

# GOOD HEALTH.

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### DISEASES OF THE EAR.

RUPTURE OR PERFORATION OF THE MEMBRANE OF THE EAR may result from ex-

ally introduced into the auditory canal, or by ulceration as a result of suppuration of the middle ear. Cases of rupture of

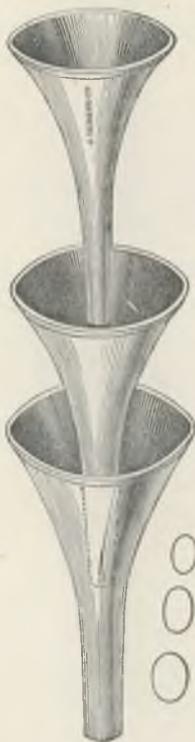


Fig. 1. Ear Specula of three sizes.



G. TIEMANN & CO. N.Y.

Fig. 2. Dipper Trumpet.



G. TIEMANN & CO. N.Y.

Fig. 3. Ear Trumpet.

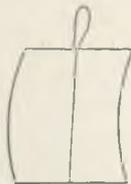
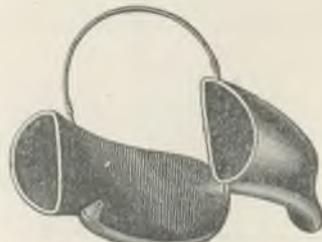


Fig. 4. The Audiphone.



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Fig. 5. Auricles.

posure of the ear to loud sounds, as the firing of a cannon, or a violent explosion of any kind, or perforation may occur by puncturing with an instrument used in removing wax from the ear, or accident-

the membrane have also been known to occur in consequence of the injudicious use of the nasal douche. Rupture of the membrane has also been caused by boxing the ears, or by a blow upon the ear.

from a snow-ball. The accident generally causes loud buzzing in the ear and confusion in the head. In many cases the ear whistles when the patient blows his nose, due to the passage of air through it. The condition of the drum membrane is easily ascertained by an examination by means of the ear speculum, of which two forms

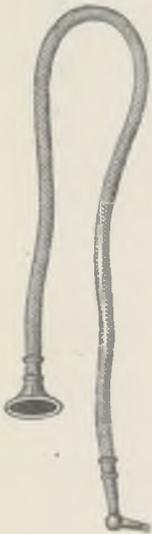


Fig. 6. Conversation Tube.



Fig. 7. Small Silver Cornets.



Fig. 8. Artificial Drum Membrane.

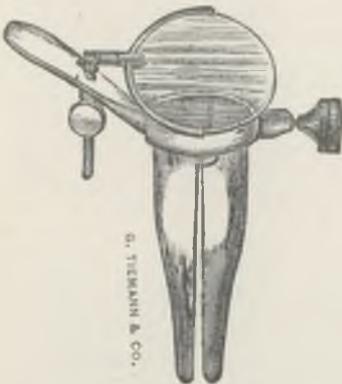


Fig. 9. A Bi-valve Ear Speculum.

are shown in Figs. 1 and 9. Light is thrown upon the membrane through the speculum by means of the concave mirror, such as is used in examining the throat.

*Treatment.*—The pain may be relieved by fomentations. If inflammation occurs, hot douches to the ear should be employed, but not otherwise. In a majority

of cases, rupture of the membrane heals quite readily, especially when it is the result of puncture with a sharp body, as a knitting-needle.

#### EAR TRUMPETS.\*

Quite a variety of instruments have been invented for the purpose of intensifying sound for the benefit of those who are hard of hearing, in cases in which the middle ear is the seat of the disease, the auditory nerve remaining intact. Two of the most useful instruments are shown in Figs. 2 and 3. Auricles, Fig. 5, are of rather doubtful value. The conversation tube, Fig. 6, is a very serviceable instrument. Fig. 7 shows at *a* and *b*, small silver cornets, which are recommended on account of the ease with which they can be concealed. They are, however, of little value as aids to hearing. Some years ago the discovery was made that a small bit of moist cotton in the ear adds greatly to the hearing power when the drum membrane is ruptured. Artificial drum membranes, Fig. 8, are now made and are often very serviceable in some cases, though all are not benefited by them.

The audiphone, Fig. 4, is a recent invention which is of service in some cases of deafness, though it is by no means so universally applicable as has been claimed by its inventor. It is composed of a sheet of gutta-percha attached to a handle and made tense by means of a cord. In use, the upper edge is placed against the front teeth, through which the vibrations of sound are communicated to the bones of the skull and to the auditory apparatus. The principal objection is its price, which is very exorbitant when compared with its actual cost. A sheet of card-board eight or ten inches square may be used in the same way as the audiphone. The dentaphone is practically the same as the audiphone, the only difference being that it may be folded so as to be convenient to carry in the pocket. The megaphone, an instrument by which very distant sounds may be distinctly heard when wholly imperceptible to the unaided ear, is one of the numerous inventions of Mr.

Thos. A. Edison. The instrument constructed by him, the marvelous powers of which were exhibited to us by his laboratory assistant, is of such mammoth proportions as to be of no particular value for the relief of deafness. It is quite doubtful whether it can be sufficiently reduced in size to be of any value for this purpose.—*Home Hand-Book.*

Written for GOOD HEALTH.

### HUMBUGS.

I HAD been spending some time at the Sanitarium located at Battle Creek, Michigan, and had received much benefit bodily, consequently, mentally. The doctor had told us much in his parlor talks of medical humbugs, etc. Many shams were exposed to the evident relief of such poor sufferers as are ever wondering if the real Elixir of Life is not contained in the last beautifully labeled bottle that has been placed before the public, accompanied by glowing testimonials. No doubt many of the venders of these patent nostrums foisted upon credulous sufferers, have more or less faith in their wares; but far the larger proportion have an intimate connection with ignorance or cupidity.

Although a thousand miles away, I pondered upon the words, and facts presented, and asked myself *why* and *how* does all this "shamming" come. As there is some reason for nearly every event, but such as are recognized as miracles, and this can hardly come under that class, although it does seem somewhat miraculous that such a multitude of sensible people should be so easily duped, there must be some way to trace it to its fountain-head.

A gentleman, anxious to make a display of his three-year-old daughter, said to her in the presence of a friend, "Come here, dear; now tell us, What is papa?" "Papa's a humbug," replied the child. "There, what do you think of that," exultantly exclaimed the fond parent. "Upon my word," replied his friend, "I never saw so young a child with such mature judgment." That there is close connection between the human humbug and all oth-

ers, cannot be denied. Here is wanting no "missing link." The system frequently commences in the cradle, and only ceases when the "silver cord is loosed" and the "golden bowl broken."

The child of scarce a year old is induced to swallow the nauseating draught by the assurance, "Alice wants it now," or "Mamma will eat it all up if baby does n't take it." Thus the child is taught a lesson of selfishness, as well as deception. It takes but a few years to open its eyes to the fact that neither "Alice" nor "mamma" could be readily persuaded to swallow the portion that he was duped to believe so appetizing.

While traveling on the cars recently, a young woman with her little boy, probably three years of age, occupied the next seat. The latter had received considerable attention during the afternoon, as he was a fine specimen of bright, healthy childhood. The mother seemed to enjoy, quite as much as did any one else, his playful willfulness. But the time came when it was not so funny. As night approached, the poor little boy was flushed and excited by all he had seen and heard, and when his mother told him he "must be quiet and go to sleep," his frame quivered from nervous stress, and he said, "Georgie can't go sleep." "But you must," said the mother, "or I will give you to that big man out there," pointing to the car window as the train swept rapidly past brake and brook and bramble, the "big man" being invisible. The boy ran away, but tripped, and was soon captured, with the assurance that the car window was to be immediately opened, through which aperture "the fat man" would seize him. It was very evident that he was either well acquainted with the "fat man" and had no faith in his kidnapping propensity, or he had heard such stories before. Finally, after threats and blows, which were mutually exchanged, the poor child fell asleep from sheer exhaustion. How long, think you, will it take for him to learn to translate the fiction of the "big man" and the "fat

man" into the most flagrant falsehood?

Instead of telling the child at school that the great world is full of knowledge as is the ocean of briny drops, that the more of th's he succeeds in making his own, combined with pure and lofty purpose, the broader will his mind become, and if God spares his life, somewhere in the busy world there will be a place and work for him, not merely that which will satisfy the fancy of the head, or craving of the heart, but where he shall be able to benefit his fellow-men,—instead of this, he is promised some desired treasure if he succeeds in getting more head-marks than Tommie Jones. Purity of motive is not exalted before him, and naturally sharp and shrewd, he resorts to any subterfuge which his mind suggests, to secure the desired object. "Tell them whose child you are, and they won't ask you to pay anything for it," is the thoughtless parent's advice, as his child goes out to make a small purchase of a friend. Know this, O father, you are planting the seed of a moral blot on that child's mind that time nor eternity may efface! The desire to secure that for which no equivalent has been rendered, lies at the foundation of numberless breaches of trust and deeds of dishonor. From this cradle emerge "Another defaulting bank cashier," "Star Route Frauds," and so on *ad infinitum*.

The young man just entering the busy arena of life is not told to take into consideration his mental and physical qualifications for any particular pursuit; he is not told to meet the people with voice, or skill, or pen, because he feels that he has a work to do for humanity in some particular direction, and because of his natural adaptation to it, it seems to be Heaven-appointed work for him. No; but Where will he reach the loftiest attitude in public opinion, or be enabled to pocket the largest number of dollars? is the question oftenest propounded. Is there then no "royal road," no path of duty for which fame, ease, and prosperity, are not also synonymous terms? Must one ever choose the thorns and briars in order to feel certain he is in the right path? There are,

indeed, thrones and presidential chairs to be occupied, but there are also by-ways and hedges, little niches in the world's strange mechanism; and if your native talent the better quality, and duty call to the latter—if the situation be met and accepted with becoming heroism and devotion, it were higher honor than to merely wear a crown.

It is not presumable that either our manners or our morals are any improvement upon the time when our first parents inhabited their Eden home. Inherited tendencies, either latent or active, come to the surface full soon, if wise direction and repression be ever on the alert.

A few weeks since, while seated in a dentist's office, a little girl, accompanied by a young lady, came in to interview her uncle, and "see the teeth." "Now," said the attendant, "don't you want your teeth fixed—beautiful bright gold put in them?" "No," said the little Miss, "*I want the gold put on the outside.*" There is the active principle of so much that we see about us, in epitome. The child wants the "gold on the outside," and the mother puts it on in ruffles and tucks and loops, perchance chains and charms and rings, and says, "Papa, isn't she pretty?" and little Miss Importance says in tone and manner, often in words, "Don't I look pretty?" The genuine gold, the sweet graces of heart, and culture of mind, receive but indifferent attention. The sham of childhood is only equaled by that of womanhood, and woe to many a luckless wight, who, mistaking the glitter of the tinsel, for the pure ore, discovers his mistake only when it is too late! It is sham, sham, sham,—political, medical, educational, religious, social, household sham! and even the "writing on the wall," prophetic of coming doom, fails to intimidate.

The moral of the story told by Dr. Johnson of the man picking his way along the mountain-side, to whom his little child said, "Take a safe path, father; I'm coming after you," is too apparent to need elucidation. Joshua Billings may not be

considered standard authority upon all subjects, but no sage ever uttered wiser aphorism than he, when consulted by a friend as to *how* he should train up his child in the way he should go. "Walk that way yourself," was the sententious reply.

I have somewhere read of a beautiful custom among the Alpine peasantry. As day draws to a close, wafted on the breezes from mountain to mountain, and crag to crag, comes the musical refrain, "Praise ye the Lord." I realize the magnitude of the subject I have introduced, and although but a minor key be touched, if it shall awaken echoes that reverberate from point to point along the mountain-steep of life, in the form of deeper thought, more fertile pen, or more careful living, my object will have been accomplished.

MOUNTAINSIDE.

### THE PHYSICAL EFFECTS OF ALCOHOL AND TOBACCO.

A LECTURE DELIVERED AT THE LAKE BLUFF TEMPERANCE CONVOCATION, AUG. 18, 1882.

BY DR. J. H. KELLOGG.

[CONTINUED.]

HERE we have a plate representing the actual state of things which has been found existing in the stomachs of persons accustomed to use alcoholic drinks daily in large quantities. The blood-vessels are dilated, as in the case of the moderate drinker, and in addition, large bluish patches are observed, which indicate the stagnation of the blood which is likely to result in death of the tissues and form ulcers. Ulceration of the stomach is more often the result of the use of spirituous liquors, than of any other cause.

St. Martin, who was experimented upon by Dr. Beaumont, had been addicted to the use of liquor, and sometimes broke away from the restraints imposed upon him by the doctor's experiments, and indulged his appetite for alcoholic drink. After these occasions, Dr. Beaumont always noticed that the mucous membrane of the stomach was greatly congested. Even the use of a small quantity of alco-

holic drink was sufficient to produce an inflamed appearance, while greater excess caused the stomach to present a surface swollen and roughened with inflammation, with ulcers and numerous black patches of deadened tissue. Notwithstanding this terrible condition of his stomach, St. Martin was scarcely conscious of any disturbance, and thought himself as well as usual! Why was this? Because the stomach has few nerves of general sensibility, and suffers long before it remonstrates.

Some years ago we were talking on this subject before a large audience, when suddenly some accident in the back part of the audience occasioned a little disturbance for a moment. We afterward learned that a man who had previously been an habitual drinker had been so affected when he beheld a picture of the condition of his stomach when drinking, that he tipped over backward in a faint.

The next plate represents in a very faint degree the terrible condition present in the stomach of a victim of alcoholic poisoning, suffering with what is generally known as "delirium tremens," or acute alcoholism. The mucous lining of the stomach is in a state of intense inflammation, so that its functions are wholly suspended. In a case which we had under treatment a few years ago, we found our patient at our first visit suffering most intense nausea. He had been vomiting incessantly for more than two days. The smallest sip of water could not be retained upon the stomach. Great quantities of mucus were vomited, together with blood. We asked him if he had any hallucinations. "Oh, no!" he replied, "only a few phantasmagora."

While malignant disease of the stomach is not produced solely by alcohol, there is no question but that it is one of the most frequent causes of cancer of this organ. This plate represents the malignant growth extending entirely around the lower portion of the stomach, and having compressed its cavity until it is narrowed less than the size of the small intestine. Sometimes it becomes closed

entirely, when the person dies from suffocation.

This plate represents a number of diseased conditions produced by alcohol, all of which are exceedingly interesting in character. At A we see healthy nerve cells. In a healthy condition, nerve cells, although irregular in form, possess an exceedingly delicate and highly vitalized structure. These are the elements of the body which make up the great bulk of the brain, and the nerve centers of the spine and other parts of the body. These structures give rise, by a marvelous process not well understood, to sensation and motion, and in fact all the activities of the body.

At B are represented nerve cells in a state of fatty degeneration. The effect of alcoholic drinks is to produce atrophy, or wasting, and fatty degeneration (change to fat) of nerve cells as well as other tissues of the body. It is in this way that *locomotor ataxia*, *palsy*, and other incurable diseases are produced by the liquor habit.

H represents HEALTHY NERVE FIBRES.—The blue outer portions represent the sheath of the nerve, within which are shown the delicate dotted fibres by means of which messages of sensation and volition are sent to and fro between the brain and spinal cord and other portions of the body.

At I is shown nerve fibres which have undergone fatty degeneration. This is a fair representation of the havoc made among the delicate nerve filaments by the destroying influence of alcohol. It will be observed that the nerve is shrunken, its delicate outlines are almost wholly obliterated, and the minute fibres broken and obstructed, and thus the nerve rendered wholly useless.

C represents HEALTHY BLOOD-CORPUSCLES.—The blood-corpuscles in a state of health are wonderfully symmetrical in form, being flattened, bi-concave disks, as shown on the plate, giving the blood its red color. It will be observed that the corpuscles adhere together somewhat in

groups, and are arranged in forms resembling a rouleau of coins.

D represents the BLOOD-CORPUSCLES OF AN HABITUAL SMOKER.—Dr. B. W. Richardson of England has made a large number of observations upon the blood of smokers, and finds that the effect of tobacco upon the blood is to destroy the symmetrical character of the corpuscles, and cause them to be shriveled and irregular in outline.

E shows the CONDITION OF THE BLOOD OF A DRUNKARD.—Whisky has an effect upon the blood-corpuscles similar to that of tobacco, and also produces an irregular distribution of the coloring of the corpuscles, giving them a somewhat mottled appearance, and in part destroying the power to perform their important function of holding and carrying oxygen.

F represents the appearance of corpuscles which have been removed from the body and subjected to the action of alcohol in such a manner that its effects could be watched under the microscope. Almost instantly after the application of the alcohol, it will be observed that the corpuscle loses its natural form, and becomes so greatly shriveled and changed in form as to wholly destroy its resemblance to human blood-corpuscles. While it is probable that when used as a beverage, alcohol does not produce quite so profound an effect upon the blood as is represented by this experiment, at least to a very great extent, there can be no doubt but that the same effect is produced in some degree before the fiery liquid has become diluted after absorption by mixture with the blood. The effects of alcohol upon the blood are produced even when diluted to the extent of one part in five hundred, according to Dr. William Carpenter, of England.

G represents an eye, the colored portion of which presents a ring known as the *arcus senilis* from the fact that it is more often present in elderly people, in consequence of the degeneration which naturally occurs in old age. The ring is occasioned by a deposit of fat which is within the upper edge of the cornea, and

can be seen, when present, by a careful examination of the eye. This ring is often present in persons addicted to the use of alcohol at a much earlier period than it should naturally make its appearance; and although it does not in the least injure the eye, its significance is very great, since it indicates that the deposit of fat by which it is produced, is taking place in other parts of the body, as the brain, the heart, the blood-vessels, the liver, and other important vital organs. It is a sign hung out in the drunkard's eye to warn others of the havoc which is being made within.

As seen under the microscope, nothing is more beautiful than a healthy muscular fibre as shown at J. Its delicate striping is so regular as to almost lead one to imagine it to be the work of some skillful artist.

K illustrates the FATTY DEGENERATION OF MUSCULAR FIBRES.—Here again we observe the ruin wrought by alcohol. Globules of fat of varying size have taken the place of the healthy structures, and rendered the fibre almost useless for the purpose for which it is designed. No wonder that the drunkard's muscles are weak, that he possesses no strength, that he totters and trembles, that his flesh is soft and flabby!

PLATE 8 illustrates at its upper left hand corner, one of the results of smoking, namely, cancer of the lip. That terrible form of malignant disease known as epithelioma, more often occurs upon the lip or in the mouth, as the result of smoking, than from any other cause. The figure shown is an almost perfect copy of a photograph of a man suffering with this terrible disease occasioned by smoking. Only recently one of the most prominent politicians of the country, a senator, died of this terrible disease after enduring several painful operations, all the result of smoking.

One of the signs of intemperance, which its victims put forth the most strenuous efforts to suppress, is that peculiar enlargement of the nose, with intense redness, so appropriately termed the "rum-

blossom." The example given in the plate, though an extreme case, is no exaggeration, as it is a fac-simile of the "blossom" belonging to a somewhat popular politician in one of our Western cities. Like the drunkard's ring, the rum-blossom, although something of a blemish, is chiefly important in consequence of its significance, since it does not particularly interfere with the functions of the organ to which it is attached. The mode of development of the rum-blossom is interesting. It may be best explained by reference to an experiment sometimes performed by physiologists upon lower animals. A white rabbit is generally selected for the experiment, which consists in dividing a certain nerve, which in a curious manner not wholly understood, controls the circulation in the ear of the rabbit. The object of this nerve is to keep the blood-vessels of the rabbit's ear in a state of proper contraction, thereby regulating the supply of blood. The moment it is divided, the blood-vessels relax, become filled with blood, and the ear blushes. This can be readily seen in the ear of the white rabbit, from the absence of coloring matter in its skin. By the removal of a portion of the nerve, so that the divided parts will not grow together again, the condition of blushing or congestion may be made permanent in the ear. When left in this condition for a few months, it is observed that the ear becomes much larger than that of the other side, the increased supply of blood having occasioned more vigorous growth, as shown on the plate. All other parts of the rabbit's body, and of the human body as well, are supplied with nerves which regulate the circulation in each part. This is true of the face, the lungs, the stomach, the liver, the brain, and all other internal and external organs. Blushing or blanching of the face are occasioned by the influence of different emotions upon these nerves. The effect of alcohol is to paralyze these nerves, and when its frequent use occasions the almost constant paralysis and engorgement of the blood-vessels

of the face and nose, more particularly the latter, it, like the rabbit's ear, grows too fast, and by this means may acquire even as enormous a development as that shown on the plate.

We must not omit the remark that persons who are strictly temperate sometimes acquire a deformity of this sort through other causes which are not well understood.

The brain in a state of health is one of the most delicate organs of the body. It is so soft and fragile that it can scarcely be cut, without being torn, by the sharpest knife. Its color has been very closely imitated by the artist. Let us now notice—

**A DRUNKARD'S BRAIN.**—The intense red color of the drunkard's brain is produced in precisely the same way as that of the nose, namely, paralysis of the nerves which control the circulation of this part of the body. When the drunkard's face and nose are reddened, or blushing under the influence of alcohol, the brain blushes. The same may be said also of the lungs, the stomach, the liver, the kidneys, and other structures of his body. His whole physical being blushes with shame for the outrage against nature. In consequence of this intense congestion, and the fact that it receives one-fifth of all the blood in the body, the brain participates more than any other organ in the body, except the liver, in the injury wrought by the "demon drink." As before mentioned, it sometimes becomes hardened to such a degree even during life that it can be readily distinguished from a healthy brain by the sense of touch alone.

[CONCLUDED NEXT NUMBER.]

WHENEVER the wandering demon of Drunkenness finds a ship adrift,—no steady wind in its sails, no thoughtful pilot directing its course,—he steps on board, takes the helm, and steers straight for the mael-strom.—*Holmes.*

ADVERSITY borrows its sharpest sting from our impatience.

### MENTAL EQUALITY OF MEN AND WOMEN.

THE same writer also bases an argument on the fact that woman expends a large amount of force in the functions of motherhood, which he assumes as about one-twentieth part of the total amount of vital force during the child-bearing period. In this argument an important fact is overlooked, namely, that during the period of pregnancy, when the mother's vital powers are taxed in an extraordinary degree, a more than commensurate increase occurs in the force-producing capacities of the mother. This fact is well recognized by physiologists, and ought not to be ignored in this discussion. It is well known that a woman usually gains in flesh during the period of pregnancy, and women often enjoy a higher degree of health at this period than when in their usual condition. In view of this fact, it appears to be fair to draw the conclusion that motherhood is really a gain to an individual in the ability to manifest force rather than a loss, at any rate, during the period in which the functions of maternity may be exercised.

Another fact is worthy of attention in this connection, namely, that the transmission of characteristics from the mother to the daughter by heredity is scarcely if any greater than from the father to the daughter. If woman's training and education through generations has been such as to develop her mental faculties less than those of man, the deteriorating influences of these circumstances must be neutralized by heredity, since mothers are as likely to transmit their enfeebled mental qualities to their sons as to their daughters, and fathers as likely to transmit their superior mental development to their daughters as to their sons. The seeming contradictions to this statement may be readily accounted for by the fact that girls have not, at least until recently, enjoyed the same opportunities for developing the mental powers which they might possess as have boys, so that superior inherited mental qualifications have undoubtedly in thousands of instances lain dormant in women because their cir-

cumstances were not such as to expand and develop them.

But suppose that those who so arduously seek to demonstrate the mental inferiority of woman were able to establish their point; what conclusion has been reached? Simply the fact that through a long course of injudicious training, woman has become mentally as well as physically inferior to man. That such a difference, if it exists, is simply the result of education, cannot be doubted. All the evidence necessary for the demonstration of this fact is afforded by an observation made by Vogt, as quoted by Bastian in his recent admirable work entitled, "The Brain as an Organ of Mind," that the difference between the size of the brain in males and females is much less in uncivilized than in civilized nations. This is undoubtedly due to the fact that in races which are in a low state of culture the occupations for physical and mental labor are more nearly alike. As Vogt remarks, "Among the Australians, the Bushmen, and other low races possessing no fixed habitations, the wife partakes of all her husband's toils, and has, in addition, the care of the progeny. The sphere of occupation is the same for both sexes; whilst among civilized nations there is a division both in physical and mental labor. If it be true that every organ is strengthened by exercise, increasing in size and weight, it must equally apply to the brain, which must become more developed by proper mental exercise."

The observations made by Le Bon, also quoted by Bastian, show that the difference between the capacity of the skulls of males and females among modern Parisians is about double that of the ancient Egyptians. From these facts we may legitimately draw the conclusion that the difference in the mental development of men and women is wholly the result of differences in training and education which have been operating through many generations. If this is the case, certainly it is about time that woman had a chance to regain her lost capacity; and instead of being an argument against the de-

mands made for woman for wider opportunities for culture, it is the best possible argument which could be urged in favor of affording her such opportunities. Indeed, it is evident that she ought to be provided with better opportunities for culture and development than man, who has so long enjoyed a monopoly of these advantages.—*Ladies' Guide.*

#### A LECTURE DELIVERED IN THE SANITARIUM PARLORS, AUGUST 23.

BY DR. J. H. KELLOGG.

I HAVE selected for my lecture this morning an interesting topic in which I am sure you will all be interested: "How to Get Well Fast." Almost the first question that a patient asks after he has had his examination and been thoroughly looked over, is, "How long must I stay here?" A patient is usually considered very unfortunate if he has to come here at all. A gentleman told me the other day that he thought this institution was a sort of penitentiary, and he considered it a very great hardship to be obliged to stay here any length of time. This seems to be the general impression with patients who come here, and so the first question they ask is, as I remarked before, how long they will have to stay. I am going to try to answer this question for you, or put you in a fair way to answer it for yourselves.

It is impossible to tell at the outset how long it will be before a patient can go home with safety. You can easily see why this must be so. In the first place, the rapidity with which a person will recover depends to a great degree on the amount of vitality that person has. A man who has impaired his vitality by drinking beer and smoking cigars has very little recuperative force, and his recovery must of necessity be slow. You cannot sail a ship on the sea without wind. You may crowd on all the sail you please, but if there is no wind to drive the ship, it will not move. In the same way, you must have vitality to carry a patient on toward health. If

his reserved vitality has been all used up, we may supply all the conditions for recovery, and yet he will show no signs of improvement, simply because there is no vitality to work with. Again, differences in temperament have much to do with getting well. If a person has a sluggish sort of temperament, he may have considerable vitality and yet not recover rapidly because his system does not respond readily to treatment. Persons who have sluggish minds and a sluggish nervous system, who have what is termed a phlegmatic temperament, will make much slower progress toward health than those who are of a lively, vivacious temperament. Here, then, are two very important circumstances tending to modify the rapidity with which a person will recover.

We cannot always tell just how rapidly a person will recover, as there are various circumstances the influence of which it is impossible to calculate. For instance, we cannot tell just how closely a person is going to conform to the laws of health. If a patient comes here and says, "Doctor, I put myself in your hands; I want you to cure me," and settles down to have all the work done for him, there is not very much hope for improvement in his case. He expects the baths and massage, and the other appliances to do all that is to be done for him. He is anxious to be cured, but wants everything done to or for him. He asks us to cure him just as he would order a house built, or a pair of boots mended. Many people come here in just that state of mind.

But doctors do not sustain that sort of relation to sick people. A man that is out of health is out of health because he has done something wrong; he has been a physical sinner, if you please. The amount of penalty that he will have to suffer will depend on the gravity of his crimes. The man who commits murder has to spend a longer time in the penitentiary than the man who borrows money and forgets to return it. It is just exactly so with the physical transgressions.

The man who has transgressed the laws of health in a trivial way will get well sooner, other things being equal, than a man who has been transgressing the laws of health during a life-time.

We cannot tell how completely a man is going to reform when he comes here, nor how perfectly he will comply with the rules of health necessary to put him in good relations with the laws of nature. For instance, a man comes who is troubled with indigestion. He is given a "diet prescription," and perhaps for a time follows it closely. After a while he finds that his stomach does not trouble him particularly, and he says to himself that it will do no harm to go down town and have a dish of ice-cream, or to eat an apple between meals. He makes the little digression. It does not seem to do him much harm, and so he tries various other digressions at different times, and the result is that it takes him a long time to get well. He does not seem to see that these little departures from the rules of health are standing right in the way of his recovery. In order to get well, he will have to contend against the obstacles that he is all the time putting in his own path. If a person expects to get well just as soon as it is possible for him to do so, he must conform with the most rigid and scrupulous care to all the conditions necessary in his particular case. Suppose a man has fallen into the very bad habit of using tobacco; his system has become filled with nicotine; his nervous system is deranged; he perhaps has neuralgia or some other trouble which is dependent on the use of tobacco. If such a man continues to keep a little piece of "plug" in his cheek, or to smoke a cigar now and then, he can never expect to really get well. He may improve a little perhaps from day to day, but he can never become entirely well. I have never in the course of my experience seen a patient of this sort recover, and we have had a good many of them here. Some of these patients would be all the time complaining that they

were receiving no good from treatment. When I would ask if they had given up the use of tobacco, they would say, "Oh yes, it was given up entirely when I came." Sometimes I would be quite puzzled to know why they did not improve, until I would learn from a room-mate, perhaps, that they were taking a few cigars on the sly every week, just enough to keep the nicotine in the system, and to keep the nerves in a state of irritation. The only remedy in such cases is to get every particle of nicotine out of the body before attempting to build up again. Just as surely as you attempt to build up on a tobacco foundation, so surely will the whole structure tumble down again. The whole system has to be cleared out thoroughly, you must get down to terra firma, to rock bottom, before you commence to construct the superstructure. If our patient wants to get well, he will drop the use of tobacco altogether. I have known patients to prolong their stay with us month after month by making some little digression which they thought would be of no consequence.

Perhaps a patient comes here who is troubled with slow digestion, caused by overeating. If that person continues to overeat, he can never get well, no matter how long he may remain under treatment. He may get a little better, but he can never get entirely well. If he merely takes a little too much dinner once a week, that is enough to prevent him from getting any benefit from his stay here. He sits down to dinner and perhaps says to himself, "This is a pretty good dinner; I will take a little extra today and make up for it to-morrow by not taking so much." Perhaps he has improved so much that he is able to digest a reasonable dinner; but this indiscretion in overeating puts him so far back that he has to begin all over again. Perhaps he will get up a little sooner than before, but you cannot expect that a patient of that sort will ever get to the top.

This process of getting well is very

much like climbing a steep and rocky mountain—a mountain that is broken by chasms and precipices and covered by rocks. Suppose a person gets clear down into the valley of disease, into the slough of despond. Away up above him is the mountain-top of health. Perhaps he struggles a long time around the foot of the mountain before he finds the right path. He stumbles over the rocks and boulders that have rolled down the mountain and accumulated at its base, and, it may be, gets badly bruised with Warner's Safe Liver and Kidney Cure, or Pierce's Pleasant Purgative Pellets, or other patent nostrums. His strength is nearly exhausted, and he is almost in despair, when by some good fortune he happens upon the narrow path which leads up the mountain-side. Perhaps some one on the top of the mountain shouts to him that if he will take that path, he will get to the top. So he starts up the path and has gotten pretty well along, when he meets some one who tells him that he has found some patent medicine or other by which he can slide right up the side of the mountain. No matter if he has a dozen incurable diseases, this new remedy will cure them all; the patient can ride right up to the top of the mountain on the patent medicine train without the least exertion on his part, if he will only pay his fare. It seems so much easier and more pleasant than walking up the steep path, struggling among crags and pit-falls, that the patient tries it, and in a very short time finds himself down at the foot again in a much worse plight than before. How many here have had that experience? I will warrant that half of those in this room have been through this very process in their search for health. If a person wants to get well in the shortest possible time, he must keep in this narrow path all the time. It is slow and tedious work, there is no doubt about that, and people often become discouraged because they cannot see that they are making any progress. The path does not go straight up the mountain-side, but winds around it, so that it is hard to tell sometimes whether you are making any headway or not. But by-and-by you will get to a point where you can look back and see where you were before, and you find that you have been making some progress.



## TEMPERANCE AND MISCELLANY.



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

### NOT LOST.

Fret not because the promise of the buds  
The fruit doth not fulfill;  
Was not the hope and fragrance which they brought  
To us a blessing still?

Nor count as lost, the seed we sow in faith  
Upon a barren land  
And reap not. Doth not God the purpose know,  
And bless the sower's hand?

Spurn not the vow the eager spirit makes  
That weak flesh cannot keep;  
The ocean bubbles break, but underneath  
There flows a current deep.

The buds that blossom not, the withered seed,  
The vows we leave undone,  
Are gems we drop; yet angels mark their fall,  
And raise them to the crown.—*Sel.*

Written for GOOD HEALTH.

### EDICAL ASPECTS OF THE ALCOHOL QUESTION.

BY JULIA COLMAN.

MAKE this limitation intentionally. Those who have paid much attention to the ills of humanity know that if temperance proper had always been properly observed, medicine would scarcely have had an existence. The original man was supple and strong of muscle, clear of brain, firm of nerve, and pure of blood, with a title to longevity that took him well up into the hundreds at least. His appetites were strong, and his great temptations lay in the line of their indulgence. Gormandizing and gluttony seemed limited only by their source of supply and by the individual capacity, and that was apparently much greater than it is at the present day. The performances of Roman grandees at the time of the Cæsars may be taken as a fair indication of the tendencies of the race. The number of courses was marvelous, and the capacity of the guest was increased by tickling the throat with a feather to relieve the stomach of its contents and make room for more. No less than two hundred

wines were at command, and drunkenness was the climax aimed at on every festive occasion. Is it any wonder that the average length of life among the patricians of Rome at this period was only thirty years, and that subsequently it ran even lower still?

Medicine had as yet hardly begun to be called a science, but men dreamed of some wonderful panacea that should restore the pristine vigor and power of endurance of which they then had much more lively traditions than we at the present day. They conjured with the philosopher's stone, they sought for the Fountain of Youth, they concocted, and seethed, and distilled, and at last they distilled alcohol! This they hoped was the elixir they had been seeking. Dr. Raymond Lully of the sixteenth century called it an "emanation of Divinity sent for the physical renovation of mankind." The learned Savonarola speaks of it as "the spirit of wine," and says it was called "aqua vitæ, or water of life, from its supposed property of prolonging human existence," and he also says it was used as a medicine *only*. It seems to have been several hundred years after its first production in getting into general use even as a medicine, and we have no proof that it was thought of as a drink up to this time.

Whatever may have been the origin of wine and beer drinking, the proof is abundant that we are indebted to the doctors for the common use of distilled spirits. If any more proof is needed, Sir Wm. Douglas tells us in a book printed in Boston in 1755 that "spirits (spiritus ardentés) not above a century ago were used only as officinal cordials, but now they are become an endemical plague, being a pernicious ingredient in most of our cordials." But it has happened in

this case only as in many others. When the people become familiar with any medicine, they learn to take it for themselves, and so it will be till the end of time. We ought to learn an effective lesson from all this. It is nonsense to think that this stuff or any other can be used freely by the physicians as a remedy and the people not learn to prescribe it for themselves. Still more preposterous is the idea that now, when the people are familiar with it, alcohol can be relegated to the medicine chest to be used only by the doctors or by their order. As well might any other brood of vipers be put back again into the eggs from which they sprung.

We have no special intention in this article of running a tirade at the doctors. We do not consider them any better nor any worse than the rest of the people, for they are part and parcel of the people, and like other people they have been deceived by alcohol, though it is true also that they have had better opportunities than "the laity," as they call us, for knowing the mischief wrought by the use of alcoholic drinks, and they have largely failed to warn us of the danger and help us out of it. A few have helped us. Dr. Rush of Philadelphia, in 1794, published the first campaign document, timidly it is true, not even putting his name to the first edition, yet it was a worthy document and it did good service. Dr. Armstrong also, of Moreau, Saratoga Co., was the leader in starting the first local society which did good work as a pioneer and is still in existence. Dr. Charles Jewett also identified himself with the temperance work most heartily for many years. Dr. Sewall, Dr. Charles A. Lee, and Dr. John Bell are worthy of mention; but as a body the profession has stood aloof, almost guiltily, and so far from taking the lead that we had a right to expect of them in support of a health measure, they have hindered rather than helped. They give comfort and support to the enemy. They still call these drinks good medicines in a vast majority of cases, as they have been doing in the past, and of course the vast majority of the patients drink,

and are deceived, and there is no help for it since the results of alcohol-taking are the same whether taken at the option of the drinker, or labeled medicine by the highest medical authorities. The stomach and the nerves do not recognize the dictum of the doctor.

The time has been, and it is not quite past even in this country, when the doctors rather indignantly deny that patients ever become drunkards as a result of taking alcoholic preparations, but the proofs in this line, and often from other doctors, are becoming too numerous to be challenged comfortably. A few more doctors are coming in, and a great many others are showing their uneasiness by caviling because they are not called upon to take part in public meetings "as ministers are." There is no question but that they would be called upon very quickly did they show anything like the readiness for action that ministers show. A large number have accepted the situation in Maine, but their "distinctiveness" has been the greatest of all hindrances to the execution of the law in that prohibitory State.

Because the doctors said alcohol was indispensable as a medicine, and did not *try* to do without it, a most expensive and elaborate system of agencies for its sale throughout the State had to be adopted. Their prescriptions kept up the faith of the believers in alcoholic drinks and not unfrequently the strength of the appetite in the drinkers also, while it is pretty well certified that in a great many of the drug stores that kept liquors "for medicinal purposes only," (that is, because the doctors prescribed it, or medicines that contained it,) almost anybody could get a drink by laying down twenty-five cents and *saying nothing about it*.

This is about the situation here in these United States. We prefer to make our criticisms upon it by recording a very different state of things on the other side of the water.

If the English are not so enterprising as we in starting new ideas, they are more thorough than we in carrying out what they do undertake. They did not

*inaugurate* the temperance reform, but when they took hold of it, they soon came to the decision that total abstinence was essential to success. Alcoholic drinks of all kinds were in common use, and the people believed in them, so when they were asked to give them up, they inquired, "Are they not good for us?" "Can we do as well without them?" "What will be the effect of giving them up?" and they began to investigate. It did not take long for many earnest investigators to come to the conclusion that they would be better off without them, even as medicines, and being once convinced of that, they were not afraid to act upon it. They asked perplexing questions of the doctors: "How will this benefit me if I take it?" "What will it do for me?" and the doctors were ashamed when they could not answer them intelligently. It made them investigate, and in several notable instances it ended in their conversion to non-alcoholic practice; and this practice was remarkably successful, resulting in a much larger ratio of recoveries in typhoid fever, in surgical and obstetrical cases, and in general hospital practice. Then the London Temperance Hospital was organized which has proved a tower of strength practically, dispensing with the use of alcohol even in the preparation of medicines.

The British Temperance League, mostly through the wise management of its efficient secretary, Mr. Robert Rae, has succeeded admirably in enlisting the doctors, so that now they have the British Medical Temperance Association with nearly three hundred members, and Dr. B. W. Richardson as president. The League also publishes the "Medical Temperance Journal," a quarterly of great ability, containing the advanced thought of the world in scientific temperance. Besides this, an immense amount of literature on the scientific aspects of the question has been put into circulation, and without doubt it forms the strongest element there. It shows what can be done by "moral suasion" without much help thus far from the law. The amount of liquor drunk

there is sensibly diminishing, and the best of the public prints acknowledge that "the authors of the total abstinence movement have done a genuine public service." This of course lies at the foundation of all effective work; and with the conditions they have succeeded in creating, they ought to have good work done in all lines, and they are in a fair way to have good laws made and executed, with much more help from the medical men than we have any reason to expect in this country.

But we do not entirely despair. We are getting subscribers to this Medical Temperance Journal. We are sending this and some excellent pamphlets to the doctors; we are distributing tracts on the subject among the people. The scientific teaching in the schools will be a great help. The practice of physicians of that new school who dispense with the use of alcohol will help, but we must have a great deal of direct and intelligent work in this line. Patients must require their doctors to treat them without alcohol. And one thing it is well to remember, we shall never have the country thoroughly conquered so long as we leave this "fort medical" in the hands of the enemy.

#### FINERY FOR BABIES.

WHEN will American mothers show their good sense and dress their children plainly? An underskirt is just as useful entirely plain as with innumerable tucks and ruffles; aprons soil just as quickly with all the stitching and ornamenting, as without it.

We should avoid all this useless work. A good sewing machine, used to perform the sewing of plain garments, is a valuable servant. My sewing is no severe matter for me, though there are six of us to be clothed. My children never seem to feel the need of tucks and ruffles, and as I join them for a ramble hunting spring flowers, I am not constantly fretted about their clothes, for they are of good, substantial material, not easily torn, and so plainly made that if soiled they are very easily washed and ironed. People say to me, what a healthy, rosy-looking family you have; and surely we have. I think very few people ever felt seriously dis-

tressed at the plain simple dress of my children. I was very much distressed by one of the numerous children of a hard working mechanic coming to my door one cold, rainy day, dressed in a ruffled dress and apron, with shoes unfit for any child to wear, and asking for a pattern for an infant's tucked dress. I told the child to tell its mother I never had such an article, and hoped my good sense would never allow such a display. Very pretty they are, but there are so many things to be done for the sweetest and most helpless of all creation, that I should hardly feel justified in taking the time to make and iron such a garment.

Mothers, try this plan of plain garments, and see if the little ones are not just as comfortable, and if you do not find your labors very much lessened by it.

Above all things try to find time for a little self-culture, that you may be the companions and teachers of the tender years of your children.—*Cor. N. Y. Tribune.*

#### TABLE TALKS.

THE influence exerted upon the household by the conversations indulged in, and the sentiments habitually expressed at the family table, is inestimable. It is well known that food digests better when seasoned with agreeable conversation, and it is a matter of great importance that all vexatious questions and unpleasant thoughts be completely banished from the family board. Says a writer in the *Sunday-School Times*: "The table is the place for cheerfulness. Simply on hygienic grounds meals should not be eaten in silence. Bright, cheerful conversation is an excellent sauce, and a prime aid to digestion. If it prolongs the meal and thus appears to take too much time out of the busy day, it will add to the years in the end by increased healthfulness and lengthened life. In any case, however, something is due to refinement, and still more is due to the culture of one's home-life. The table should be made the center of the social life of the household. There all should appear at their best. The conversation should be bright and sparkling. It should consist of something besides dull and threadbare common-places. The idle gossip of the street is not a worthy theme for such hallowed moments.

"The conversation of the table should be of a kind to interest all the members of the family; hence it should vary to suit

the age and intelligence of those who form the circle. The events and occurrences of each day may with profit be spoken of and discussed, and now that the daily newspapers contain so full and faithful a summary of the world's doings and happenings, this is easy. Each one may mention the event which has specially impressed him in reading. Bits of humor should always be welcome, and all wearisome recital, and dull, uninteresting discussions should be avoided.

"Table-talk may be enriched, and at the same time the intelligence of all the members of a family may be advanced, by bringing out at least one new fact at each meal, to be added to the common fund of knowledge. Suppose there are two or three children at the table, varying in their ages from five to twelve. Let the father or the mother have some particular subject to introduce during the meal, which will be both interesting and profitable to the younger members of the family. It may be some historical incident, or some scientific fact, or the life of some distinguished man. The subject should not be above the capacity of the younger people for whose especial benefit it is introduced, nor should the conversation be overlaid by attempting too much at one time. One single fact, clearly presented and firmly impressed, is better than whole chapters of information poured out in a confused jargon on minds that cannot remember any part of it. A little thought will show the rich outcome of a system like this, if faithfully followed through a series of years: If but one fact is presented at every meal, there will be a thousand things taught to the children in a year. If the subjects are wisely chosen, the fund of knowledge communicated in this way will be of no inconsiderable value. A whole system of education lies in this suggestion; for besides the communication of important knowledge, mental activity is stimulated, interest is awakened in lines of study and research which may afterward be followed out, tastes are improved, while the effect upon the family life is elevating and refining.

"It may be objected that such a system of table-talk could not be conducted without much thought and preparation on the part of parents. But if the habit were once formed, and the plan properly introduced, it would be found comparatively easy for parents of ordinary intelligence to maintain it. Books are now prepared in great numbers, giving impor-

tant facts in small compass. Then there are encyclopedias and dictionaries of various kinds. The newspapers contain every week paragraphs and articles of great value in such a course. A wise use of scissors and paste will keep scrap-books well filled with materials which can readily be made available. It will be necessary to think and plan for such a system, to choose the topics in advance, and to become familiar with the facts. This work might be shared by both parents, and thus be easy for both. That it will cost time and thought and labor ought not to be an objection; for is it not worth almost any cost to secure the benefits and advantages which would result from such a system of home instruction?

"These are hints only of the almost infinite possibilities of good which lie in the home conversation. That so little is realized in most cases when so much is possible, is one of the saddest things about our current life. It may be that these suggestions may stimulate, in some families at least, an earnest search after something better than they have yet found in their desultory and aimless conversational habits. Surely there should be no home in which, amid all the light talk that flies from busy tongues, time is not found every day to say at least one word that shall be instructive, suggestive, elevating, or in some way helpful."

#### SOUL BURYING.

WHENEVER an Abchasian is drowned, his friends search carefully for the body, but if this is not found they proceed to capture the soul of the deceased, a measure which then has become a matter of importance.

A goatskin bag is sprinkled with water and placed with its mouth, which is stretched open over a hoop, looking toward the river, near the place where the man is supposed to have been drowned. Two cords are stretched from the spot across the river as a bridge on which the soul can come over. Vessels containing food and drink are set around the skin and the friends of the deceased come and eat quietly, while a song is sung with instrumental accompaniments.

The soul, it is believed, attracted by the ceremonies, comes over on the bridge that is laid for it, and goes into the trap. As soon as it has entered—that is, when the bag is inflated by the breeze—the

opening is quietly closed, and the bag is taken up to the burial place, where a grave has already been prepared. The bag is held with the opening to the grave, the strings are untied, and the bag is squeezed into the grave, and the burial is afterward completed.

This rite is considered of equivalent value with the burial of the body, and the grave is treated with the same honor as if the body were really within it.—*Popular Science Monthly.*

#### LITTLE THINGS.

MORE depends on little things than we think. It is said that Voltaire when five years old learned an infidel poem, and he was never able to free himself from its effects. Scott, the commentator, when despairing, read a hymn of Dr. Watts, and was turned from a life of idleness and sin to one of usefulness. Cowper, about to drown himself, was carried the wrong way by his driver, and went home to write the hymn, "God moves in a mysterious way."

The rebuke of a teacher roused Dr. Clarke to great action, who had up to that time been slow in acquiring knowledge. Ole Bull, the great violinist, rescued from suicide by drowning, and taken to the near residence of a wealthy lady, became her *protege* and soon acquired fame. Robert Moffat, the distinguished missionary, reading a placard announcing a missionary meeting, was led to devote himself to work for the heathen.

So one step in the downward path often leads to the direst results. A single glass of whisky, taken at a critical point, has often turned the whole tide of life, and landed the drinker in a hopeless drunkard's grave. Beware of the small beginnings in vice! Learn to say "No" to the silvery voice of temptation. Look out for the little things, and the great things will generally take care of themselves.—*Sel.*

#### THE FOLLY OF THE DAY.

THERE is a dreadful ambition abroad for being "genteel." We keep up appearances too often at the expense of honesty; and though we may not be rich, yet we must seem to be "respectable," though only in the meanest sense—in mere vulgar show. We have not the courage to go patiently onward in the condition of life in which it has pleased God to call

us; but must need live in some fashionable state, to which we ridiculously please to call ourselves, and all to gratify the vanity of that unsubstantial, genteel world, of which we form a part. There is a constant struggle and pressure for front seats, in the social amphitheatre; in the midst of which all noble, self-denying resolve is trodden down, and many fine natures are inevitably crushed to death. What waste, what misery, what bankruptcy come from all this ambition to dazzle others with the glare of apparent worldly success, we need not describe. The mischievous results show themselves in a thousand ways,—in the rank frauds committed by men who dare to be dishonest, but do not dare to seem poor; and in the desperate dashes at fortune, in which the pity is not so much for those who fail as for the hundreds of innocent families who are so often involved in the ruin.—*The Home Journal.*

**WOMAN'S WORK.**

I AM convinced that at least one quarter of the work performed by women is unnecessary, and that the world would get on quite as well without it. It is like the ottoman cover I once saw a lady working. She was all bent up, and putting her eyes out counting stitches. "I don't get any time for reading," she said plaintively, as she picked up some beads on a needle. "You must have a great deal of leisure." And yet she had spent more time embroidering a ridiculous dog on a piece of broadcloth than I had spent with my books in a year, and when the work was done she covered it up with a lace tidy and put it in a dark corner where the sun would not fade it, and threatened to cut off the children's ears if they ever sat upon it. It did not have the poor merit of being economical, for the price of the materials would have bought enough handsome damask for two covers.

A friend of mine tells of seeing a squaw seat herself by the town pump, unroll a bundle of calico, cut out a dress, make it, put it on, and walk off, all in about two hours. I have always regretted that he did not continue the story by telling me that the squaw spent her abundant leisure beautifully. I would not have women reduce their sewing to quite so simple a performance, but a good deal would be gained if they thought more about living and less about its accidents. The transcendent

fact is what we are, not what we accumulate or possess. Even knowledge may be so used that it is merely an ornament, which keeps up a twinkling about the mind, like bright jewels in pretty ears, and is only a possession and not a part of ourselves. To fill time, to pass it busily, is not to use it. Labor in itself is not worthy. The meanest work that makes home a lovely, sacred place is consecrated, and fit for the hands of a queen; but delicate work that ministers to no human need, even if it has artistic merit to recommend it, if it consumes the hours a woman ought to use training her mind to think, and her eyes to see, and making her brains something more than a mere filling for her skull, is but busy idleness, and a waste of time. I hope the day will come when every woman who can read will be ashamed of the columns "for the ladies," printed in some of our papers, and which tell with more sarcastic emphasis than any words of mine how some women choose to spend their leisure. Surely if they have time to follow intricate directions for making all sorts of trimming, not so good as that sold in the shops at two cents a yard, and for crocheting all sorts of flummediddles, they may, if they will, find a few moments in which to read a book.—*Elizabeth Cummings, in Christian Union.*

**TRUE ECONOMIES AND FALSE.**

Of course, every virtue (like every coin) has its counterfeit. This holds true of frugality. There is a true frugality, and there is a false. Our saving may, perhaps, be more apparent than real. A man might walk from Philadelphia to Pittsburg, and save his car-fare; but his expenses for maintenance on his way would leave him but a small margin of profit. We may have a trifle in money, but at a great cost in time, and, in the long run, in money. One may save six cents in street-car fare, but may miss an engagement, and thus lose a vast amount of time and money. One may reject the idea of hiring a carriage as madness; he may walk through mud and rain, and in the end find that he has spoiled his clothes to an extent far beyond the expense of the carriage. If a man is caught in a shower, he may reluctantly at the expense of buying an umbrella, yet the economy may be wasteful.

The best investment, next to a good conscience, is health; and it is a very wasteful economy that saves at the ex-

pense of health. It is very foolish to delay employing a physician, and thereby to entail long sickness and measureless expense. It is very foolish to refuse to employ a nurse, and to try to save by having all the nursing done by the members of the family, or by volunteer friends, who, of course, are ignorant and inexperienced.

It is a very short-sighted saving for the mother of the family to be all day bending over the weekly mending, darning half a peck of stockings, and bringing on headache and backache, and at the same time being unable to see to the house. It would be much better economy for her to employ some one to do this mending and leave her free for things that no one but herself can do.

It is not wise economy for a man, whose capital is in his brain, to stint and starve his brains. Five dollars spent by a young professional man in books, may add \$1,000 to his income. Five dollars may be saved, with the result of keeping him a poor man all his life.

A father may save a few dollars by refusing to make the home inviting for his children; but he may spend ten times that, yes, a hundred times, in getting them out of troubles which they have brought on by roaming the streets.

We believe in economy; but it is well to know whether it is real economy or false.—*National Baptist.*

—It appears from the Inspector General's report of the customs in China, that about one million of its inhabitants are addicted to the use of opium.

—Southey says, in one of his letters: "I have told you of the Spaniard who always puts on his spectacles when about to eat cherries, that they might look bigger and more tempting. In like manner, I make the most of my enjoyments, and pack away my troubles in as small a compass as I can."

—Originality! what do they mean by it? The action of the world upon us commences with the hour of our birth, and ends only with our death. It is here and there and everywhere. There is nothing we can claim as our own but energy, strength, and volition. Very little of me would be left, if I could say what I owe to my great predecessors and contemporaries.—*Goethe.*

## POPULAR SCIENCE.

—Petroleum has been discovered by parties prospecting for asphaltum, in Vernon Co., Missouri, nearly 5,000 feet above the level of the sea.

—A German experimenter has succeeded in keeping the heart of a frog in motion for twenty days after all the blood was removed from its body, another fluid being substituted in its stead.

**Electric Car-Lightning.**—The Pennsylvania R. R. Co. has introduced the electric light into one of its coaches, which is run between Newark and Jersey City. The experiment is reported to be a success.

**Scientific Hanging.**—A New York physician has devoted considerable pains to the investigation of hanging as a mode of death, and reports that when properly executed, hanging is absolutely harmless. He allowed himself to be strangled to the point of insensibility, and was free from pain during the whole experiment.

**Fire without Fuel.**—An ingenious inventor has recently patented an apparatus for utilizing the heat of the sun's rays for generating steam and for other purposes requiring heat. The leading peculiarity of the apparatus is that it does away with expensive mirrors and reflectors, common flat window glass being made to answer the purpose.

**Mirror Telegraphing.**—During the late war in Egypt, telegraphing by the old system of mirror signals was employed by Sir Garnet Wolseley. Colonel Keyser ascended one of the pyramids near Cairo, and by means of a heliographic mirror reflected a ray of sunlight to Alexandria, 120 miles away. At that great distance the signals, appearing like pin points of brightness, were easily ascertained to be a message from Sir Garnet Wolseley to the Khedive.

### GLASS TYPE.

THE experiments which have been made in France, with a view to the substitution of printing-type made of toughened glass in place of metal, have proved quite encouraging.

The advantages in point of cleanliness would, it is alleged, be not insignificant. The toughened glass is naturally much harder than the usual metallic composition, and can hardly be crushed out of shape by those small accidents which shorten the life and mar the beauty of the type now employed. The glass, too, is capable of being cast into more delicate shapes, so that the difference between the thin and thick strokes can be more clearly defined.—*Sel.*

### HUMMING INSECTS.

AN array of mailed forms, including the "shard-borne beetle, with his drowy hum," demands attention. In no beetle, and, indeed, in no other insect, do we meet the perfection of vocalization seen in the grasshoppers and their relations. And with the beetle we approach more clearly to the region of "hums" and droning, and leave that of specialized sounds, such as we have been metaphorically hearing in the cicadas. To pass from the latter insects to the beetles, bees, flies, and their neighbors, appears to be a transition almost as wide as that between the articulate language or arithmetic of culture and the scanty vocabulary of the savage or the primitive mathematics of the tribe who can count ten as represented on their fingers and toes, but ask in amazement why there should be more things in the world. In the beetles the sound producing organ is comparable to a kind of "rasp" which moves upon an adjoining surface. The site of the organ in question varies in different beetles. In some the rasps are situated on the upper surface of one or two of the tail segments, and are rubbed against the hinder edges of the wing covers. Sometimes the rasp is placed quite at the tip of the tail; and in some well known beetles (such as the weevils) the rasps may be borne on the wing covers and may produce the stridulating sound by rubbing against the edges of the joints of the tail. Among the sounds produced by beetles, the weird noise of the death watch (*Anobium*) stands pre-eminent. The sound produced by these beetles resembles the ticking of a watch, and they may be made to respond by placing a watch close by their habitats. The female death watches are known to tick in response to the sounds of the male insects. The noise is produced apparently by the insect raising itself on its legs and by its striking its chest against the adjoining wood. Thus the simple explanation of an insect call explains away the superstition expressed in Gay's line:—

"The solemn death watch click'd the hour she died."

Butterflies and moths are known occasionally to produce sounds, which proceed, in one or two cases at least, from a drum-like membrane analogous to that seen in cicada. Mr. Darwin indeed mentions that one species (*Ageronia feronia*) "makes a noise like that produced by a spring catch, which can be heard at the distance of several yards"—*Belgravia*.

### POTATO IVORY.

THIS new "vegetable ivory" is made from ordinary potatoes—provided they are tolerably sound and fully developed—by purely chemical means. The selected tubers must first be carefully peeled and the "eyes" cut out, all "spongy" and discolored portions being also scrupulously pared away. The peeled tubers should then be allowed to soak for a short time, first in plain then in acidulated water, sulphuric acid being the agent employed, and the mixture should be quite cold before the potatoes are put into it.

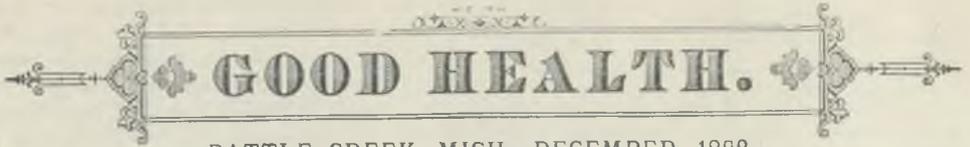
The next, and most important part of the process, is that of boiling the vegetables in diluted sulphuric acid for a considerable time, herein lying the gist of the invention, the secret of which is kept rather close at present, but a short series of well organized experiments would probably enable any of our friends to elucidate the question.

The variety and age of the vegetable itself, the time for which it is subjected to the action of the acid, and especially the strength of the latter, are all matters of great importance to the object in view as affecting the quality of the preparation. As some little guide, however, we may bear in mind the process for "parchmentizing" paper, which is effected in the cold, and also the fact that heat greatly enhances the action of all acids upon organic substances, so that as the potatoes according to our advices have to be "boiled" in the liquid, a comparatively more dilute acid should probably be used.

Treated in this way the entire substance of the potato hardens and becomes gradually less pervious. When "done" they are to be taken out and washed in a stream of first warm and afterward cold water, the subsequent drying process being in all instances a slow and gradual one. Potato ivory thus prepared is not very unlike the ordinary "vegetable" kind, but is said to be of a more even "grain," as well as easier to turn, while it is not so liable to split when exposed to the influence of a very dry atmosphere.

Potato ivory is of a creamy white tint, hard, durable, and elastic, it being even adapted, it is stated, for the manufacture of billiard balls. There is no difficulty in dyeing or coloring the material either during the process of preparation or afterward, and altogether it would seem that this new product is one which is capable of an immense number of useful applications. To its other good qualities it adds that of being exceedingly cheap. We should have said before that the sulphuric acid used must be quite free from impurity, even traces of nitric or hydrochloric acid being detrimental.—*Monthly Magazine*.

—The only picture from a sacred subject that has been discovered among the relics of antiquity, unearthed at Pompeii, has been placed in the Naples museum. It represents the decision rendered by Solomon in regard to the child claimed by two mothers. The King appears clothed in white, attended by a councilor and six soldiers. The triumph of the pseudo-mother, the agony of the true one, and the attention of the King, are strikingly portrayed.



# GOOD HEALTH.

BATTLE CREEK, MICH., DECEMBER, 1882.

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

TERMS, \$1.00 A YEAR.

## **A TRIP IN THE INTEREST OF SANITARY SCIENCE.**

A FEW months ago we received from the secretary of the Ft. Wayne (Ind.) College of Medicine an urgent invitation to accept the chair of Sanitary Science, recently established in that medical school. As the amount of labor in connection with this professorship was not such as to be onerous, and as we were given full liberty to make the arrangements for lectures, such as we could most easily comply with, our love for the science of hygiene, and desire to see the truths of this most important of all departments of medical knowledge diffused among the people by every possible means, we, after some deliberation, accepted the invitation.

Last week we visited Ft. Wayne for the purpose of delivering the introductory lecture of our course in Sanitary Science. Upon reaching Kalamazoo, where we were obliged to change cars, we found to our chagrin that our carefully packed trunk, full of apparatus, which we had charged the hack-man to handle gingerly, as it contained many fragile instruments to be used in illustrating the subject of our first lecture, was peacefully resting in the baggage-house at Battle Creek, having failed to get on board through the neglect of our hack-man.

The temptation to return and select another day for the trip was very strong; but as we had made our arrangements for leaving home, we knew it to be impossible to get away again for several days at least, and so determined that we would go on without the trunk. Having a cou-

ple of hours at our disposal before the arrival of our train, we set out in search of tin-shops, drug-stores, hard-wares, and groceries, determined to improvise the necessary means for illustrating our subject. We soon had two or three tanners at work making tin chimneys, diminutive candle-sticks, etc., and after a thorough canvas discovered a drug-store which could provide us with glass and rubber tubing, and a few glass bottles and jars, and just as our train was whistling for the depot, we started on a vigorous run for the same place with two well-packed valises and an armful of hastily made appliances, rude but really efficient substitutes for the more elegantly constructed apparatus left behind.

After a ride of four or five hours, we found ourselves in Ft. Wayne, an enterprising city of about 30,000 inhabitants. Our friend, Prof. J. S. Gregg, met us at the depot with his carriage, and in a few moments left us with our luggage at the door of the building, the upper portion of which is occupied as a college, the first story being used as a drug-store. Seeing our immense valises and bundles, the proprietor of the latter establishment mistook us for a patent-medicine drummer, and warmly welcomed us into his sanctum, while we were waiting for the janitor to open up the lecture-room, which had been closed for dinner. We hastily explained his blunder, assuring him that our mission to his city was conservative, rather than destruction, in its object. The janitor, having arrived, the class soon convened at the appointed hour, and after some apologies for the rude character of

our apparatus, we proceeded to elucidate the principles of ventilation and the hygiene of the air. We found in the medical students of Ft. Wayne an appreciative audience, and expect to enjoy the pleasant task of instructing them in the principles of sanitation, having marked out for our course a series of topics which will cover quite thoroughly the subject of individual hygiene, which is of vastly greater importance to the average medical practitioner than a profound knowledge of the principles of sanitary engineering, sewerage of cities, etc.

Immediately at the close of our lecture we spent about two minutes in packing such of our rude appliances as might be of possible service on similar occasions, and again seated ourself in Dr. Gregg's carriage, and in three minutes more were en route for home, which we reached in time to enable us to make our usual evening visits, retiring to rest shortly before midnight, with a consciousness of having done a hard day's work, although obliged to postpone both breakfast and dinner until the next day, which was decidedly better than retiring with a full stomach.

#### **A PROFESSOR'S OPINION OF TOBACCO.**

PROF. D. S. REYNOLDS, of the Hospital College of Medicine, of Louisville, Ky., in an address to the graduating class of that school took strong grounds against tobacco, as will be seen by the following extract from his address:—

“It is a well-known fact that tobacco deranges the digestion and poisons the nerve centers of a majority of the male members of the human family. A species of blindness, not complete, but partial blindness, sufficiently great in extent to destroy the reading of ordinary type, results from the continued and excessive use of tobacco. Careful investigations have led to the discovery that that form of the tobacco habit known as smoking produces the so-called amblyopia. This form of amblyopia is precisely identical in all re-

spects with that produced from the excessive use of alcohol. Both are incurable. I know a number of persons in Louisville who are now practically blind from the excessive use of tobacco.

“A lady in Portland was forced to admit she had been a secret smoker of tobacco for thirty years. On abandoning the habit, the further progress of her dimness of vision ceased, though there is little or no hope of her regaining that power of perception which she had already lost. She may be considered fortunate in the possession of enough vision to go about and attend to her ordinary household duties. Smoking tobacco has never been known to result beneficially to any person in the world. It always lessens the sense of smell and taste; it always contaminates the breath; it always creates an unsteadiness of the muscles, through its irritating effect upon the nerves; and I know from personal experience it diminishes the capacity for mental labor.

“Now, if you can succeed in inducing even a few people to abandon the habit of smoking, and to pay over to a common charity fund the amount formerly spent for cigars and smoking-tobacco, the time may come when public taxation may be reduced, and the condition of the pauper, who is now miserable, made at least comfortable. If the money destroyed by burning cigars and tobacco in Louisville could be paid into the city treasury, it would support all our charitable institutions, and pay the entire expense of the street-cleaning department besides. This would reduce taxation nearly or quite one-half, and produce a corresponding improvement in the public health.”

#### **THE SEWERAGE OF LARGE BUILDINGS.**

THE sewerage and drainage of any large building is a matter of serious moment, though far too often disregarded. Instances are not rare in which a large portion of the inmates of a fashionable hotel, college, or boarding school have been

prostrated with some epidemic disorder, the cause of which was subsequently found to be defective sewerage. At this age of the world, when sanitary science has reached such a degree of perfection, such neglect is inexcusable and even in the highest degree criminal.

Perhaps we cannot better illustrate our idea of what the sewerage of a large building should be than by describing the plan which has been in successful practical operation in the Sanitarium of this place for

ment floor the whole length of the building. At the left or lower end of the building is located the large trap. From the trap the sewer runs directly to the river, a distance of about one hundred rods, having a fall of about seventy feet, which insures a very rapid current. Through the sewer run about five hundred barrels of water a day. The great fall and large volume of water secure the most thorough cleansing of the sewer, so that it is impossible for it to become foul, as nothing re-

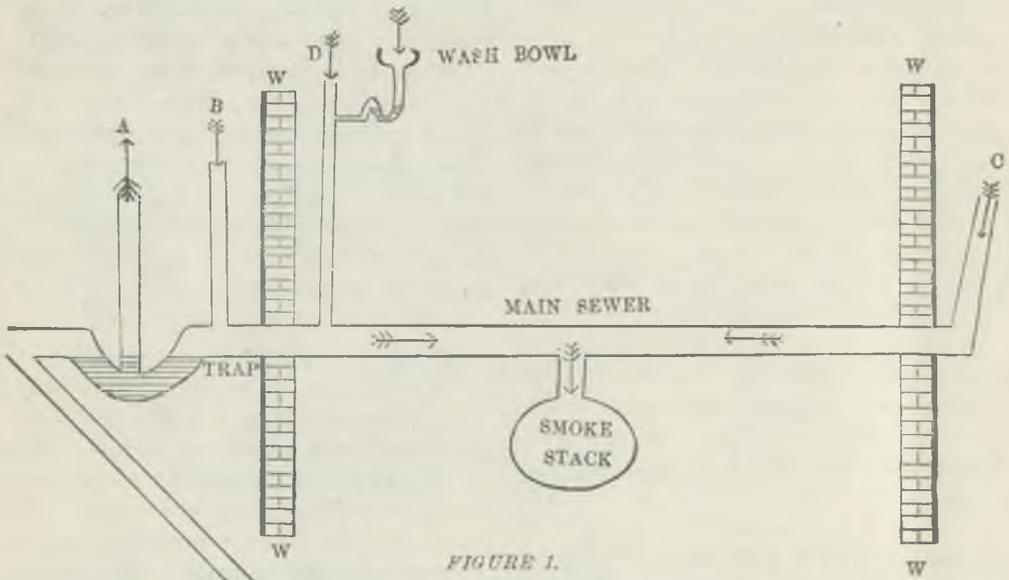


FIGURE 1.

several years, and which embodies the most recent improvements in this branch of sanitary science.

Those who planned the large main building of the Sanitarium were fully awake to the importance of this subject, having made it a special study, and spared no pains nor expense to secure absolute safety in every detail of the work connected with the sewerage of the building. How perfectly this result has been attained, can be readily determined by reference to the accompanying diagrams, which represent correctly the plan upon which the sewers are laid and connected with the building.

Figure 1 represents the main sewer of the building, which runs beneath the base-

ments in it sufficiently long to undergo decomposition.

Notwithstanding these unusual advantages, every possible additional precaution has been adopted, so as to make the sewer an impossible source of contamination, even if it were a hot-bed of yellow fever infection. To prevent any possible back-pressure from the main sewer, giving rise to trouble by escaping through the trap, the pipe shown at A was introduced at the lowest part of the trap, so that any gases passing through the trap will be intercepted and escape up the pipe into the open air. Not content with this, and to make it impossible for any accumulation of gas to occur in the sewer on the house-side of the trap, two other pipes are con-

ned with the sewer, one at each end, as shown at B and C. This renders any back-pressure from the sewer impossible, since whatever gases might accumulate can find their way to the open air with much more readiness than into the house, even if such entrance were not rendered absolutely impossible by the S traps placed under each wash-bowl and sink, as shown in the diagram. But to make assurance doubly sure, still another precaution is taken. As will be seen in the

is a constant draft into the sewers, making an outward convey absolutely impossible. The strong draft into the sewer may be readily seen by placing a handkerchief over the upper end of the pipe B. The suction is so strong that the handkerchief is instantly drawn down into the pipe. A careful test made with the anemometer in a warm day, indicated that the air enters the sewer at the rate of 700 feet a minute, so that the whole air in the

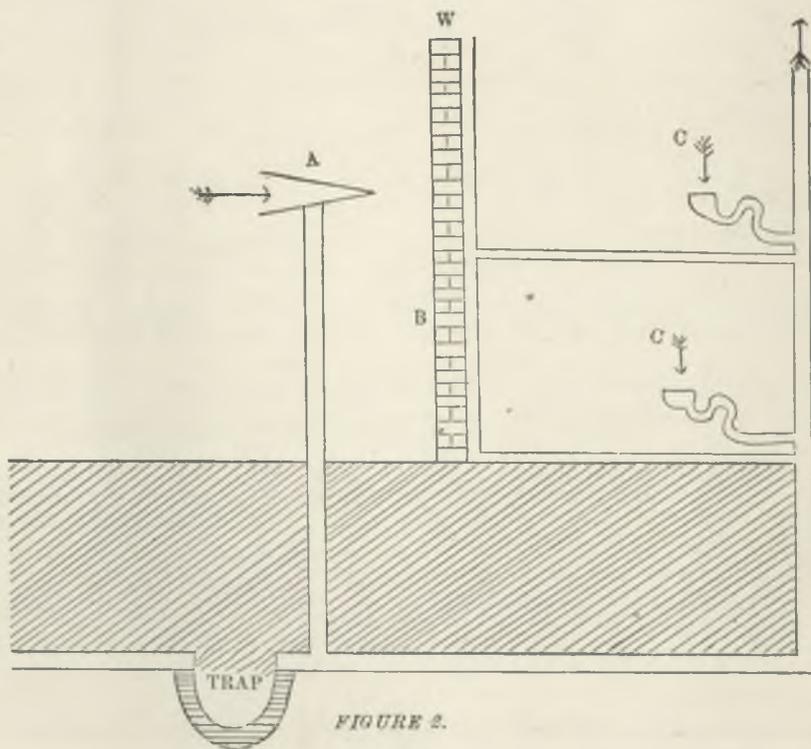


FIGURE 2.

diagram, the main sewer is connected with the smoke-stack, thus securing a constant draft of fresh air into the sewer, and keeping it thoroughly ventilated. The smoke-stack is one hundred feet in height, three feet in diameter, and receives the hot flames and gases from two large furnaces which supply heat to the building, a large bakery oven, and two large kitchen ranges. Whatever sewer gas there may be is thus completely consumed, and contamination of the building with sewer gas is beyond the range of possibilities. There

sewer is changed several times every minute.

The sewer for the water-closets is not connected with the service-pipes of the house, but is independent, entering the main sewer below the large trap, as shown in Fig. 1. This sewer is also ventilated in a manner similar to that of the main sewer, as may be seen by reference to Fig. 2. The vertical pipe B, technically known as the soil-pipe, extends directly up through the roof, thus making back-pressure of gas impossible. But as a fur-

ther precaution, another pipe is connected with the sewer at A, on the top of which is placed a revolving funnel so arranged that its mouth will always face toward the wind, so that the wind blows down the pipe into the sewer, driving any gases which may be present up the vertical pipe B to the open air above the roof of the building. The vertical pipe is warmed by a steam pipe close beside it, so that there is always a draft in it even if there is no wind to create a draft. Its upper end is surmounted by a ventilating cap, so that the wind, even a gentle breeze, will aid in creating an upward draft in the vertical pipe. The water-closets connected with the soil-pipe are all of the most approved form, and are thoroughly trapped.

It is the belief of the managers of the institution that no building can be found anywhere that is more thoroughly protected from any possible danger from contamination with sewer gas than this, and they will reward liberally any one who will point out any dangerous defect in the plan of the sewerage employed. The building has been carefully inspected by a large number of sanitary experts, and has been pronounced by them the most thoroughly protected building with which they were acquainted. Professional visitors are especially requested to make a careful examination of the systems of sewerage, ventilation, and heating.

#### THE ANTI-TOBACCO SENTIMENT.

WE are pleased to note the growing opposition to tobacco-using. The more observing class of physicians everywhere are becoming convinced of its hurtfulness, and now and then a clear note of warning is sounded by some one whose attention has been particularly called to the subject. We have recently been especially pleased in the perusal of a lengthy article on "Tobacco and its effects," written by a member of the Wisconsin State Board of Health, and published in the Annual Report of that sanitary body.

The following are a few of the many forcible paragraphs contained in the able paper by Dr. Witter, referred to, more extended portions of which we shall quote at some future time:—

"One of the most remarkable circumstances connected with the history of tobacco is the rapidity with which its growth has spread, and its consumption increased.' The enormous extent to which its use has attained in Great Britain and other countries is briefly shown in the following figures:—

In Great Britain the total consumption has been:	
In 1857	32,856,913 lbs.
In 1867	40,730,767 lbs.
In 1875	49,951,830 lbs.
In 1880	50,000,000 lbs.
In France, the amount entered for consumption in 1880 was	
	45,000,000 lbs.
In Austria, during the same year	
	81,000,000 lbs.
In Russia, during the same year	
	25,000,000 lbs.

"The extent to which its use has increased in our own country may be judged with tolerable accuracy by a comparison of the census returns given herewith, which show the tobacco production of the States and Territories for the census years 1870 and 1880, the increase being 210,372,232 lbs. during the decade, or rather more than 80 per cent."

"Thus it will be seen that the amount of money expended and changing hands for tobacco, in this country alone, is enormous; allowing ten cents per pound for the raw material in 1880, it reached the sum of \$47,310,757.30, and this only on the first change from the producer's into the manufacturer's hands, to say nothing of the added value given to it in the factory, and the added cost due to the revenue tax. What more effectual argument can be made by the economist than the simple presentation of these figures? The official returns show that in Germany, Spain, Holland, Great Britain, and the United States *tobacco costs more than bread*. 'A single firm in New York paid to the government *in one month* in 1880, a revenue tax of \$120,000! The average monthly tax paid by this house for Internal Revenue is over \$100,000. The shipment of snuff by this concern to one city in North Carolina amounts to one

hundred pounds per month.' We learn from the Internal Revenue Reports that more than ninety-five million pounds of manufactured tobacco, and one billion, three hundred millions of cigars are used in the United States every year, at an expense of two hundred and fifty millions of dollars, while the revenue tax amounts to one hundred and fifty millions of dollars. In the city of New York alone, about seventy-five millions of cigars are annually consumed at a cost of more than nine millions of dollars."

"The enormous consumption of tobacco in our country heretofore mentioned has been ascertained from the yearly returns of the revenue officers, but the physical, mental, and moral deterioration resulting therefrom admits of no such tangible analysis. These, although sure, are slow and imperceptible in their development, and it is therefore impossible to estimate the amount of the injury which tobacco thus inflicts upon the public welfare."

"There seems to be little room for doubt that tobacco perpetrates a most successful deception upon its users by inducing them to believe that its effects are exhilarating, when the so-called exhilaration is in fact only the sensation of relief from its primary effects and a hallucination brought on by the narcotic and perverting action of tobacco on the sympathetic nerves. Had we not used tobacco ourself to excess during fifteen years, we should not be able to speak so definitely with regard to its effects.

"The dangers and the injuries already discussed as resulting from the use of tobacco are manifest; but there is an effect not yet mentioned, which threatens ultimately to produce a great national calamity—nothing less than a tendency to gradual enfeeblement of mind,—progressive loss of intellectual power and vigor. That this is no chimera, known and well proven facts will testify.

"In 1862, Napoleon III. of France had his attention called to the facts that there were more than five times as many par-

alytics and lunatics in the hospitals of France than there were, in proportion to the population, thirty years before, and that the government revenue from the tobacco monopoly had increased during that time in about an equal ratio. He appointed a commission of scientific men to examine whether this were a case of cause and effect or only a coincidence. This commission devoted much time and attention to the young men in the government training schools, dividing the students into two classes,—the smokers and the non-smokers. The latter were found so much superior physically, mentally, and morally, that the Emperor at once prohibited the use of tobacco by students in all the schools under governmental supervision throughout the country."

#### HOW TO LIVE LONG.

THE following, copied from *Arthur's Home Magazine*, contains some very valuable suggestions in regard to the necessity of regular habits of living in order to prolong life:—

"We have, to a great extent, the power of prolonging our lives. Living by rule and obeying nature's simple laws may seem very irksome to people at first; but doing so soon becomes a habit, and a blessed habit, and one that tends to happiness, to comfort, and to length of days. A great deal might be said about the benefits of regularity in our modes of living. Old people who have once settled down in a kind of groove of life, cannot be unsettled therefrom, even for a few days, without danger to health and life itself. They may, perhaps, have their regular time for getting up in the morning, certain methods of ablution, certain kinds and qualities of food and drink, certain hours for taking these, certain times for rest, exercise, and recreation, and a hundred other things, which, taken separately, may seem but a trifle, but taken in the aggregate, make up their lives, and they know and feel that they must not be unsettled. The wheels of life will run

long in grooves, but soon wear out over rough, irregular roads. Habits, whether good or bad, are easily formed when one is young; but when one advances in years, it is terribly difficult and oftentimes dangerous to set them aside. Therefore, study, if you would live long, to be regular in your habits of life in every way, and let your regularity have a good tendency."

#### *Bed-bugs and Mosquitoes vs. Malaria.*

—A Texas "medicus" writes to a journal in his native State that he has been experimenting with mosquitoes and bed-bugs and finds that they contain a large proportion of quinia, a small dose of which they insert with every bite. If this is true, a person who lives in a malarial country should cultivate the society of these useful insects, and afford them an opportunity to make frequent hypodermic injections of the precious antidote for malarial germs. Further confirmation of the new discovery is needed to develop sufficient faith in the new remedy to secure its general adoption.

*Afraid of Bathing.*—There are thousands of people who seem to be suffering with a sort of photophobia. They would about as soon think of jumping into the fire as of taking a bath. A doctor who prescribed a daily bath for one of these individuals who evidently needed the benefit of a frequent ablution, was met by the discouraging reply, "Well, I do n't know; I took a bath a year or two ago, and felt better for a little while, but pretty soon began to feel worse again, and have been getting worse ever since."

We once had a similar experience. An old man for whom we prescribed a warm bath objected that he could not bathe without taking cold, and stated that a drop of water had not touched his back for forty years.

A French medical writer objected to the bath because it "removed the natural secretions of the skin."

*Healthy Homes.*—Robert Rawlinson, an English civil engineer, gives in his letters and papers on sanitary questions many excellent rules for making a healthy home, of which the following are a few of the most practical and important:—

"The subsoil beneath a house should be naturally dry, or it should be made dry by land draining.

The ground floor of a house should not be below the level of the land, street, or road outside.

A site excavated on the side of a hill or steep bank, is liable to be dangerous, as external ventilation may be defective, and the subsoil water from above may soak toward and beneath such houses. Middens, ashpits, and cesspools, if at the back, must also taint such basements.

The subsoil within every basement should have a layer of concrete over it, and there should be full ventilation.

Cesspools, cesspits, sink-holes, or drains, should not be formed nor be retained within house basements.

The ground around dwelling houses should be paved, flagged, asphalted, covered with concrete, or be graveled.

Outside channels should be in good order, and be regularly cleansed.

House eaves should be guttered and spouted.

Swill tubs should not be near doors or windows.

Pig-sties should ever be at a distance; and where pigs are kept there should be rigid cleanliness. Improperly keeping pigs has caused more human sickness and destroyed more life than all the battles the country has ever been engaged in.

Garden plots should of course be in order and be properly cultivated."

*A New Mode of Poisoning.*—A new method of poisoning human beings has been recently invented. A chemist has discovered that the zinc lemon-squeezers so much used in making lemonade are a source of danger, since the acid of the lemon corrodes the zinc and thus makes a

poisonous compound. The zinc commonly used for the purpose is more or less impure, containing varying quantities of arsenic, lead, antimony and other metals, and hence the danger becomes greater than it would be if zinc alone were employed.

*Danger of Eating Raw Meat.*—The following experiments, by Monsieur Toussaint, an eminent French scientist, show that the use of raw meat from animals not positively known to be healthy at the time of being killed, is a practice by no means free from danger, and one which should be condemned, although it would also be well to go farther and say that no meat whatever should be used which is not known to be from healthy animals:—

“M. Toussaint took the lung of a cow not very much affected with consumption; he placed it under a press and collected the juice; he inoculated rabbits and young pigs with the liquid as it came from the press, and after he had heated another portion to 114° F., the result was, all the subjects died within a very short period. He extracted the juice in the same manner from the thigh of a pig, dead from consumption, previously cooking the flesh, to correspond with that served in hotels, etc., according to the latest fashion. Then he inoculated rabbits with such grilled juice, and they invariably died of consumption. There are cases where the consumption of raw meat is necessary; here duty suggests to ascertain well the origin of such meat; in all other cases it is prudent to only eat meat suitably cooked; that is, meat whose interior has been acted upon by a temperature of 150° or 160°.”

—The pickle industry is said to have reached the enormous proportions of \$100,000,000 annually. This represents an amount of dyspepsia and concomitant ills not easy to estimate. The manufacturers admit that copper is used for the purpose of coloring pickles, but claim that

the quantity is too small to be a cause of harm. It is probable that the pickle itself is worse than any of its adulterants.

—A London newspaper describes a new trade which has recently sprung up in Paris. It appears that hundreds of persons in that city are engaged in the business of collecting the stumps of cigars, which are manufactured into various forms to be used as filling for cigars, or for the purpose of fumigating greenhouses. This is very good economy so far as it goes; but would it not be wiser and more profitable to save the whole cigar?

—Twenty large cigars a day was the regular tobacco ration of Catelain, a famous restaurant keeper of Paris. Was it any wonder that he died of smoker's cancer after thirty years of such abuse?

### For the Sick Room.

*HOT MILK.*—Everybody ought to know the valuable properties of hot milk. A glass of milk taken at a temperature as hot as can be swallowed is in the highest degree invigorating, and will be more readily digested than almost anything else which can be taken into the stomach. The milk should not be scalded, but simply heated as hot as can be taken. Persons suffering with slow digestion will find this a most valuable addition to the meal, since the heat stimulates the secretion of gastric juice, and thus the process of digestion is encouraged.

Persons who cannot take milk in any other way can take it hot, and find great advantage from its use. Hot milk is to be recommended for persons who need to increase their flesh. Hence it is excellent for persons just recovering from a prolonged and wasting illness, and for persons suffering with consumption or any other malady accompanied by loss of flesh.

Hot milk should be taken with the meal, not between meals, and should be taken with some kind of solid food, as a water cracker or a piece of well-toasted bread. It should be sipped slowly, so as to secure thorough insalivation.

Persons who feel the need of some kind of food at night, will find a glass of hot milk much

superior to an ordinary lunch or supper, and wholly satisfying.

Hot milk may be recommended as a substitute for tea and coffee to those who have long used the beverages. We have usually found that it was readily accepted as a substitute for any other form of hot drink, and it is in every way superior. It is a good form of food, and though fluid before taken into the stomach, after coming in contact with the digestive juices is coagulated, and becomes semi-solid.

**CROUP.**—SYMPTOMS: At first, those of a slight cold, or catarrh,—slight fever,—hoarseness, cough, running at the nose; after a few hours, fits of coughing, increased hoarseness, and harassed respiration, spasm of the muscles of the throat; characteristic symptoms now appear,—brassy, ringing, or barking cough, accompanied with a crowing sound, increased fever, embarrassment of the respiration, irregularity of the pulse, features expressive of distress, patient worse at night, and better toward morning; in fatal cases, drowsiness increases, breathing becomes more embarrassed, lungs congested, skin covered with cold sweat; finally, coma, asphyxia, and death.

**CAUSES.**—The causes of croup are not thoroughly understood. They are probably similar to those which produce acute catarrh of the larynx. Indeed, it is held by some that croup is identical with acute catarrh of the larynx in adults, the difference in severity being due to the age of the patients. It occurs most frequently in children from two to six years of age, more often in boys than in girls. The disease is characterized by the formation of a false membrane in the larynx and trachea. It sometimes also affects the pharynx. The danger to life is from suffocation, through accumulation of the false membrane.

**TREATMENT.**—The old treatment, by applying antimony, mercury, and blisters, was in the highest degree unsuccessful. According to Tanner, one-half the persons treated by this plan died. The disease is a very severe one and sometimes difficult to manage, but with proper treatment from the first, few cases will prove fatal.

Apply hot water to the throat by means of sponges or flannels wrung out in hot water as directed for acute catarrh of the larynx. If relief is not quickly secured, exchange the hot applications for cold ones, and if some relief is obtained, keep the cold constantly applied. If necessary, employ ice compresses. This measure must be employed thoroughly to be of any value whatever. Used early in the disease, it will prevent the formation of the false mem-

brane. If it is not employed early enough or with sufficient thoroughness to accomplish this, measures must be employed to secure an early separation of the false membrane from the mucous membrane of the larynx. For this purpose hot and cold applications should be applied to the throat, and the patient should be made to inhale the vapor of hot water, as hot as it can be borne and as large a portion at a time as possible. The vapor may be inhaled through an apparatus for the purpose, as represented in the cuts, or from a tea-kettle or tea-pot. A

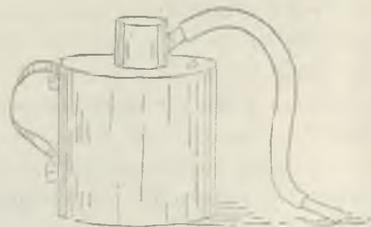


Figure 1.

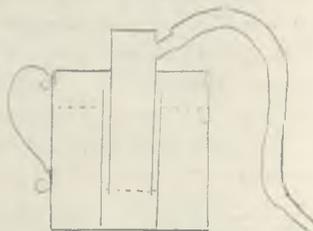


Figure 2.

paper cone may be arranged in such a way as to conduct the steam to the patient's mouth. A very excellent method of generating steam for this purpose is to slake lime in a tea-pot, and have the patient inhale the vapor through the nozzle. We have used this method on several occasions with complete success. The vapor of warm vinegar is also sometimes useful. Among the most serviceable remedies for causing separation of the false membrane may be mentioned lime-water, vinegar, and a strong solution of chlorate of potash taken by means of an atomizer. The chlorate of potash solution should be hot when taken, and the patient should inhale it a large part of the time.

It is of the greatest importance that the temperature of the room in which the patient is placed should be carefully regulated. The air should also be kept thoroughly saturated with moisture by boiling water or by means of slaking lime. The latter method has been frequently employed with success, the lime being placed in a tub near the center of the room or near the patient, and water applied to it.

Sponging of the hands, feet, arms, and limbs is also recommended for this disease.

If the patient becomes so greatly exhausted that he loses the ability to cough, although the membrane may be separated sufficiently to allow expectoration, means should be adopted to restore the patient as much as possible. Dr. Niemeyer recommends placing the patient in a warm bath and pouring cold water on his head, the back of the neck, or spine, for the purpose of exciting increased nervous activity, particularly to excite cough, thus enabling the patient to throw out the loosened membrane. In case all other measures fail, and suffocation seems impending, as shown by increased difficulty in breathing, blueness of the skin, etc., the surgical operation of laryngotomy or tracheotomy should be performed. This consists in making an opening into the larynx or trachea and passing in a silver tube through which the patient can breathe. Life has sometimes been saved in this manner.

## LITERARY NOTICES.

OUR YOUNG PEOPLE. Springfield, Ohio; and Louisville, Ky.

This is a new monthly which has just been started in the interests of the young people. Each number contains a variety of miscellaneous reading illustrated with many fine wood cuts. It is issued by the same firm as the *Farm and Fireside*, but each number is complete in itself. Subscription price \$1.00 per annum.

THE ESCULAPINS, AND JOURNAL OF REFORM. Candor, Tioga Co., N. Y.

Number one of the first volume of a new monthly bearing the above title has come to our table. It is a four page paper devoted to Temperance, Literary Culture, and Hygiene. There is a general need of a diffusion of knowledge in the direction indicated, and we will gladly welcome to the field all competent to meet the demand.

THE BROADAXE. Nashville, Tenn.

This is a live paper recently begun in the interest of the temperance cause. The articles are characterized by pitch and brevity, and we cordially wish it success.

ARTHUR'S HOME MAGAZINE. Phila., Pa., 227 S. Sixth St.

This excellent magazine is too widely known to need commendation. It is one of the oldest home journals published, and it is the evident intention of the editor to exclude everything from its pages that can vitiate the taste, or lower the moral sentiments. Subscription price \$2.00 per year.

OUR LITTLE ONES AND THE NURSERY, monthly. Published by the Russell Publishing Co., Boston, Mass.

This is a bright little magazine adapted to the

wants of the younger members of the family circle. Useful information is imparted in simple language, and the author's writings are illustrated from the manuscript by skilled artists. Price \$1.50 per year.

THE ORPHAN'S FRIEND, is the title of an eight page monthly published at Auburn, N. Y., under the supervision of the managers of the Cayuga Asylum for destitute children. The object of the institution is a laudable one, and this little sheet well calculated to awaken an interest in the enterprise. Subscription price \$1.00 per year.

THE HOUSEKEEPER'S FRIEND AND ADVISER. In number nine of the present Vol., which is the first, we find, "Notes on Palestine, Education in New England, Sitting Room, Dining Room, Kitchen, and Boys' and Girls' Departments all filled with a supply of readable and instructive articles. It is published monthly by N. P. Miller, Franklin, Pa., at \$1.00 per year.

BREARLEY'S TELEGRAPH CODE. A new and ingenious method of securing cheap telegraphing by the use of a code in which letters are substituted for words, enabling one to send from twenty to forty words for the price of ten, has been invented and copyrighted by W. H. Brearley, of the *Detroit (Michigan) Evening News*. The code, which contains a vocabulary of 1,225 words, and is very simple, easily understood, and entirely practical, may be obtained at a rental of \$1.00 per year by sending to the inventor the price for the first year. If the statement made in Haven's Rhetoric (page 55) be true, that "a vocabulary of 300 words suffice for telegraphing in Great Britain," then Brearley's code with more than four times that number of words should be ample for ordinary business communications. Mr. Brearley has invented and copyrighted three other devices of considerable merit; viz.,—

*First*—A unique plan for an Improved Church Building. Complete sets of architects' plans with all needed specifications and builders' estimates are offered for \$1.00 without, or \$6.00 with right to use. Those ordering should state the seating capacity desired, and intended expenditure.

*Second*—A Sunday-school Record Card of which the *Chataqua Bureau of Information* says, "We think it excellent and recommend it for use in Sunday-schools." Enough of these cards to supply any Sunday-school, with one for each class, are offered free to those applying, with two 3 cent stamps, to W. H. Brearley, office *Detroit Evening News*, Detroit, Mich.

The *Third* is a three pound book that is capable of justifying the designation of "*Brearley's Office Systematizer*," also copyrighted, and for sale at \$3.50 per copy. Over one thousand have been sold to newspapers alone, and in the office of this paper a list of literally "no end" of favorable testimonials from those who are using them, has been hung up for the inspection of any one interested.

## Publishers' Page.

### A SPLENDID INDUCEMENT!

We propose to offer as a premium for new subscribers something novel and valuable, in which we feel sure all will be interested. For four subscribers we will send by mail, postage paid, a **Paper Manikin of the Human Body**, showing the relative size and position of all the important organs of the body, with a complete index, constituting in itself alone almost a complete treatise on anatomy. This ingenious and interesting article cannot be obtained in any other way for less than several times the amount of the cash commission; but we have made arrangements with the publishers which enable us to make this magnificent offer, which will undoubtedly be appreciated.

Persons desiring to visit the Sanitarium as patients must give notice of their arrival a few days in advance, as our rooms are all full. The only vacancies are such as are made by the usual changes. We have not yet been obliged to send any one away, however, and trust that we shall be able to accommodate comfortably all who come; but a notice should be sent, when possible, at least three or four days in advance.

We have again reached the close of an annual volume, the seventeenth, and are glad to be able to believe that in some respects the prospects of the journal as an educator of the people were never so good as at the present time. During the seventeen years which have elapsed since the foundation of this enterprise in journalism, a most remarkable change has taken place in the feeling of the public with reference to what has been termed "health reform." Twelve or fifteen years ago a hygienist was laughed at. Now no class of men are respected more in a community than those who make the laws of health a special study. Almost every State in the Union has, within a decade, organized a board of educated physicians and others, to whom has been assigned the duty of looking after the health of the citizens of the State. In most of the older States, every city, and even every village and town, has its health officer and its board of health, who are, by law, required to give attention to some of the more important hygienic requirements. It is doubtful whether the world ever saw a day when hygiene was so popular, not even excepting those ancient times when Greece set such a model to the world in sanitary and hygienic excellence.

There is a broad field opened for sanitary missionary work by this wonderful advance in public sentiment. The people are hungry for knowledge, and greedily accept information on any subject relating to the maintenance of health.

Contrary to what might at first seem to be the case, this general awakening on the subject of hygiene does not, in itself, to any great extent increase the circulation of journals specially devoted to health. This is attributable to the fact that the popular magazines of the day, and even the newspapers and the patent medicine almanacs, recognizing the general want, have undertaken to supply it. The common people being still unlearned in such matters, are not prepared to appreciate the difference between really reliable and useful information, and that which is not only useless, but actually dangerous. The consequence is that many persons are content with the uncertain and unreliable information brought to them through irresponsible channels, and thus the few really reliable sources of knowledge are neglected.

This being the case, journals which make a specialty of the subject of health need the support of all who appreciate the

difference between truth and error, reliable information and the cheap literature of the day. This is the season of the year when people have time to read, and when they usually make the selection of their periodical literature. Now is the time for each subscriber to the journal to make a thorough canvass of his immediate vicinity. We still offer the same cash commission given last year; viz., 35 cents each for every subscriber obtained, or 40 cents if the commission is to be paid in books or other publications at regular prices. The same premium to new subscribers is also offered.

Thanksgiving at the Sanitarium was a day long to be remembered. A week before the day appointed, Dr. Kellogg addressed the patients in the parlor at the usual lecture hour on the subject of "Thanksgiving Dinners." At the conclusion of the lecture, a vote was taken to see how many were in favor of following the usual custom of dining upon Thanksgiving day on roast turkey with the usual concomitants. The question was put, "turkey, or no turkey." The vote for "no turkey" was almost unanimous, only two being in favor of bowing to the old-time custom. And so the Sanitarium tables on Thanksgiving day were a sample of what the managers and inmates of the institution think to be a better means of expressing gratitude, than the time-honored custom of feasting upon the flesh of luckless fowls, being laden with a liberal supply of the most luscious fruits, oranges from Florida, grapes, figs, dates, nuts, and various grains prepared in many toothsome but wholesome ways, and beautifully decorated with flowers.

Not a regret at the absence of the conventional gobbler was heard. Even those who had rather expressed a hankering for a "wish-bone," feeling well satisfied with a feast which savored not of bloodshed, and suggested no repulsive associations.

In the evening the patients and helpers listened with pleasure and profit to an address by Eld. I. D. VanHorn, recently from California.

The next annual meeting of the American Health and Temperance Association will be held at Rome, New York, Dec. 14, 1882. It is hoped that there will be a general attendance of all who are interested in the work of this Association.

We would call especial attention to the advertisements in this number of the Sanitary Supply Co. Every physician condemns the fashionable styles of dress, particularly the construction of ladies' undergarments. Thousands of ladies are anxious to emancipate themselves from the miseries to which they are subjected by unphysiological clothing; but are unable to do so for want of the practical aid of satisfactory substitutes.

We are glad to hear occasional reports of the favorable progress of our sister institution at St. Helena, Cal. A few days ago we had the pleasure of sending a patient over the mountains as a patron of the Rural Health Retreat. A short time ago we sent one of our most experienced and capable bath attendants, Miss Katie Haynes, to take charge of the ladies' bath department of the institution, and from all we can learn we believe there is a prosperous future before this new institution. It affords patients an opportunity to enjoy the unrivaled climate of California, at the same time that they are having good hygienic diet and treatment, and intelligent medical care.

The annual report of the financial workings of the Sanitarium shows the past to have been the most prosperous of any year since the founding of the institution. A larger number of patients has been treated than in any previous year, and a considerable reduction has been made on the debt.

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