
Masters, rulers, lords, remember  
That your meanest hinds are men;  
Men by honor, men by feeling,  
Men by thought, and men by fame,  
Claiming equal rights to sunshine,  
In a man's ennobling name.

There are foam-embroidered oceans,  
There are little weed-clad rills;  
There are feeble inch-high saplings,  
There are cedars on the hills;  
God, who counts by souls, not station,  
Loves and prospers you and me;  
For to him all famed distinctions  
Are as pebbles in the sea.

Toiling hands alone are builders  
Of a nation's wealth or fame;  
Titled laziness is pensioned,  
Fed, and fattened on the same;  
By the sweat of others' foreheads,  
Living only to rejoice;  
While the poor man's outraged freedom  
Vainly lifteth up its voice.

Truth and justice are eternal,  
Born with loveliness and light;  
Secret wrongs shall never prosper  
While there is a sunny right;  
God, whose world-heard voice is singing  
Boundless love to you and me,  
Sinks oppression with its titles,  
As the pebbles in the sea.

—Mental pleasures never cloy. Unlike those of the body, they are increased by repetition, approved of by reflection, and strengthened by enjoyment.

## The Apostasy of Solomon.

BY MRS. E. G. WHITE.

### THE MOUNT OF OFFENSE.

IN the days of Christ there were still to be seen opposite the Kidron, on the southern eminence of the Mount of Olives, huge stones, and relics of heathen temples and altars. This *debris* was in sight of the temple of God, and seemed to defiantly confront it. King Solomon had built those heathen sanctuaries during the time of his departure from God, and though they had subsequently been destroyed, their remnants were still remaining as memorials of his apostasy. During Josiah's reign, unsightly blocks of wood and stone were to be seen peering through the myrtle and olive groves.

Josiah had read to priests and people the book of the law found in the side of the ark in the house of God. His sensitive conscience was deeply stirred as he saw how far the people had departed from the requirements of the covenant they had made with God. He saw that they were indulging appetite to a fearful extent, and perverting their senses by the use of wine. Men in sacred offices were frequently incapacitated for the duties of their positions, because of their indulgence in wine.

Appetite and passion were fast gaining the ascendancy over the reason and judgment of the people, till they could not discern that the retribution of God would follow upon their corrupt course. Josiah, the youthful reformer, in the fear of God demolished the profane sanctuaries and hideous idols built for heathen worship, and the altars reared for sacrifices to heathen deities. Yet there were still to be seen in Christ's time the memorials of the sad apostasy of the king of Israel and his people.

Solomon, at the age of eighteen years, commenced his reign upon the throne of his father, David. He felt his need of strength from God. He asked for it humbly, and it was given to him. When he, at this early age, assumed the reins of government, he was cautious and distrustful of himself. He placed great confidence in the men who had wisely sustained his father, and deferred to their counsel. He did not feel competent to fill so



responsible a position without the aid of wiser and more experienced heads.

God perceived the desire of Solomon to walk with integrity before him, and to deal justly with his people, and, in a dream, asked what he should give him. And Solomon, after recounting the goodness of God to him, and to his father David, answered the Lord, saying, "I am but a little child; I know not how to go out or come in. And thy servant is in the midst of thy people which thou hast chosen, a great people, that cannot be numbered nor counted for multitude. Give therefore thy servant an understanding heart to judge thy people, that I may discern between good and bad; for who is able to judge this thy so great a people?"

The Lord was pleased with Solomon's answer, because, instead of asking any personal favor for himself, he asked for power to guide his people aright. God said unto Solomon, "Behold, I have done according to thy words: lo, I have given thee a wise and an understanding heart; so that there was none like thee before thee, neither after thee shall any arise like unto thee. And I have also given thee that which thou hast not asked, both riches and honor; so that there shall not be any among the kings like unto thee all thy days. And if thou wilt walk in my ways, to keep my statutes and my commandments, as thy father David did walk, then I will lengthen thy days."

Solomon's youth was illustrious, because he was connected with Heaven, and made God his dependence and his strength. God had called him Jedediah, which, interpreted, means The Beloved of God. He had been the pride and hope of his father, and well beloved in the sight of his mother. He had been surrounded by every worldly advantage that could improve his education and increase his wisdom. But, on the other hand, the corruption of court life was calculated to lead him to love amusement and the gratification of his appetite. He never felt the want of means by which to gratify his desires, and never had need to exercise self-denial.

Notwithstanding all these objectionable surroundings, the character of Solomon was preserved in purity during his youth. God's angel could talk with him in the night season; and the divine promise to give him understanding and judgment, and to fully qualify him for his responsible work, was faithfully kept. In the history of Solomon we have the assurance that God will do great things for those who love him, who are obedient to his commandments, and trust in him as their surety and strength.

Many of our youth suffer shipwreck in the

dangerous voyage of life, because they are self-confident and presumptuous. They follow their inclinations, and are allured by amusements, and indulgence of appetite, till habits are formed which become shackles, impossible for them to break, and which drag them down to ruin. Their once bright hopes and prospects are wrecked, and they are held in the veriest bondage to Satan. If the youth of our day would, like young King Solomon, feel their need of heavenly wisdom, and seek to develop and strengthen their higher faculties, and consecrate them to the service of God, their lives would show great and noble results, and bring pure and holy happiness to themselves and many others.

Those who do not make God their trust, but indulge their animal passions and appetites, are gradually overcome entirely by their evil propensities: their moral powers become enfeebled; they are unable to discriminate between right and wrong; and Satan takes advantage of this to lead them into carrying forward his work. Thus God is robbed of the service due him, and society is deprived of the benefits which would follow the proper use of the endowments which God has bestowed upon them to use for his glory. This debasement of the higher qualities of the mind to the slavery of appetite and passion is a bondage more to be dreaded than prisons and fetters.

God made man in his own image for high and noble purposes, such as are the delight of angels. If he connects with Heaven, the wisdom of Heaven will be given him, as in the case of Solomon in the years of his youth and purity. Continual dependence upon God, and obedience to him, will prevent man from imitating the example of Solomon in his mature years, when evil associates and unsanctified connections led him into apostasy and ruin. If the youth are connected with Heaven they will be able to discern evil from good, and to penetrate the specious appearance with which vice hides its hideousness. They will carefully consider every step they take, realizing that it can never be retraced, and that when they are once led astray by the deceitful devices of sin, they are weakened in principle, and are in double danger of again becoming the victims of temptation.

The thought of our responsibility to God should be the strongest safeguard to finite minds. It is a solemn thought that our individual being is inseparably bound to the infinite God. Christ, our Saviour, has, by the sacrifice of his own life, brought to man, who was feeble in moral power, divine strength, that, through his name and merits, man might



become, even in this life, little less than the angels of God. Whatever course we may choose to pursue, so long as we possess our reason we can never cease to be responsible to God for our words and deeds.

It is the basest ingratitude to accept the favors and blessings of God with the indifference of dumb brutes, without making any acknowledgment of his goodness, or meeting the claims he has upon us. Our faculties are given us to be used in the work of God; and if we answer this purpose of our existence, still more important work will be intrusted to us; we shall be co-laborers with the Creator of the universe, ambassadors for Christ. We shall be elevated above the taint of selfishness and moral defilement; and the thought that we are living for a grand and noble purpose, fulfilling the design of our being, will make us earnest, cheerful, and strong under all discouragements and difficulties.

The mental and moral powers of Solomon in his early life were unequalled by those of any king that ever sat upon an earthly throne. His wise rule was the praise of all nations; and his purity and goodness enshrined him in the hearts of all his people. The fear of the Lord, and a right connection with him, does not disqualify men for dealing with people of different minds and temperaments, but, on the other hand, does much toward qualifying them for the most important posts of responsibility in this life.

God was glorified through Solomon, and he loved him, and favored his servant with the highest prosperity. His dominion extended from the Euphrates to the river of Egypt. He built a magnificent temple for God. He hearkened to the word of the Lord, and was so closely connected with him that the Lord gave him all the directions for building his temple.

Solomon, under all his honors, walked wisely and firmly in the counsels of God for a considerable time; but he was overcome at length by temptations that came through his prosperity. He had lived luxuriously from his youth. His appetite had been gratified with the most delicate and expensive dainties. The effects of this luxurious living, and the free use of wine, finally clouded his intellect, and caused him to depart from God. He entered into rash and sinful marriage relations with idolatrous women.

This was contrary to the special directions of God, who had forbidden the Hebrews to intermarry with the heathen nations around them, lest their wives, having been reared in idolatry, should draw the hearts of the people away from the living God, the Creator of

the heavens and the earth, and they themselves should become worshipers of idols. If they should thus separate from God, their wisdom and power would be no higher than those of the heathen nations around them. God was ever leading his people upward and onward if they would submit to his guidance.

Solomon was ruined by intemperate habits; had it not been for them, his later years would have been as illustrious as his earlier ones. In following his own inclinations he separated himself from God. He commenced to follow his own judgment, step by step, seeking less and less the wisdom of God, which would have kept him pure. At length God was forgotten, and his only care was for pleasure and self-gratification.

After his unsanctified alliance with many idolatrous women, Solomon, in his desire to please them, was led away from God, and into idolatry, in proof of which the ruins we have mentioned still remained in the days of Christ. In the decline of life, this great king plunged into sinful indulgences, and the grossest excesses. The wonderful intelligence and ability which had once been devoted to God, and to his glory, were now employed in devising means by which he could best gratify his carnal desires for pleasure and his own glory. God did not, however, utterly forsake him who had once been his faithful servant. His moral powers, which had become benumbed through dissipation and lasciviousness, were mercifully aroused; and in proof of his reformation, we have the relation of his experience given in his inspired writings.

### The Son of my Friend.

AN O'ER TRUE TALE.

"I've been thinking," said I, speaking to my husband, who stood drawing on his gloves.

"Have you?" he answered; "then give me the benefit of your thoughts."

"That we shall have to give a party. You know we have accepted a number of invitations this winter, and it's but right that we should contribute our share of social entertainment."

"I have thought as much myself," was his reply; "and so far we stand agreed. But as I am very busy just now, the heaviest part of the burden will fall on you."

"There is a way of making it light, you know," I returned.

"How?" he queried.

"By employing a professional caterer. He will supply everything for the table, and



furnish waiters. We shall have nothing to do but to receive our guests."

My husband shrugged his shoulders and smiled, as he said, "What will it cost?"

"Almost anything we please. But the size of the company will have the most to do with that."

"Say we invite one hundred."

"Then we can make the cost range anywhere between three hundred and a thousand dollars."

"A large sum to throw away on a single evening's entertainment of our friends. I am very sure I could put it to a better use."

"Very likely," I answered. "Still, we cannot well help ourselves. Unless we give a party, we shall have to decline invitations in future. But there is no obligation resting on us to make it sensational. Let the Hardings and the Marygolds emulate extravagance in this line; we must be content with a fair entertainment; and no friend worth the name will have any the less respect for us."

"All that is a question of money and good fame," said my husband, his voice falling into a more serious tone. "I can make it three, five, or ten hundred dollars, and forget all about the cost in a week. But the wine and the brandy will not sit so easily on my conscience."

A slight but sudden chill went through my nerves.

"If we could only throw them out."

"There is no substitute," replied my husband, "that people in our circle would accept. If we should serve tea, coffee, and chocolate instead, we would be laughed at."

"Not by the fathers and mothers, I think. At least not by those who have grown-up sons," I returned. "Only last week I heard Mrs. Gordon say that cards for a party always gave her a fit of low spirits. She has three sons, you know."

"Rather fast young men, as the phrase is. I've noticed them in supper-rooms, this winter, several times—a little too free with the wine."

We both stood silent for the space of nearly a minute.

"Well, Agnes," said my husband, breaking the silence, "how are we to decide this matter?"

"We must give a party, or decline invitations in future," I replied.

"Which shall it be?" His eyes looked steadily into mine. I saw that the thing troubled him.

"Turn it in your thoughts during the day, and we'll talk it over this evening," said I.

After tea my husband said, laying down the newspaper he had been reading, and look-

ing at me across the center-table, "What about the party, Agnes?"

"We shall have to give it, I suppose." We must drop out of the fashionable circle in which I desired to remain, or do our part in it. I had thought it all over, looking at the dark side and at the bright side, and settled the question. I had my weaknesses as well as others. There was a social *éclat* in a party, and I wanted my share.

"Wine, and brandy, and all?" said my husband.

"We cannot help ourselves. It is the custom of society; and society is responsible, not we."

"There is such a thing as individual responsibility," returned my husband. "As to social responsibility, it is an intangible thing—very well to talk about, but reached by no law, either of conscience or the statute-book. You, and I, and every other living soul, must answer to God for what we do. No custom or law of society will save us from the consequences of our own acts. So far we stand alone."

"But if society bind us to a certain line of action, what are we to do? Ignore society?"

"If we must ignore society or conscience, what then?"

His calm eyes were on my face. "I'm afraid," said I, "that you are magnifying this thing into an undue importance."

He sighed heavily, and dropped his eyes away from mine. I watched his countenance, and saw the shadows of uneasy thought gathering about his lips and forehead.

"It is always best," he remarked, "to consider the probable consequences of what we intend doing. If we give this party, one thing is certain."

"What?"

"That boys and young men, some of them already in the ways that lead to drunkenness and ruin, will be enticed to drink. We shall put temptation to their lips, and invite them to taste its dangerous sweets. By our example, we shall help to make drinking respectable. If we serve wine and brandy to our guests, young and old, male and female, what do we less than any dramseller in the town? Shall we condemn him, and ourselves be blameless? Do we call his trade a social evil of the direst character, and yet ply our guests with the same tempting stimulants that his wretched customers crowd his bar-room to obtain?"

I was borne down by the weight of what my husband said. I saw the evil that was involved in this social use of wines and liquors which he so strongly condemned. But, alas that I must say it! neither principle nor



conscience was strong enough to overcome my weak desire to keep in good standing with my fashionable friends. I wanted to give a party; I felt that I must give a party. Gladly would I have dispensed with liquor; but I had not the courage to depart from the regular order of things. So I decided to give the party.

"Very well, Agnes," said my husband, when the final decision was made. "If the thing has to be done, let it be well and liberally done."

I had a very dear friend, a Mrs. Martindale. As school-girls, we were warmly attached to each other, and as we grew older our friendship became closer and tenderer. Marriage, that separates so many, did not separate us. Our lots were cast in the same city and in the same social circle. She had an only son, a young man of fine intellect and much promise, in whom her life seemed bound up. He went into the army at an early period of the war, and held the rank of second lieutenant, conducting himself bravely. A slight but disabling wound sent him home a short time previous to the surrender of Lee, and, before he was well enough to join his regiment, it was mustered out of service.

Alfred Martindale left his home, as did thousands of other young men, with his blood untouched by the fire of alcohol, and returned from the war, as thousands of other young men returned, with its subtle poison in all his veins.

The dread of this very thing had haunted his mother during all the years of his absence in the army.

"O Agnes!" she had often said to me, with eyes full of tears, "it is not the dread of his death that troubles me most. I have tried to adjust that sad event between myself and God. In our fearful crisis, he belongs to his country. I could not withhold him, though my heart seemed breaking when I let him go. I live in the daily anticipation of a telegram announcing death or a terrible wound. Yet that is not the thing of fear I dread; but something worse,—his moral defection. I would rather he should fall in battle than come home with manhood wrecked. What I most dread is intemperance. There is so much drinking among officers. It is the curse of our army. I pray that he may escape, yet I weep, and tremble, and fear while I pray. O my friend! I think his fall into this terrible vice would kill me."

Alas for my friend! Her son came home to her with tainted breath and fevered blood. It did not kill her. Love held her above despair, and gave her heart a new vitality.

She must be a saviour, not a weak mourner over wrecked hopes.

With what a loving care and wise discretion did she set herself to work to withdraw her son from the dangerous path in which his feet were walking! And she would have been successful but for one thing. The customs of society were against her. She could not keep him away from the parties and evening entertainments of her friends; and here all the good resolutions she had led him to make were as flax fibers in the flame of a candle. He had no strength to resist when wine sparkled and flashed all around him, and bright eyes and ruby lips invited him to drink. It takes more than ordinary firmness of principle to abstain in a fashionable company of ladies and gentlemen where wine and brandy flow as water. In the case of Alfred Martindale, two things were against him. He was not strong enough to set himself against any tide of custom, in the first place; and, in the second, he had the allurement of appetite.

I knew all this when, with my own hand, I wrote on one of our cards of invitation, "Mr. and Mrs. Martindale and family," but did not think of it until the card was written. As I laid it aside with the rest, the truth flashed on me, and sent a thrill of pain along every nerve. My heart grew sick and my head faint, as thoughts of the evil that might come to the son of my friend, in consequence of the temptation I was about to throw in his way, rushed through my mind. My first idea was to recall the card, and I lifted it from the table with a half-formed resolution to destroy it. But a moment's reflection changed this purpose. I could not give a large entertainment, and leave out my nearest friend and her family.

The pain and wild agitation of that moment were dreadful. I think all good spirits and angels that could get near my conscience strove with me, for the sake of a soul in peril, to hold me back from taking another step in the way I was going; for it was not yet too late to abandon the party.

When, after a long struggle with right convictions, I resumed my work of filling up the cards of invitation, I had such a blinding headache that I could scarcely see the letters my pen was forming; and, when the task was done, I went to bed, unable to bear up against the double burden of intense bodily and mental anguish.

The cards went out, and the question of the party was settled beyond recall. But that did not soothe the disquietude of my spirit. I felt the perpetual burden of a great and troubling responsibility. Do what I



would, there was for me no ease of mind. Waking or sleeping, the thought of Alfred Martindale and his mother haunted me continually.

At last the evening came, and our guests began to arrive in party dresses and party faces, richly attired, smiling and gracious. Among the earliest were Mr. and Mrs. Martindale, their son and daughter. The light in my friend's eyes, as we clasped hands and looked into each other's face, did not conceal the shadows of anxious fear that rested on them. As I held Alfred's hand, and gazed at him for a moment, a pang shot through my heart. Would he go out as pure and manly as he had come in? Alas! no; for I had made provision for his fall.

The company was large and fashionable. I shall not attempt a description of the dresses, nor venture an estimate touching the value of the diamonds. I have no heart for this. No doubt, the guests enjoyed themselves to the degree usual on such occasions. I cannot say as much for at least one of the hosts. In the supper-room stood a table, the sight of which had smitten my eyes with pain. Its image was perpetually before me. All the evening, while my outward eyes looked into happy faces, my inward gaze rested gloomily on decanters of brandy and bottles of wine crowding the supper-table, to which I was soon to invite the young men—mere boys, some of them—and maidens whose glad voices filled the air of my drawing-rooms.

I tried to console myself by the argument that I was only doing as the rest did,—following a social custom,—and that society was responsible, not the individual. But this did not lift the weight of concern and self-condemnation that so heavily oppressed me.

At last word came that all was ready in the supper-room. The hour was eleven. Our guests passed in to where smoking viands, rich confectionery, and exhilarating draughts awaited them. We had prepared a liberal entertainment, a costly feast of all available delicacies. Almost the first sound that greeted my ears after entering the supper-room was the "pop" of a champagne cork. I looked in the direction from whence it came, and saw a bottle in the hands of Alfred Martindale. A little back from the young man stood his mother. Our eyes met. Oh! the pain and reproach in the glance of my friend! I could not bear it, but turned my face away.

I neither ate nor drank anything. The most tempting dish had no allurements for my palate, and I shivered at the thought of tasting wine. I was strangely and unnaturally

disturbed, yet forced to command myself, and be affable and smiling to our guests.

"Observe Mrs. Gordon," I heard a lady near me say in a low voice to her companion.

"What of her?" was returned.

"Follow the direction of her eyes."

I did so, as well as the ladies near me, and saw that Mrs. Gordon was looking anxiously at one of her sons, who was filling his glass for, it might be, the second or third time.

"It is no place for that young man," one of them remarked. "I pity his mother. Tom is a fine fellow at heart, and has a bright mind; but he is falling into habits that will, I fear, destroy him. I think he has too much self-respect to visit bar-rooms frequently, but an occasion like this gives him a liberty that is freely used to his hurt. It is all very respectable, and the best people set an example which he is too ready to follow."

I heard no more, but that was quite enough to give my nerves a new shock, and fill my heart with a new disquietude. A few minutes afterward, I found myself at the side of Mrs. Gordon. To a remark that I made, she answered in an absent kind of way, as though the meaning of what I said did not reach her thought. She looked past me; I followed her eyes with mine, and saw her youngest boy, not yet eighteen, with a glass of champagne to his lips. He was drinking with a too apparent sense of enjoyment. The sigh that passed the mother's lips smote my ears with accusation.

"Mrs. Carleton?" A frank, cheery voice dropped into my ear. It was that of Alfred Martindale, the son of my friend. He was handsome, and had a free, winning manner. I saw, by the flush on his cheeks and the gleam in his eyes, that wine had already quickened the flow of blood in his veins.

"You are enjoying yourself," I said.

"Oh! splendidly!" Then, bending to my ear, he added, "You've given the finest entertainment of the season."

"Hush!" I whispered, raising my finger; then added, in a warning tone, "Enjoy it in moderation, Alfred."

His brows knit slightly. The crowd parted us, and we did not meet again during the evening.

By twelve o'clock, most of the ladies had withdrawn from the supper-room, but the enticement of wine held too many of the men there, young and old. Bursts of coarse laughter, loud exclamations, and snatches of song rang out from the company in strange confusion. It was difficult to realize that the actors in this scene of revelry were gentlemen and gentlemen's sons so-called, and not the coarse frequenters of a corner tavern.



Guests now began to withdraw quietly. It was about half-past twelve when Mrs. Martindale came down from the dressing-room with her daughter, and joined Mr. Martindale in the hall, where he had been waiting for them.

"Where is Alfred?" I heard the mother ask.

"In the supper-room, I presume; I've looked for him in the parlors," Mr. Martindale answered.

"I will call him for you," I said, coming forward.

"Oh! do, if you please," my friend replied. There was a husky tremor in her voice.

I went to the supper-room. All the ladies had retired, and the door was shut. What a scene for a gentleman's house presented itself! Cigars had been lighted, and the air was thick with smoke. As I pushed open the door, my ear was fairly stunned by the confusion of sounds. There was a hush of voices, and I saw bottles from many hands set quickly upon the table, and glasses removed from lips already too deeply stained with wine. With three or four exceptions, all of this company were young men and boys. Near the door was the person I sought.

"Alfred!" I called; and the young man came forward. His face was darkly flushed, and his eyes red and glittering.

"Alfred, your mother is going," I said.

"Give her my compliments," he answered, with an air of mock courtesy, "and tell her that she has my gracious permission."

"Come!" I urged; "she is waiting for you."

He shook his head resolutely. "I'm not going for an hour, Mrs. Carleton. Tell mother not to trouble herself. I'll be home in good time."

I urged him, but in vain.

"Tell him that he *must* come!" Mrs. Martindale turned on her husband an appealing look of distress when I gave her Alfred's reply.

But the father did not care to assert an authority which might not be heeded, and answered, "Let him enjoy himself with the rest. Young blood beats quicker than old."

The flush of excited feeling went out of Mrs. Martindale's face. I saw it but for an instant after this reply from her husband; but, like a sun-painting, its whole expression was transferred to a leaf of memory, where it is as painfully vivid now as on that never-to-be-forgotten evening. It was pale and convulsed, and the eyes full of despair. A dark presentiment of something terrible had fallen upon her,—the shadow of an approaching woe that was to burden all her life.

My friend passed out from my door, and left me so wretched that I could with difficulty rally my feelings to give other parting

guests a pleasant word. Mrs. Gordon had to leave in her carriage without her sons, who gave no heed to the repeated messages she sent to them.—*T. S. Arthur.*

(To be Continued.)

**Appearance and Habits of the Andaman Islanders.**—The natives of the Andaman Islands are described by Surgeon-Major Horder, of the British army, as not exactly prepossessing in appearance, though not deformed and hideous, as has been stated. In height they vary from four feet nine inches to five feet one inch; they are extremely black, more so than the African negro, and some of them have "a dull, leaden hue, like that of a black-leaded stove." They are fond of dancing, have a strong sense of the ridiculous, are exceedingly passionate, are easily aroused by trifles, and then "their appearance becomes diabolical." The men go entirely naked, and the women nearly so. They cover their bodies with red earth, and, as ornaments, wear strings of their ancestors' bones round their necks, or a skull slung in a basket over their shoulders. They are tattooed all over their bodies; their heads are shaven, with the exception of a narrow streak from the crown to the nape of the neck. They rarely have eyebrows, beard, mustache, whiskers, or eyelashes.

They are very fond of strong drink and of smoking; are short-lived and not healthy, not many passing forty years of age. Their language consists of few words, harsh and explosive, and chiefly monosyllabic. Almost their only amusement is dancing to a monotonous chant and the music of a rough skin drum, played by stamping with the feet. Their courtship and marriage usages are very simple. The male candidate for matrimony eats a sort of ray-fish, which gives him the appellation of "goo-mo,"—bachelor desirous of marrying. The marriageable girls wear a certain kind of flower. The ceremony consists in the pair about to be married sitting down, apart from the others, and staring at each other in silence; toward evening the girl's father or guardian joins the hands of the pair.

The only manufactures of the islanders are canoes, bows, arrows, spears, and nets. Of late years, "homes" have been established for the Andamanese, consisting of large bamboo sheds, in which those who come in from the jungle put up, coming and going at will. They seem, however, to prefer the jungle, and the attempts made to cultivate their acquaintance do not appear to have been very successful.—*Sel.*



## Popular Science.

—Oxygen gas has not only been liquefied, but reduced to a solid state.

—The royal astronomer of England has figured up the calculations made by English observers on the transit of Venus, and announces the distance of the sun to be 93,375,000 miles.

—A cheap process for the manufacture of the celebrated Bastie glass, which possesses remarkable toughness, has been recently invented, so that we may soon hope to have it furnished at such low rates as to make its general introduction possible.

—A difficult problem for evolutionists to solve is the total absence of any fossil representatives of connecting links between man and his brute ancestors, according to the evolutionary hypothesis. It is a notable fact, which our foremost scientists admit, that the oldest skulls in existence present every mark of as superior development as human skulls of the present day. In fact, they contained brains which were really larger than the brain of the average European of the present day.

—R. Müller has, by recent experiments, discovered that water which is strongly charged with carbonic acid will dissolve various minerals, such as abound in the soil, to the amount of two per cent., which is a larger percentage than is found in any mineral water. It may be fairly supposed, in the light of this fact, that geological calculations which are based on the observation of stalagmite formations may be regarded as liable to great error, since the rate of formation at some past time may have been very much more rapid than now.

**Hydrogen a Metal.**—Many chemists have for a long time looked upon the element hydrogen as a metal, on account of its curious behavior in combination with some of the metals. This opinion has now been confirmed by the wonderful experiments of MM. Pictet and Cailletet, who have not only suc-

ceeded in reducing the so-called fixed gases to the liquid state, but have subjected the most subtle of all gases, hydrogen, to so great a degree of refrigeration and compression as to cause it to assume the solid state, little steel-blue masses rattling down in the apparatus like shot.

**Vegetable Soaps.**—It is not generally known, except to the chemist, that many vegetables contain a compound which corresponds exactly, in its properties, to soap, being called saponine. A West India tree bears a fruit called the soap berry, the pulp of which is excellent for washing purposes, one pound of it being equal to sixty pounds of soap. Egypt and Spain each has a soap-root which has long been used for cleansing purposes. Chili and Peru produce a tree, the bark of which is an excellent substitute for soap; and in the South Sea Islands a vine is grown which answers the same purpose.

**Science and Spiritualism.**—A lively discussion has been in progress for some time between a certain class of spiritualistic scientists and Dr. Carpenter, one of the most noted physiologists of the present day. Dr. Carpenter repudiates the claims of mesmerists, clairvoyants, animal magnetizers, etc., and demands of them more satisfactory evidence of the genuineness of their claims than they have yet given.

Among other interesting facts developed in this discussion is the following: In 1837, M. Burdin, a member of the French Academy of Science, put the claims of clairvoyance to a very simple and seemingly decisive test. He placed the sum of 3,000 francs, equal to \$600, in the hands of a notary, subject to the order of the Academy, to be paid to any person who could read writing placed in an opaque box carefully sealed. Three years' time was given the mediums of the world to read the writing, but all failed utterly; and in many instances in which the attempt was made, the manner of the fraud was discovered.

It was not long ago that Dr. Lankester, one of England's foremost scientists, thoroughly exposed the renowned letter-reader, Slade, and even secured his arrest and prosecution as a vagrant.



# THE HEALTH REFORMER

BATTLE CREEK, MICH., APRIL, 1878.

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

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## Beware of Humbugs.

It being a part of the legitimate work of this journal to expose humbugs of all sorts that are dangerous to life or health, or public safety, we shall be quite in order by uttering a warning voice against the sale of a recipe which is said to preserve fruits, vegetables, and even various sorts of meats, without the expense and labor of the old process of canning.

This wonderful recipe or process is being retailed all through this portion of the country, and many are being duped by persons who go from house to house representing that they have possession of a remarkable secret which they are willing to divulge for a stated sum, and the possession of which will enable a person to preserve all kinds of fruits, vegetables, and even meats from decay, with very little trouble or expense. Specimens of different articles are shown which give good evidence that the process is effective as a preservative.

Those who invest their money in this wonderful invention are disappointed and vexed to learn that the process is nothing more nor less than the very old-fashioned one of sulphur fumigation, which has been in use from time immemorial, almost. Meats are simply subjected to the fumes of burning sulphur by inclosure in a small box, built after the fashion of a bleaching box. Fruits and vegetables, after being well smoked with the sulphurous fumes, are immersed in water which has been well charged with sulphurous acid by somewhat prolonged exposure to the fumes of sulphurous oxide arising from combustion.

This same process has been long in use for the preservation of cider and unfermented wines, as well as meats. A hint of the

harmful character of the process is to be gained by observation of its effects upon colored fruits, such as blackberries, raspberries, etc. It will be noted that the natural color of the fruit is almost totally destroyed, a fact which the vender will attempt to explain upon a variety of hypotheses. The truth is, however, as hinted, that the sulphurous acid contained in the water bleaches the fruit, or, in other words, destroys its color, just as the fumes of a burning match will destroy the colors of flowers, or as bleaching with sulphur will remove the color of straw, etc.

About a year ago we were called upon to make an examination of the method by a person who was engaged in selling rights to use the process, and wished to get our certificate of its efficiency and harmlessness, as a recommendation. Of course we refused to give the sale of such a process the slightest degree of countenance. We stated our reasons to the person offering the same, as follows:—

1. The sale of the process is a swindle upon the public, since it professes to give the public something new, which is not done, essentially the same method having been in use for similar purposes for many centuries.

2. Again, the sale of this chemical process as a harmless one is a further swindle in that the pretension is false. A chemical agent which is sufficiently powerful to remove the color of such highly colored fruits as raspberries and blackberries is certainly sufficiently energetic not only to impair the nutritive value of articles of food, but also to injure the delicate tissue of the digestive organs and the still more delicate constituents of the blood.

Some grocers and butchers are already employing the method described as a means of rendering meats salable which the ordinary



processes of decomposition have rendered not only unfit for food but obnoxious to smell and taste. In one case which has come to our notice, a grocer who had on hand a number of cod-fish so far advanced in decay that they had actually become a nuisance to his neighbors, having purchased the above-named process, thought that he had made a most profitable investment, since by bleaching his rotten fish he was able to sell them for fresh ones. Such a procedure gives one a strong hint of the appropriateness of the Biblical suggestion of the application of brimstone in a retributive sort of way.

### "Am I my Brother's Keeper?"

THE Bible represents Cain as offering this very lame apology when Jehovah questioned him concerning the whereabouts of his murdered brother, Abel. Cain doubtless considered that he had very shrewdly avoided the acknowledgment of his crime by disowning any responsibility for his brother. But God did not recognize his evasive answer as at all satisfactory. It was not only no mask for his crime, but was itself a confession of a sinful indifference to his brother's condition.

In effect, the same retort is made by individuals everywhere who are appealed to on matters of sanitary reform. A man whose broad acres were dotted with hop-vines which annually yielded him a munificent income, when remonstrated with on the ground that his labor was really directly in support of the cause of intemperance, since the product of his farm was almost wholly consumed in the manufacture of intoxicating liquors, replied that it made no difference to him what was done with his hops; he was not responsible for what others might do.

A merchant who was himself a temperate man, and who regarded the use of tobacco as a sin, had no scruples about selling the filthy weed to his neighbors, since, as he said, if they did not buy of him they would of somebody else, and he might as well have their money as anybody.

On the same principle another quieted his conscience respecting the sale of alcoholic liquors.

The same indifference to the best interests of the race, of one's fellow-mortals, is apparent in each case. In another class of cases we see the same spirit manifested, though in a somewhat different manner. For instance, a man who harbored on his premises a nuisance in the shape of a filthy hog-pen, refused to remove it when requested to do so, because it was sufficiently far from his own house to prevent danger to himself and family, though in very close proximity to his neighbor's home.

Many people have a wicked habit of throwing over upon their neighbors' premises the decaying carcasses of dead dogs, cats, rats, sheep, or hogs, apparently never for a moment considering that the foul emanations from such putrescent sources are quite as bad for their neighbors to breathe as for themselves. Others, with equal impropriety, make the street a depository of everything considered too filthy for home tolerance, giving to every passer-by an opportunity to regale himself with the putrescent odors of decomposition.

The spirit of the golden rule demands that the same respect shall be shown to other people's interests as to our own; and in no direction is the bearing of the principle more apparent and important than in sanitary matters. A man who will knowingly expose his fellow-men to the causes of disease in a manner to incur danger to them, possesses the spirit of Cain, and ought to be branded as an enemy of the race.

### Out-of-Door Study.

ONE of the most patent evils of our educational system is the confinement of pupils so much in-doors. Instead of being trained up in the study of Nature, they are drilled to death in abstractions and the artificial. Little ones whose first lessons ought to be drawn from the beautiful and instructive products of Nature which abound in beautiful profusion out-of-doors, are imprisoned within four uninviting walls and crammed with unintelligible abstractions until their taste for knowledge is wholly obliterated, while all around, outside, the materials for mental culture and development lie unused and neglected.



A movement is just now on foot in New York for the utilization of the great parks of New York City for educational purposes on the natural plan. We hope the effort may succeed, and that the example will be everywhere followed. In the country, no expense, or little at least, is needed to make all the provision necessary; Nature has been so lavish in her bounties for this purpose. We heartily concur in the idea that the school-house should be used "only when it cannot be helped, the rules of physiological education needed by a free people being, Never to teach in-doors what can be learned out-of-doors; never to explain in the abstract what can be demonstrated in the concrete; never to teach with books what can be perceived in objects; never to teach by images when Nature itself is at hand; never to show dead Nature when living Nature is obtainable; and never to require belief when seeing and understanding are possible."

#### Palliative Treatment of Hemorrhoids.

THERE are few diseases not absolutely dangerous to life which occasion more acute suffering than the malady commonly known as piles. Although this disease is seldom the immediate cause of death, we have seen several cases in which the long-continued and uninterrupted suffering caused by this disease had reduced the patient to a bed-ridden condition. In one case the daily suffering and loss of blood had made a man naturally strong and robust, a mere skeleton, almost bloodless, and scarcely strong enough to walk a dozen rods.

Thousands suffer daily an aggregate of anguish almost beyond estimation. Anything which will contribute even to the mitigation or amelioration of this suffering will certainly be a boon to thousands. In many cases, nothing short of a surgical operation of some sort will suffice to effect a cure of this obstinate disease; but there are measures which will do much toward relieving the pain and palliating the other symptoms of this most distressing disorder.

Attention to the dietary is of first importance. All stimulating and clogging condiments should be discarded. Concentrated food should be avoided. The whole grains,

together with cracked wheat, oatmeal, Graham flour, and an abundance of fruits of various kinds, particularly fresh fruits, should constitute a very considerable portion of the dietary.

The second point in importance is securing regularity in the action of the bowels. This should be done, not by the use of cathartics, which are one of the great causes of this disease, but by proper exercise, as walking, rowing, horseback-riding, and similar exercises. Kneading and percussing the abdomen is also a very useful kind of exercise. A matter of special importance is regularity in evacuating the bowels. A movement should be secured as nearly as possible at the same hour each day. For this purpose a convenient hour should be selected, and attention to the indications of nature should not be delayed a moment. The same regularity should be observed in giving the bowels an opportunity to move at the appointed hour, whether there is any special indication or not.

As a palliative measure of treatment, probably no other single means is nearly so useful as the cool hip-bath. This bath may be taken every day with advantage. The temperature should be varied somewhat, according to the sensations of the patient. As a general rule, the water should be, at the beginning of the bath, at a temperature of about 90°. After four or five minutes, the temperature may be lowered to 85°; and before the conclusion of the bath, which should last fifteen or twenty minutes, and longer in special cases, the temperature may be lowered by degrees to 80° or even 70°. In some cases, a still lower temperature may be employed to advantage. To prevent chilliness, the amount of water employed should be sufficient only to partly cover the hips, not extending up around the body. Persons who have a vigorous circulation may take a full hip-bath to advantage.

The most convenient means for administering the bath is a tin or wooden tub made expressly for the purpose; but an ordinary wash-tub may be made to answer admirably in the absence of a more convenient vessel. When the feet are cold, a warm foot-bath should be taken at the same time. The application of cold compresses, or even ice, to the seat of the disease, is a useful measure in



cases in which the sitz-bath cannot be administered.

In many cases of hemorrhoids, the most severe pain is felt immediately after evacuation of the bowels. It is caused partly by the violence done to the irritable mucous membrane of the rectum, and partly by the removal of the coating of mucus which nature throws out upon the diseased surface as a protective. This suffering can be in a great degree removed by observing the following directions: 1. Avoid straining at stool; 2. In case the pain is very severe, it will be worth the trouble to evacuate the bowels over a vessel nearly filled with warm water, as the warm vapor rising from the water will relax the sphincter muscles, and so facilitate the operation; 3. Immediately after the evacuation, the diseased surface should be bathed with cool water, and afterward thoroughly anointed with olive oil, fresh butter, vaseline, or any other good unguent.

**Fanatical Zeal.**—Unfortunately for the cause of sanitary reform, it numbers some in its ranks who are continually endangering their own reputation, and bringing odium upon the cause, by assuming positions which are unwarrantable either in the light of science or of common sense. The animus of this class of persons is well illustrated by the expression of one individual, who declared, when his wife was suffering with a malarial fever, that he would "*let her die*" rather than take a drop of medicine. Cases have come to our knowledge in which the determination expressed was really carried into action, persons having died who might have been saved by the judicious employment of a needed stimulus, or the use of an antiperiodic. In another case, a fanatical disciple of a learned but crotchety teacher, actually starved a man to death who was just recovering from a protracted fever and needed a nourishing diet, by depriving him of food even though he plead for it most piteously, and even offered to give a deed of his farm for a morsel of bread.

People of this stamp are always railing out against those whose views, being more in accord with sound reason and common sense, are different from their own. The same spirit which would starve a person to death or let a wife die, for the sake of riding a

hobby to the death (literally), would let a human being lie for days in unremitting misery, and probably die from sheer pain and want of rest, rather than allow the administration of a palliative. Such fanaticism and hypocritical zeal is unbearable in a civilized community. The unfeeling brutality of such minds is beyond description. We would rather be left to the tender mercies of the savage denizens of an African jungle than to such men.

**The Work of the Liver.**—No other organ in the body possesses so many different functions as the liver. In addition to its ordinary work as an excretory organ, in removing various biliary elements from the system, it secretes a digestive fluid and manufactures sugar; and according to the results of recent experiments it has still another function—that of destroying certain organic poisons which are generated in the body, together with some which are taken. Thus, the liver was found to destroy in limited quantities, *nicotine*, the poisonous element of tobacco. This will readily account for the damaged condition of the liver in persons who have long made use of the filthy weed in any form.

The organic poisons generated in the body are so deleterious in character that if the destructive action of the liver upon them is prevented by ligation of the portal vein, death speedily results. The blood of an animal whose portal vein has been tied soon becomes so poisonous that it will produce speedy death when injected into the veins of a dog or other small animal. Is it any wonder, then, that people whose livers are congested or inactive suffer such a variety of painful and unpleasant symptoms?

**Agents Affecting the Circulation of the Blood.**—According to the London *Lancet*, M. Haro has made some very interesting discoveries relating to the effects of various agents upon the circulation of the blood in the capillaries. He found that heat and oxygen increase the rapidity of the flow of blood, while it is greatly retarded by ether, chloroform, and some of the biliary salts. Blood which contains an abundance of red corpuscles flows more rapidly than that which is deficient.



This discovery explains very clearly the effect of hot applications in relieving the pain resulting from local congestions, often when other remedies fail. It also aids in explaining the action of ether and chloroform as anesthetics, and the morbid symptoms accompanying a torpid condition of the liver, and poverty of the blood, or anemia.

**How to Make Ozone.**—Ozone is well known as one of the most efficient and useful of all disinfectant agents. Nature produces it in abundance in some localities, and the air always contains at least a mere trace. The difficulty with the employment of this powerful disinfectant has been the want of a simple method of preparing it. Several excellent methods have recently been described. The following is so simple that any one may use it with a fair degree of caution: Mix equal parts of per-oxide of manganese, permanganate of potash, and oxalic acid, using about half a teaspoonful each of the mixtures. The ozone will be rapidly developed when the mixture is dissolved in a little water.

The materials used are explosive when mixed, and so should be kept separate until needed, when they should be mixed with care. It is best to use a small stick or a wooden spatula in place of a knife or spoon in mixing. The use of such a mixture two or three times a day will keep the sick-room of a fever patient in excellent condition, and will give the patient no inconvenience.

**A Nest of Tape-Worms.**—We recently received from a friend in Texas a specimen of pork containing what was described as a number of worms. The hog from which the specimen was taken, was said to have been filled with similar creatures. The fact was discovered only when the animal was being cut up and distributed to customers by the butcher. Upon examination of the specimen, we found that instead of ordinary worms, as those who had examined the pork supposed, the unusual appearance was caused by the presence of what are known as hydatids, which are nothing more nor less than tape-worms in an early stage of development.

The specimen examined, contained more than twenty little cysts, varying in size from

that of a wheat grain to a small pea; each cyst contained an embryonic tape-worm in the shape of a set of hooklets which, when taken into the human stomach, were ready to attach themselves to its walls with such tenacity as to resist all ordinary means for detaching them, speedily developing into full-grown tape-worms. These loathsome creatures sometimes attain, within the human alimentary canal, the enormous length of more than a hundred feet.

Tape-worm was formerly a very rare disease in this country, though common in some European countries; but it is now becoming quite frequent, and doubtless the frequency of the disease will increase so long as the people continue to employ food which is liable to contain the germs of the disease.

Since each cyst may develop into a complete worm, it will readily be seen that the single hog, in which the parasite was fortunately discovered in time to prevent great injury, might have been the means of communicating the disease to hundreds of persons.

**Trichinæ Tortures.**—An Indiana paper gives an account of an epidemic of trichinosis which has recently occurred in South Bend, Indiana. About twenty persons were poisoned by eating infected pork, and several have already died, many others being still in a critical condition.

Why people will continue to endanger life and health by the use as food of an article which may at any time occasion the most disastrous results, is a mystery which we are utterly unable to explain.

Some have supposed that trichinosis is gradually disappearing; but the numerous cases reported from time to time show that the disease is really increasing in frequency rather than diminishing.

**Tobacco Charity.**—A unique society has been organized in Berlin for the purpose of collecting cigar ends, which are sold to snuff manufacturers, and the proceeds applied to benevolent purposes. Every Christmas the proceeds of the year's collections are expended in purchasing clothing for poor children. It is stated that about thirty children were clothed in this way in 1876.



This is certainly a very commendable effort, so far as it goes; but it is indeed surprising that it has not occurred to any one of the members of the society to save the whole cigar instead of simply the end, and thereby increase the saving sufficiently to both clothe and feed all the poor of the empire. The tobacco waste is one of the most harmful and unaccountable extravagances of the age. England pays yearly more for tobacco than for bread.

**The Anti-Malarial Tree.**—For four or five years back, the papers have abounded with wonderful accounts of the influence of the blue-gum or eucalyptus tree of Australia in antidoting the malarial poison which in certain portions of the globe makes human and even lower animal life almost impossible. It has been asserted that wherever the blue-gum flourished all kinds of malarial diseases disappeared; so that whole sections of malarial country had been freed from this terrible scourge by the introduction of the eucalyptus. It was also claimed that the same tree was so obnoxious to mosquitoes that they never ventured beneath its shade or even within its precincts.

Mr. Nichols has recently written an article for *Nature* which proves that these glowing reports have been greatly exaggerated at least. He claims to have suffered from ague right in the midst of a forest of eucalypti, and states that he has known shepherds and others to suffer in a similar manner every year.

With reference to mosquitoes, the same writer claims to have suffered severely from those insects, both night and day, while in the midst of a dense grove of eucalypti.

Now we are ready for another humbug. What will be the next sensation?

**Survival of Men without Food.**—The *Medical Times* describes an accident in a Welsh coal mine which resulted in the burying alive of nine miners. They were rescued after ten days, during which time they had not tasted a morsel of food, having no kind of nourishment but air and a little muddy water. All survived, and some were able to walk away when taken out.

—A singular case of suffocation occurred in Brooklyn, N. Y., recently, when a father put into the mouth of his child the pipe he had just been smoking. The first whiff produced strangulation, which all means failed to relieve.

## People's Department.

**An Extract.**—I was born two years before my friend Isaac, and he was much hardier than I; yet he is now the older, by far. He uses tobacco profusely, and this, I think, is one thing that has hastened age. How much better it is to live after God's laws. God's laws environ the body as well as the soul. Indeed, they are interwoven and one. "Present your bodies a living sacrifice, holy, acceptable unto God." It is God's order that we should be healthy. We do not enough make this a matter of conscience. Our bodies and souls are intimately related to each other, so that what injures one injures the other. As with an overgorged mosquito, a heavy meal brings us prostrate on the earth, and noble thoughts and feelings smoulder in the dust. Improper eating withers the energies. We cannot think well after eating injudiciously, any more than we can sleep well; and if we have not the use of our mind, where is culture? where is communion with God and with each other?

The stomach is a great hindrance to the progress of gospel truth, and of any other truth. Sabbath is the great feast day all over our land, and that with Christians. They use their *rest* from other labor to devise extra dishes and to gorge. This is doubly wrong. Preachers must preach to a dead weight of rich cakes, pies, biscuit, pork, preserves, etc., etc. Is it any wonder that the truth is not heard, or, if heard, understood by so few? As long as people live to eat, they cannot well listen to live; and what a solemn thing to sit under the truth and yet perish!

Just enough of proper food will not stupefy, but leave all the faculties clear and energetic, to be exercised in the nobler fields. Give me clear minds to preach to, and half the work is done; but give me minds clouded by stomach improprieties, and I will ever have much to do and but little done. I wish that Christians were more generally convinced of the wrong of defiling the temple of God; then a better example would be set, at least on the Sabbath. Hereafter I shall preach *temporal* as well as spiritual things.

G. T. T.



## Questions and Answers.

**Milk and Fever.**—L. P. K., Ohio, asks: Do you advise milk as food in fever cases?

*Ans.* In all continued fevers, the dietary is a matter of the greatest importance. Many have labored under the false impression that nutrition is wholly unnecessary while a febrile action is present in the system. There is no doubt that many patients suffering from typhoid and other fevers have been actually starved to death by those who have entertained erroneous notions of this disease. No single article of food is best or proper in all cases. The general rule to follow is this: Give the patient such food as will be easy of digestion, and in such quantity as he can digest well, and of such kind as will be most agreeable to him. These directions are named in the order of their importance. Patients should not be given everything they crave, as the appetite is often morbid. If milk is well relished, and will digest, it is not objectionable as an article of food. Oatmeal gruel with fruit, together with water crackers, and many other simple articles of diet, are equally good in most cases. In case of extreme prostration, a great difficulty, often experienced, is in getting the patient to swallow; a sufficient quantity of milk, on account of its liquid character, is a most invaluable aliment. Some cases do fully as well, or better, upon an almost purely frugivorous diet.

**Galvanized Iron.**—A. H., Cal., asks: Is it injurious to cook or keep food in galvanized vessels?

*Ans.* The answer to the question depends upon the nature of the food. Galvanized iron is simply ordinary iron coated with zinc. When taken into the system, zinc is a poison. Its effects are not quite so great as those which follow the introduction of lead, but are very distinct. Zinc is a very perishable metal, and is easily corroded by even mild acids; consequently, if acid fruit were allowed to stand for some length of time in the galvanized iron vessels, some portions of the zinc would be dissolved by the acid, and by that means subsequently taken into the stomach of some human being. On this account, the use of galvanized iron vessels in cooking cannot be recommended.

**Swedish Movements and Dyspepsia.**—Mrs. L. S., Ill., asks: 1. What do you think of Swedish movements as a health restorative? 2. What hygienic treatment

would you recommend for a flatulent dyspeptic?

*Ans.* 1. Swedish movements are not a "cure-all." They are nothing more nor less than an admirable means of exercise. For certain classes of invalids, Swedish movements are invaluable,—perhaps we may say essential. They are useful in their place, but cannot be expected to cure everything. As a general thing, they are to be used only in connection with other methods of treatment. 2. Since the treatment of no two cases of dyspepsia can be alike, we cannot give directions for the treatment without knowing more about the particular case which our correspondent has in mind.

**Milk in Catarrh.**—M. E. M., Mich., writes: My son has catarrh very badly. He uses a great deal of milk. Is it best for him to do so?

*Ans.* From observation of quite a large number of cases of catarrh, we are of the opinion that the free use of milk is a practice not to be recommended in this disease.

**Koumiss.**—Mrs. H. H., Iowa, asks: 1. What is koumiss, and how is it made? 2. Is it good to take as a remedy?

*Ans.* 1. Koumiss is an intoxicating liquor which was originally made by fermenting mares' milk. It is now also made from the milk of the cow. 2. This peculiar drink has in some way acquired a reputation as a remedy for consumption. It is not regarded, however, by scientific physicians as of any value in this disease. We have no faith in it at all.

**Milk and Meat.**—R. L. inquires: Do you consider milk more wholesome than the flesh of herbivorous animals, such as are generally used for food?

*Ans.* Milk and flesh are both animal products, and on that account are open to essentially the same objections. Circumstances, however, might make either one more or less objectionable than the other; for some persons, under certain circumstances, milk would be much preferable to meat; under other circumstances, a flesh diet would be decidedly preferable to a milk diet.

The diet you describe would be quite objectionable for a dyspeptic.

**Not Tubercles.**—E. H. K., Mich., sends a specimen of small, whitish particles which were coughed up by a girl of twelve years, who has comparatively good health with the exception of a severe cold.

Our correspondent asks: 1. Are they tubercles? 2. Do they indicate consumption?



*Ans.* 1. No; they are not tubercles. They are small concretions which are formed in the pharynx or back part of the mouth, and being loosened by coughing, are expectorated; 2. They do not indicate consumption, and have nothing to do with that disease.

**Renewing Filters.**—W. C. M., Kan., wishes information concerning the renewal of a Kedzie's water filter.

*Ans.* All filters should be frequently cleansed and renewed, as they soon become worse than useless when neglected. To renew a Kedzie's filter, all that is necessary is to remove the gravel and charcoal with which it is packed, and then replace the same in the same manner in which it is found when removed. The old charcoal should be replaced by new, fresh charcoal, and the gravel should be thoroughly washed. It is important to get good hard-wood charcoal for use in filters, and that should be secured which has been

recently burned, as it deteriorates for filtering purposes with age.

If a filter is packed very tight, water will pass through it very slowly, but will be filtered very perfectly. The more loosely the filter is packed, the more rapidly the water will pass through it, and the less perfect will be the filtration.

**Hand-Mills.**—C. F. W., Minn., inquires what kind of a small mill he can obtain for use in grinding wheat, corn, etc., for mush.

*Ans.* Any hardware dealer would probably be able to obtain for you such a mill as you desire.

Mrs. E. B., Iowa: The symptoms of the child which you describe suggest the possibility of the existence of injurious habits. We advise you to investigate the matter carefully. A child three years of age would probably not be injured by taking a cupful of milk at night as its evening meal.

## DIETETICS.

"Eat ye that which Is Good." As a Man Eateth, so Is he.

—Dr. Magnus Huss asserts that in Sweden 1,500,000, or about one-half the whole population, annually consume an average of one hundred and sixty pints of spirits each. By this excessive indulgence in drink, the Swedes already show distinct marks of deterioration in stature and in health. Several new diseases have appeared among them, and their longevity is decreasing.

**Delicious Bread.**—B. F. K. sends the following recipe for making graham bread which he says is delicious. We hope some of our subscribers will try it, and report:—

Mix up a batter of graham flour with warm water, and let it stand two or three hours. Mold the dough just stiff enough so it will stick, and roll it out to one-fourth of an inch in thickness. Have the baker as hot as it can be without scorching the dough. The heat can be determined by throwing a little meal into the baker. Spread the dough smoothly in the bottom of the baker, and hold it before a glowing fire so that the rays will fall directly upon the dough. In a few minutes you will have a pan of porous bread,—both delicious and wholesome. If a hard bread is required, the cakes can be dried before a fire after baking.

**Cooking.**—Nothing, probably, has more direct influence over our physical and moral well-being than the preparation of the food we eat, and it is not too much to suppose that a proper knowledge of the culinary art would, if tolerably wide-spread, do not a little to diminish crime and drunkenness. Now that ladies are to be admitted without let or hindrance to all the degrees of the University of London, we hope the Senate will see fit to add "cooking" to the list of subjects for the B. Sc. Science in the kitchen has long been a desideratum, and cooking has not hitherto been regarded really as a branch of chemistry, and, as such, an ennobling occupation. The English of all classes have everything to learn on this subject, and even the very best of our cooks seem to go right rather by intuitive talent than by any exact knowledge which they may possess. In the cookery-book of the future, however, we may hope to see milligrammes, cubic centimetres, and degrees of Celsius, replace the less exact measurements to which cooks have been accustomed, and then success in cooking will become a certainty.—*London Lancet.*

—Newly-made bread is less digestible than that which has been kept twenty-four hours.



# FARM AND HOUSEHOLD?

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

**Cheap Hot-Bed.**—Make the bed in the usual way, but instead of glass use ordinary canvas made translucent and water-proof by painting with the following mixture: Linseed oil, 4 ozs.; lime-water, 2 ozs.; white of egg, 1 oz.; yellow of egg, 2 ozs. Mix lime-water and oil together with gentle heat, then add egg after beating the latter, and apply several coats with a brush, allowing each coat to dry before applying another. This kind of cover is better than glass on many accounts, besides being much cheaper.

—In handling domestic animals, that man is the most successful who governs himself.

—A pail of milk standing ten minutes where it is exposed to the scent of a strong smelling stable, or any other offensive odor, will imbibe a taint that will never leave it.

—A lady tells us that the black-walnut tables of sewing-machines are kept nice by rubbing them with a cloth moistened with kerosene oil. Try it, and you will see an improvement. But keep it off from varnish.

—Let us aim to sell nothing off the farm that will impoverish the soil unless we are sure of a price that will make all good. Let us remember the good rule, "No manure, no crops; no cattle, no manure."

**Nose-Bleed.**—A popular lecturer asserts that bleeding from the nose may be quickly stopped by vigorous motion of the jaws. A piece of gum or a wad of paper may be placed in the mouth and chewed vigorously. We have never tried this remedy, but it is said to be very effective.

**Beds and Bedrooms.**—The sleeping apartments in a house should be thoroughly aired every day, and, at this season of the year, all day long. Beds should be opened every morning to the sun, and to the atmosphere. Do not be in too much haste to get the chambers in order. Several hours should be devoted to their ventilation, after the night. Let the sheets and blankets be spread over separate

chairs, the mattresses lifted apart, and the pure, morning air be allowed to get into every nook and cranny of the room, before the beds are made.

**Straightening up Crooked Trees.**—Often in a fine orchard we find one or more trees leaning over so far as to destroy the beauty of the whole orchard. It is also much more difficult to cultivate around a leaning tree. This trouble may easily be remedied while the trees are young by partly digging up and replanting them. The roots will be found smallest on the side from which the tree leans, therefore these roots should be loosened from the earth, and the tree set in a perpendicular position and carefully fastened by stakes and guys, and the earth replaced around its roots. It would be well to add some rich compost to promote their growth. If, as is very probable, the top of the tree has become one-sided, it should be pruned so as to restore the balance. In this way we have "righted up" pear-trees six inches through the stem, but the best way is to look after the young trees and not permit them to depart from the way of uprightness.—*Ohio Farmer.*

**Recipe for Mending Old Rubbers.**—India-rubber shoes are frequently made useless by a slight cut or hole, which a little cement would repair. To prepare the cement, cut virgin or native india-rubber with a wet knife, into the thinnest possible slices, and with shears divide these into threads as fine as fine yarn. Put a small quantity of the shreds (say one-tenth or less of the capacity of the bottle) into a wide-mouthed bottle and fill it three-quarters full of benzine of good quality, perfectly free from oil. The rubber will swell up almost immediately, and in a few days, especially if shaken often, assume the consistency of honey. If it inclines to remain in undissolved masses, more benzine must be added; but if too thin and watery, it needs more rubber. A piece of solid rubber the size of a walnut will make a pint of the cement. This cement dries in a few minutes, and by using three coats in the usual manner, will unite leather straps, patches, rubber-soles, backs of books, etc., with exceeding firmness. The india-rubber unvulcanized can be obtained at most all large stores where rubber goods are sold, and at some drug-stores.



## News and Miscellany.

—The Emperor of Germany was eighty-one years old March 23.

—Queen Victoria will probably visit Germany the coming summer.

—Hon. B. F. Wade died March 6, at his residence in Jefferson, Ohio.

—Over 6,000 people have been attacked by measles at Lyons, France.

—Atlanta (Ga.) has 36,000 people, of whom 6,000 are almost starving.

—The Paris Exhibition will be open evenings, and will be lighted by electric light.

—Six persons were recently poisoned in Fond du Lac, Wis., from eating sour-kraut.

—Conciliatory letters have passed between the German Emperor and Pope Leo XIII.

—A lady in Massachusetts was recently poisoned by the coloring matter of a calico dress.

—The corset is an Italian invention, and was introduced into France by Catherine de Medicis.

—Seventy millions of people are exposed to famine and starvation in the northern provinces of China.

—Twenty thousand persons were killed in India last year by wild animals and venomous reptiles.

—Bills granting female suffrage have lately been defeated in the legislatures of Iowa and Massachusetts.

—Philadelphia had a disastrous fire March 25, which destroyed over a million dollars' worth of property.

—The oldest paper in the United States is the Hartford (Conn.) *Courant*. The first number was issued in 1754.

—Forty-five miners lost their lives by an explosion of gas in Kearsley Colliery, near Bolton, England, on the 13th of March.

—Stanley's great tour in Africa cost \$115,000; of this sum the New York *Herald* and the London *Telegraph* each pay one-half.

—Kansas boasts that the best building in every town in the State is a public school-house. The school fund exceeds \$2,000,000.

—A man in Newburyport, Mass., is fattening 500 frogs for his table. He keeps them in a barrel, and feeds them on corn-meal.

—Prof. Gordna, of the University of Padua, embalmed the body of Victor Emanuel by a process which made it as hard as marble.

—The Mormons lately tried to establish a colony in Shutesbury, Mass.; but the venturesome settlers were lodged in jail by the police.

—A colored woman was lately lynched in Rockingham Co., Va., it being supposed that

she had instigated the burning of a barn. The Governor offers a reward of \$100 each for the apprehension of the lynchers.

—The Secretary of the Navy has ordered that ten hours shall constitute a day's work, at which there is much dissatisfaction in the navy-yards.

—Parisians are tired of losing their pocket-handkerchiefs at the wash, and now they have their photograph executed in the center of each.

—It is stated that the new Pope refused to recognize the successor of Victor Emanuel as King of Italy, by addressing him as King of Sardinia.

—The government statistician estimates the value of the fruit crop of the United States at one-half that of the wheat crop, or \$140,000,000 annually.

—The State of Texas has purchased 1,400 acres of land near Hempstead, with buildings and improvements, for the State University for colored youth.

—A large number of the students at Dartmouth College have been arrested for hazing, and will undoubtedly be severely punished, as they richly deserve.

—The English ship *Eurydice*, from Bermuda to Portsmouth, was sunk March 25, in a storm on the south coast of England. Of 320 men on board, only two were saved.

—Two sons of Jesse Noe, a farmer in Green Co., Ky., have died from eating sausages containing trichinae, and other members of the family are not expected to recover.

—A new design of postage-stamps is soon to be announced. They are prepared with inclosed borders of white, to prevent the fraudulent practice of "washing" cancelled stamps.

—The soldiers of the Mexican army have been set to work by the Government in draining the Mexican Valley, and in improving the roads, which is better than making raids or fighting.

—It is calculated that if the amount of tobacco annually consumed, 4,000,000,000 pounds, were manufactured into roll-tobacco two inches in diameter, it would coil itself around the globe sixty times.

—Of \$15,000,000 awarded by the Geneva Conference on the Alabama claims, claimants have been found for but \$6,000,000. The remainder is in the hand of the United States Government.

—A girl in the employ of Judge G. D. Campbell, of Clarksburg, W. Va., tried to poison the whole family by putting arsenic in the tea, but saved their lives by putting in so much as to cause vomiting.

—The practice of smoking cigarettes is rapidly increasing, there being now 338 brands made, while ten years ago there was but one. It is pronounced much more injurious than cigar-smoking, as the smoke is generally inhaled and ejected through the nose, causing irritation



of the mucous membrane of the nose, dimness of vision, dyspepsia, throat diseases, and all the pernicious effects of the use of tobacco in an aggravated degree.

—Sitting Bull is evidently making preparations to renew hostilities this spring, and expects to be joined by the various Indian tribes of the North-west. His present forces aggregate 7,000 warriors.

—Timber-stealing from public lands in Florida and Louisiana seems to have been carried on quite extensively. Recently, however, many of the operators have been brought to grief by government authorities.

—In Italy, at the foot of Mt. Gargano, a buried town has been discovered, the houses being twenty feet below the surface. A temple of Diana has been brought to light, and a monument erected in honor of Pompey.

—An illustrated collection of ancient and modern literature, published nearly two centuries ago by the Chinese Government, consists of 6,000 volumes. A copy of the work is for sale in Peking, and the British Museum is about purchasing it.

—One of the four white-elephant deities of Siam recently died at the advanced age of upwards of a century. The three survivors followed the remains of their comrade to the grave. The burial was conducted with most extraordinary funeral services.

—Sixty-five of the eighty-one lives lost at the Ashtabula disaster have been paid for, by the Lake Shore and Michigan Southern railroad company, at a rate averaging \$5,000 apiece. The most expensive life cost the company \$9,000, and a newly married couple were appraised at only \$3,000.

—It is stated that there are 10,000,000 smokers in Germany. People there are so infatuated with the weed that many smoke even in church. A similar practice in Italy two centuries ago induced the Pope to fulminate a bull excommunicating all who indulged in the use of the filthy weed in church.

—The Mormons are increasing by the immigration of foreign proselytes at the rate of 1,000 to 5,000 annually. By far the largest number of their converts are Danes. It may not be generally known that polygamy is comparatively a new thing among them, being condemned in the book of Mormon, and only justified by a pretended special revelation to Joe Smith.

—European affairs are in a very unsettled condition, and continue to excite great anxiety and apprehension of war. England is entirely dissatisfied with the terms of peace agreed upon by Russia and Turkey, by which the latter is dismembered, and loses the most of her European territory. There is but little prospect that the matter will be left for settlement to the Congress of the great powers of Europe, which is shortly to be held at Berlin. Austria, at first dissatisfied with the treaty, has been reconciled by the promises of Russia. England now seeks

the sympathy of France and Italy. Should she gain it, and these three powers unite to oppose the dictates of Russia and Prussia, most serious trouble would inevitably result.

—The Cerro de Pasco silver mines of Peru, accidentally discovered in 1630, yielded \$600,000,000 worth of the precious metal before they were suspended on account of the almost insurmountable obstacle to working them. When the celebrated Oroya railroad from Lima, now in progress, is completed, it will open these mines again to the world. It is expected that this one mountain will produce \$100,000,000 of silver a year.

—The great famine at present prevailing in China promises to be not a mere temporary misfortune, but a permanent condition so long as there are inhabitants in the stricken section of the country. The direct cause is said to be the gradual drying up of the great table-land of Central Asia. The famine has gradually extended to the northern part of China, and already covers a district equal in size to a dozen Switzerlands. The present extremity is so great that women and children are sold for a few dollars each, and many are killed to prevent their suffering. The starving multitudes have for many months been subsisting on grass, roots, and the bark of trees. They have eaten the thatches of their cottages, and, in their last extremity, have devoured red slate-stone, and similar substances.

## Literary Notices.

MARYLAND MEDICAL JOURNAL. Baltimore: Manning & Ashby.

This young medical journal is rapidly improving in excellence, and already begins to compare very favorably with its older rivals. We believe in the multiplication of journals on medical subjects. The more we can have, the better.

BETWEEN THE GATES. By B. F. Taylor. Chicago: S. C. Griggs & Co.

This, the last of Mr. Taylor's books, is fully up to the standard of excellence reached in "Old Time Pictures," "The World on Wheels," and his other well-known works. In the peculiar excellences of his style, Mr. Taylor is equaled by no other writer. His sentences are all aglow with lively pictures that help the imagination to keep pace with the rapid movement of his racy style, carrying one along irresistibly into the scenes described, and making the ordinary reader see more of poetry and mirth than he would if he saw with his own less perceptive eyes the real objects depicted.

The present volume is a description of a trip to California and a summer spent amid the nat-



ural wonders and beauties of that attractive coast. Among the other curiosities of that treasure-house of interesting and marvelous objects he does not forget to mention the "Heathen Chinese," whom he describes with the truthfulness of a photographer.

For those who have no relish for the solid mental food of science or theology, or the dry crusts of statistical descriptions of travel, Mr. Taylor's writings furnish mental food in the form of sweet-cakes, bonbons, mince-pies, and ginger-snaps.

THE NEW ROCKY MOUNTAIN TOURIST. Chicago: Knight and Leonard.

This new publication is really an elegant thing. Its typography is exquisite, and its engravings are really works of art. The objects of interest described are quite too numerous to mention. Any one can obtain a copy by simply sending his address to W. F. White, Topeka, Kansas.

TREATMENT OF THE DROWNED. Lansing: State Board of Health, H. B. Baker, M. D., Secretary.

The Michigan State Board of Health has given another evidence of their eminent fitness for the duty intrusted to them of conserving the public health by issuing, in circular form, full directions for the "Treatment of the Drowned." The directions given are admirable for clearness, and are made easy of comprehension by accompanying cuts. Some of our readers are already familiar with the same, we having been permitted the use of the cuts and the privilege of publishing the contents of the circular in this journal. We wish that a copy of the same could be in every household in the land; and we are glad to see that it seems to be the intent of the Board to give it a very wide circulation.

—We have also received, by the courtesy of Dr. Baker, the following publications:—

"Laws of the State of Michigan Relating to the Public Health;" "First Annual Report of the State Inspector of Illuminating Oils;" "Restriction and Prevention of Scarlet Fever;" "Contributions to the Study of the Cause of Typhoid Fever;" "Report of Attendance, Abstracts, and Review of the Proceedings of the Health Department of the American Social Science Association," by H. B. Baker, M. D.

Each of these pamphlets contains a very large amount of exceedingly valuable information. The last two are especially interesting, containing much that is new on the subjects treated. The one on typhoid fever shows very clearly that this disease may be developed by the prod-

ucts of vegetable decomposition, a fact which has heretofore been disputed. In one instance, a number of cases occurred in consequence of using water from a well which contained a number of decomposing turnips. The pamphlet last mentioned contains many good things which we shall reserve for quotation at length at some future time.

THE KIROGRAFER AND STENOGRAFER. Amherst, Mass.: J. B. & E. G. Smith.

The first number of this new publication announces itself as a quarterly devoted to shorthand reporting in a new and, as claimed, improved style. The number of methods of shorthand reporting which have been invented within the last ten years is so great that one proprietor of a system has thought himself justified in denominating any attempt to introduce another "a positive offense against the peace of society." Nevertheless, the authors of the new system persist in presenting their claims, and doubtless have as good a right to do so as their predecessors. Each new system is claimed to be a great advance over all preceding ones, of course. If the claims of all are true, stenography must certainly have reached a state of perfection never attained by any previous art. But we will allow the reporters to fight it out among themselves.

## SEASONING.

—"Mrs. Spriggs, will you be helped to a small piece of turkey?"

"Yes, my dear Mr. Wilkins, I will."

"What part do you prefer, my dear Mrs. Spriggs?"

"I will have a couple of the wings, a couple of the legs, some of the breast, the side-bone, some filling, and a few dumplings,—I feel very unwell to-day."

—A man in Buffalo is so punctual in his habits that he carries his watch in his coat-tail pocket, so as to be "ahead of time."

—The best thing ever said of ghosts was said by Coleridge, when asked by a lady if he believed in them: "No, madam; I have seen too many to believe in them."

—A widow at the West, intending to succeed her husband in the management of a hotel, advertises that "the hotel will be kept by the widow of the former landlord, Mr. Brown, who died last summer on a new and improved plan."

—A young lady astonished a friend the other day by asking for "the loan of a diminutive argenteous truncated cone, convex on its summit and semi-perforated with symmetrical indentations," or in other words, a thimble.

—A grave answer—*Doctor*: "Thomas, did Mrs. Popjoy get the medicine I ordered yesterday?" *Thomas*: "I b'lieve so, sir; I see all the blinds down this morning."



## Items for the Month.

*✍* Mrs. White's article in this number is an invaluable one, and we hope it will receive the careful reading which it deserves.

*✍* Dr. D. C. Moore has opened a health resort in Stockton, Cal., and seems to have a fair prospect of success.

*✍* The next number will contain a full account of the dedication of the new building on the 10th. We expect at that time to witness the largest hygienic dinner ever given. The new dining-room has seating capacity for three hundred persons, and will doubtless be filled.

*✍* We are glad to learn that Eld. White, whose severe attack last fall was followed by a protracted illness, is steadily improving. He is now able to engage in writing and public speaking to a considerable extent, and we hope that ere long he may be able to favor the REFORMER with more of his valuable contributions.

*✍* Subscriptions to the REFORMER are coming in so rapidly that we are obliged to print each month from one to three thousand extra copies in order to supply the demand; and still we have frequently run out of certain numbers, and so have been unable to supply them. The stereotype process has recently been introduced into the Office, so that we shall have no further difficulty.

We hope that none of our agents will relax their efforts for the introduction of the journal on account of the opening of spring. This is just the season of the year when people need to pay especial attention to the very subjects upon which the REFORMER treats.

*✍* We are happy to announce the establishment on the Pacific Coast of an institution to be conducted upon a plan similar to that of the Sanitarium in this place, under the medical management of Dr. M. G. Kellogg. The new institution is to be located at St. Helena, Cal., where suitable buildings are now being erected for the purpose. Such an institution ought certainly to succeed in the "Golden State," where invalids are numerous, thousands having left their Eastern homes and gone to California in search of what they have lost through disobedience to the laws of health. Many of these seekers after health after a time make the discovery that a change of climate is not the only thing necessary to secure a return of health. Old notions of live-

ing must be changed; bad habits of various sorts must be relinquished; and a general reform must be instituted. Such a work can be done at a properly conducted sanitarium better than at any other place; and we would heartily recommend all who appreciate the need of this sort of help to patronize the new institution at St. Helena as soon as it is ready for occupancy, which will doubtless be at no distant date.

*✍* Several unexpected difficulties made necessary the postponement of the dedication of the new buildings of the Sanitarium, announced for the 5th inst., to the 10th. The building is now virtually completed and occupied. The old main building is being raised, the grounds graded and otherwise beautified, together with various other improvements, chief among which is the construction of a rustic fountain, thirty feet in diameter, in front of the main entrance to the building. Twelve hundred invitations have been issued to the old patrons and friends of the institution, and all necessary arrangements are being made for a grand and successful opening at the time appointed. The managers will be obliged to those who expect to come if they will drop a card to that effect a day or two before starting.

## The Evils of Fashionable Dress,

— AND —

## HOW TO DRESS HEALTHFULLY!

*This Little Work ought to be Circulated Everywhere.*

Thousands of American ladies are entailing upon themselves lifelong disease by their neglect of the principles which are explained in this work.

**Paper Covers, 40 Pages, 10 Cents.**

Address, **HEALTH REFORMER,**  
Battle Creek, Mich.

## HEALTH AND DISEASES OF WOMAN.

A treatise on the nature and cause of the diseases of women; a work which every woman—especially mothers—ought to possess. Lifelong misery will be avoided by regarding its advice. Price 15 cents. Address,

HEALTH REFORMER, Battle Creek, Mich.



# AGENTS WANTED!

## PREMIUMS!

THE publishers of the HEALTH REFORMER are determined to increase the circulation of the journal to at least 50,000 within the next two years, and to attain that end

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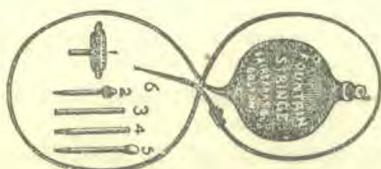
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