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DANGER FROM TINNED FOODS.

WE have often called attention to the danger attending the use of fruits and vegetables put up in tin cans through contamination with lead from cheap tin, or the solder employed in sealing the can. The *Chicago Herald* has been looking up the matter recently, and publishes the following collection of facts, which are well worthy the careful consideration of all who are interested in questions relating to health and prevention of disease:—

“A Baltimore man who is thoroughly familiar with the processes employed there in canning goods, admits that the flux for the solder which is used in sealing the cans very often gets inside the can while it is being made ready for packing and the trade. This flux is a muriate of zinc, in other words, a saturated solution of zinc and muriatic acid, which is an active poison. There is a law in Maryland forbidding the use of this flux in canning goods, but it has been a dead letter for a number of years. The reason the big houses all prefer this flux is that it makes a neater job, and is more convenient than resin.

“A series of investigations carried on by A. H. Chester, Professor of Chemistry in Hamilton College, New York, showed that not only is the meat packed away in tin cans frequently of the poorest quality and even unhealthy, but that the flux which penetrated into the can entered into a chemical combination with the meat, and formed a poisonous scum on top, often hardly perceptible to the naked eye. While this poisonous meat will not

show any injurious effects in persons whose mode of life brings about a great deal of exercise, especially those living in the open air, it will have a most disastrous effect upon persons of sedentary habits or in delicate health. Professor S. A. Lattimore, demonstrator of analytical chemistry at the University of Rochester, N. Y., tested a number of cans containing tomatoes or fruit of various kinds. While he did not find any traces of putrefaction, as the germs of fermentation had been destroyed by the heating, which forms a part of the regular process of packing, he did find evidences of poisonous matter, the product of a chemical action made by the acid in these vegetables on the tin of the cans.

“But the most damaging statements in this connection are made by Professor E. B. Stuart, Secretary of the Illinois Microscopical Society. He states that in one can which had contained Lima beans the acid in this vegetable had been powerful enough to dissolve the tin plating of the can to that extent that only a few patches remained of the original lining. The beans themselves had absorbed this tin. Now, tin being an irritant poison when introduced into the human stomach, it will, when continuously taken in small doses, as would be the case with canned goods, develop symptoms of serious sickness and debility, the cause of which will not often be apparent even to the practiced eye of the physician. Prof. Stuart found a large number of other cans, all coming from one of the most responsible firms in Baltimore, to have been similarly affected by their contents, tomatoes, peaches, and oysters. He therefore called attention to this hitherto little suspected source of danger, and at the

same time suggested the use of japanned iron or pure iron in the place of tin for cans, and instead of the solder he advises can wax, a hermetically sealing cement, and insoluble in acid.

"Prof. H. B. Hill, of the Massachusetts State Board of Health, fully corroborates the results of Prof. Stuart's experiments. He made numerous practical tests of the action which fruit or vegetable acids, such as malic acid, found in apples, peaches, and tomatoes; citric acid, found in the lemon; oxalic acid, as found in the rhubarb and sorrel; tartaric acid, found in the grape; or acetic acid, such as sugar will produce, would have upon tin. In every instance he found that after some time the tin would be affected more or less by these acids, and that particles of tin, lead, and copper would be floating in the vegetables confined in the cans.

"Prof. Charles E. Monroe, of the United States Naval Academy, obtained similar results in a similar way, only the amount of poisonous substance taken up in this manner by vegetables or fruit differing."

DR. RICHARDSON ON NARCOTICS.

IN his address on "Felicity as a Sanitary Research," delivered on Thursday last before the Sanitary Congress, Dr. B. W. Richardson, F. R. S., after referring to physical conditions affecting felicity, said: "There are substances which, taken into the body, produce strange contrasts in respect to felicity and depression. Foods well cooked, foods carefully selected, foods supplied in sufficient quantity to sustain the body equably in all its parts, but so moderately as never to oppress the nervous digestive powers, conduce to felicity in the most telling manner. As a rule all agents which stimulate—that is to say, relax—the arterial tension, and so allow the blood a freer course through the organs, promote for a time felicity, but in the reaction leave depression. The alkaloid in tea, theine, has this effect. It causes a short and slight felicity. It causes in a large number of persons a long and severe and even painful sadness. There are many who never know a day of felicity owing to this one destroying cause. In our poorer districts, among the poor women of our industrial populations, our spinning, our stocking-weaving women, the misery incident to their lot is often doubled by this one agent. There is another agent more determinate in its effects and con-

trasts than tea, and that is wine. I am a total abstainer, but I am, I trust, an honest observer also, and I confirm, from direct observation, the old saying that 'wine maketh glad the heart of man.' If it did this and no more, I should say let the felicity of wine remain to the world. Wine, like the alkaloid in tea, relaxes, lets loose, the channels of the blood; gladdens like the ascent of a mountain side; gladdens like the gentle atmospheric pressure which forces more blood on to the internal parts. But—and here, alas! is the rub—carried a little beyond the right mark, the felicity from wine passes into folly, the folly into feebleness, the feebleness into stupor, and the stupor into a depression the reaction from which is the bitterest and most persistent. Tobacco is another of the substances used to produce abeyance of anxiety; it is said, to soothe irritability without stimulation, but it leaves in many persons long depression, coupled generally with an appetite for a renewed indulgence in it, which becomes intense. The confirmed smoker who can stand out against indirect effects, whose taste for food and whose digestive endurance are little injured, is kept, during the whole time he indulges, in the state of suspension. He does not enjoy felicity, but for the time experiences a relief from infelicity. My own experience, on the whole, is opposed to the indulgence, and I tested it for a long period of my life, as well as observed the effect of it on others. To the aged it gives, I confess, a negative existence, which, when the mind is not filled with choice or refined or cultivated pleasures, makes the time less wearisome. To the man who engages in work of great excitement, and of a mental kind, it brings a joyless repose. But, on the whole, it is a bad and sometimes a fatally bad indulgence. I once knew a man to die directly from the effects, and how many I have seen injured I cannot say, but a large number. Again I have seen many much depressed by it; so that I dare not put it forward at its best as a promoter of felicity. The world, I must conclude, would be happier if tobacco were unknown or unemployable. The habitual use of opium for the obtainment of felicity is of the same erroneous character. The opium-smoker, the opium-eater, tell us of certain dreams and phantasies which are for a moment felicitous wanderings of the mind. I have visited the opium-dens to see the effects, and whatever the dream may be subject-

ively, it presents to the observer no sign of felicity. The expression of the opium-smoker is one of restless and intense anxiety. He looks like a man in a dream of misery. His eyes are joyless, his features contorted, his skin colorless or dark, his pulse slow and laboring, his breathing hard and heavy; and when from the half-struggling consciousness he wakes to reason, the dream he describes is too confused to be accepted as a dream of felicity. Then he falls into dejection, which deepens and deepens until the desire to return to the cause of the dejection is too overpowering to be resisted. To opium-eating and the subcutaneous injection of morphia the same description, with some modifications on which I need not dwell, is perfectly applicable. From the use of such an agent as opium there can be no result of human felicity. There could soon be produced by an extension of the use a madder world than now exists, a more miserable—a happier, never! And this saying, according to my knowledge, extends to all narcotic substances. There are some, like methylic ether and nitrous oxide gas, which produce for the moment infinitely more refined felicity than those I have specifically named, but in the end the results are the same."—*Temperance Record*.

THE TEETOTALER AND THE DOCTOR.

A TEETOTALER of Cork had a severe attack of illness, and among other complaints, water on the chest. He called a physician, who, among other medicines, prescribed whisky punch. He purchased some bottles of liquor, and locked them up safely at home in his cupboard, taking the other medicines regularly as prescribed, but not touching the whisky. After a time the doctor told him to discontinue the whisky, and take instead certain Drogheda ale, which he would purchase of very superior quality at a certain shop in the city. Of this, also, fearing the doctor might inquire, he purchased a few bottles, and locked them up safely with the whisky. In a short time the teetotaler got well, and his case was spoken of as a most remarkable recovery, of course attributed to the virtues of the liquor. When the doctor paid his last visit, the man thanked him for his kindness, and told him he had done all he had desired him, except in two instances.

"What were those?" said the doctor, looking very angry.

"Why, sir, I did not take the whisky-punch nor the ale."

"You did not!" said the doctor, looking at him. "And why did you not?"

"Why, sir," said the teetotaler, "I believe that any person who gives up intoxicating drinks for the love and honor of the Saviour will never have occasion to take them again."

"Is that your faith?" said the doctor.

"It is, sir."

"Then it was your faith that saved you and answered all the purposes of the whisky-punch and ale."—*Bristol Herald*.

THE BEST DIET FOR MAN.

FOOD is the material of which we are composed, and on which we depend for our existence; it is that which contains, in larger or smaller proportions, the same elements as our bodies, and which replaces or repairs the loss constantly sustained by the wear and tear of daily life, consequently that which does not form flesh or help to maintain some vital process cannot be called food.

Man may subsist on almost any kind of food,—animal or vegetable,—provided it contains all the elements of nutrition; in other words, it must be flesh-forming and heat-giving.

The animal kingdom depends for support on the vegetable kingdom, and that is the reason both animal and vegetable food contain the same life-sustaining properties; hence it is that man can live on vegetable food alone, or wholly on animal food.

The vegetable eater gets his nourishment in all its purity from the original source, and converts it for the first time into his own flesh and blood; whereas the flesh-eater gets his from a second-hand source, and reconverts into his own flesh that which has already been used by another animal.

Dr. Letheby says: "Primarily, all our foods are derived from the vegetable kingdom, for no animal has the physical power of associating mineral elements and forming them into food. Within our own bodies there is no faculty for such conversion; our province is to pull down what the vegetable has built up, and to let loose the affinities which the plant has brought into bondage, and thus to restore to inanimate nature the matter and force which the growing plant had taken from it."

It is calculated that from two-thirds to

three-fourths of the human race live on simple vegetable diets. The peasantry of Norway, Sweden, Russia, Denmark, Poland, Germany, Turkey, Greece, Switzerland, Spain, Portugal, Scotland, Ireland, Wales, and almost every other country in Europe, live chiefly on vegetable food. Millions live almost entirely on rice.

The Persians, Hindoos, Burmese, Chinese, Japanese, the inhabitants of the East Indian Archipelago, of the mountains of Himalaya, and, in fact, most of the Asiatics, live upon vegetable productions. The great body of the ancient Egyptians and Persians confined themselves to a vegetable diet; and the Egyptians of the present day, as well as the negroes (whose great bodily powers are well known), live chiefly on vegetable substances.

The brave Spartans, who, for muscular power, physical energy, and ability to endure hardships perhaps stand unequalled in the history of nations, were vegetarians. The departure from their simple diet was soon followed by their decline. The armies of Greece and Rome, in the times of their unparalleled conquests, subsisted on vegetable productions. In the training for the public games in Greece, where muscular strength was to be exhibited in all its varied forms, vegetable food was adhered to; but when flesh meat was adopted afterward, those hitherto athletic men became sluggish and stupid.

Gassendi, in his celebrated letter to Van Helmont, says: "Wherefore, I repeat, that from the primeval and spotless institutions of our nature, the teeth were destined to the mastication, not of flesh, but of fruits."

Sir Everard Home says: "While mankind remained in a state of innocence, there is ground to believe that their only food was the produce of the vegetable kingdom."

Baron Cuvier says: "Fruits, roots, and the succulent parts of vegetables appear to be the natural food of man."

The hardy, sturdy peasantry of Scotland live mainly on oat-meal porridge and milk, barley, and potatoes, and they are robust, active, and long-lived. Dr. Johnson defined the word "oats" as "food for men in Scotland and horses in England;" to which the spirited Lord Elibank replied, "Yes, indeed; and where will you find such men and such horses?"

It is said that vegetable-eating animals are stronger and capable of greater endurance than flesh-eating ones. For pure muscular strength the rhinoceros exceeds

all animals now known on earth, and it lives on the lowest order of vegetable food. This animal is not more than half the size of an elephant, and yet a whole drove of elephants will fly with terror from it, and every other beast is equally afraid of it.

It is true man may accustom himself, or animals under his care, to live on a very unnatural diet for a limited period, but never to that enjoyed by animals which subsist on purely natural food.

It is said that cows on the sea-shore may learn to live on fish; that a sheep has been taught to eat beef-steak; and that a horse may be taught to drink whisky and chew tobacco; but none of these things are natural to any of them.

Experience teaches us that the food best adapted to the human constitution, and that which at the same time is most conducive to health and long life, is derived principally from the vegetable kingdom.—*Health and Long Life.*

DEATH PRODUCED BY THE FEAR OF DYING.

THE importance of removing every cause of fear from the minds of those who are laboring under disease, and of inspiring them with hopes of recovery, is well understood by every experienced practitioner. A fearful and desponding state of mind will often render unmanageable or even fatal a slight affection; while a serene and buoyant disposition has frequently carried a patient through a serious attack, during which his life was placed in the most imminent peril. In all dangerous diseases, the person in whom there is the least fear of dying, has invariably, other circumstances being the same, the fairest chance of surviving. Men of a desponding temperament are apt, in critical situations, to be overwhelmed by their very terrors; they are drowned by their too eager struggles to emerge; they would keep afloat, if they but remained quiescent.

One circumstance which may tend to protract, year after year, the life of consumptive patients is, that they in general either do not expect a fatal event, or wait for it with an exemplary and enviable resignation. This interesting and for the most part, amiable class of patients, excite the sympathy of others in proportion as they appear to be divested of anxiety about themselves. They often seem to

leave us most willingly, with whom we are least willing to part.

Predictions of death, whether supposed to be supernatural or originating from human authority, have often, in consequence of the depressing operation of fear, been punctually fulfilled. The anecdote is well attested of the licentious Lord Littleton, that he expired at the very stroke of the clock, which, in a dream or supposed vision, he had been forewarned would be the signal of his departure.

It is recorded of a person who had been sentenced to be bled to death, that, instead of the punishment being actually inflicted, he was made to believe that his veins had been opened, by causing water, when his eyes were blindfolded, to trickle down his arm. This mimicry of an operation, however, stopped as completely the movements of life, as if an entire exhaustion of the vivifying fluid had been effected. The individual lost his life, although not his blood, by this imaginary venesection.

We read of another unfortunate being, who had been condemned to lose his head, that the moment after it had been laid upon the block, a reprieve arrived; but the victim was already sacrificed. His ear was now deaf to the dilatory mercy, the living principle having been as effectually extinguished by the fear of the ax, as it would have been by its fall. Many of the deaths which take place upon a field of battle, without the individual's being wounded in the slightest degree, all of which were formerly attributed to the wind of a flying ball, are no doubt to be accounted for from the sedative effects of intense fear. In Lesinky's voyages around the world, there is an account, the truth of which is attested by other navigators, of a religious sect in the Sandwich Islands, who arrogate to themselves the power of praying people to death. Whoever incurs their displeasure receives notice that the homicidal litany is about to commence; and such are the effects of imagination, that the very notice is frequently sufficient, with these poor people, to produce the effect. Tell a timorous man, even though brought up amid all the light of civilization, that he will die, and if he has been in the habit of looking up with reverence to your opinion, in all probability he will sink into his grave, though otherwise his life might have been prolonged. Pronounce the sentence with sufficient decision and solemnity, and, under certain circumstances, it will execute itself.

We are not advocates for imposing wantonly or unnecessarily upon the hopes of an invalid, under the pretense of remedying his distemper. Deception, however skillful, is liable to discovery, and when once detected, an individual forfeits his future right to credit and authority. By raising hopes where the speedy event shows that there existed no ground for them, we deprive ourselves of the power, forever after, of inspiring confidence in those cases where we have not the least suspicion of danger. But by terrifying the imagination of the sick, to *create* danger, where none had previously existed; by some treacherous logic to reason an individual into illness, or when a trifling ailment is present to aggravate it into a serious malady, by representing it as already such, is what we would most strenuously urge all who are called upon to minister to those of feeble health, or to surround the bed of sickness, carefully to guard against. Let the expression of gloom be banished from the face of the medical attendant. Let the language of cheerfulness and of comfort dwell upon his tongue; but above all, guard the sick from the melancholy foreboding and the gloomy predictions of indiscreet friends and tattling neighbors.

If, during a serious illness, a patient hears accidentally of the death of some old acquaintance, especially if it be a person of nearly the same age as himself, or affected with the same, or a somewhat similar complaint, it will not so much from sorrow for the loss as by exciting or aggravating his apprehensions for his own fate, be calculated to produce an unfavorable effect upon the termination of his malady. Even in ordinary health, the shock we feel at the final departure of a friend, still in the prime of life, may often arise, in part at least, from the unwelcome hint which it gives us of our own mortality. Another circumstance, which has often accelerated death, is the preparation which we make for it, when sickness has approached us, in the *post obit* disposal of our worldly property. Many a sick man has died of making his will. After having fixed the signature to his last testament, viewing it as a kind of prelude to the funeral ceremonies, the spirits and strength of the invalid will often be found irretrievably to sink; no mental stimulus will subsequently arouse him, no medicine afford mitigation of his complaint. This fact constitutes a powerful argument in favor of performing this duty to survivors,

while yet in a state of health and vigor, when the task will have a better chance of being judiciously executed, and at the same time, without any risk of disturbance or injury to the body or to the mind.—*Selected.*

HEALTH ALPHABET.

The Ladies' Sanitary Association of London gives the following simple rules for keeping health.

As soon as you are up, shake blankets and sheets;
 Better be without shoes than sit with cold feet;
 Children, if healthy, are active, not still;
 Damp beds and damp clothes will both make you ill;
 Eat slowly and always chew your food well;
 Freshen the air in the house where you dwell;
 Garments should never be made very tight;
 Homes should be healthy, airy, and light.
 If you wish to be well, as you do, I've no doubt,
 Just open the window before you go out.
 Keep your room all the time tidy and clean;
 Let dust on your furniture never be seen.
 Much illness is caused by the want of pure air;
 Now to open your windows be ever your care.
 Old rags and old rubbish should never be kept.
 People should see that their floors are well swept.
 Quick movements in children are healthy and right;
 Remember, the young cannot thrive without light.
 See that the cistern is clean to the brim.
 Take care that your dress is all tidy and trim.
 Use your nose to find if there be a bad drain;
 Very sad are the fevers that come in its train.
 Walk as much as you can without feeling fatigue;
 Xerxes could walk full many a league.
 Your health is your wealth, which your wisdom
 must keep;
 Zeal will help a good cause, and the good you will
 reap.

EGYPTIAN MANIACS.

THE insane in Egypt are treated either as beasts of prey or as saints—holy persons. Maniacs who have fits of raving, accompanied with violence in gestures, and attempts to injure those around them, are chained, conducted to Cairo, and placed in a general depot, in which they are suffered to remain, herded together, without any attempts being made to preserve the least degree of cleanliness in the place, or in their persons. They eat, sleep, and spend all their time in the same apartment, the air of which, of course, becomes insufferably offensive. The only remedy used in the treatment of insanity, is a broth made of serpents, and administered at every new moon to the afflicted.

As to the insane who are inoffensive, or comparatively so, that is, those who do not by their conduct endanger the lives and safety of the people, they are allowed to roam about entirely free. So far indeed from being molested, they are generally treated with signal distinction.

They pass throughout Egypt for saints. It is sufficient even for a person to be rather unreasonable or somewhat original, in order to obtain this title. We, in this country, are not quite so obliging; the crowd with us are content to invest a man who utters incoherencies, and goes about promising to cure all diseases by a process peculiar, and known only to himself, with the character of a wonderful doctor. This variety of insanity—a true monomania—enlists, in the United States, very general admiration and respect; and its incongruities are certified to, as so many miracles, by professors of law, physic, and divinity. A present miracle! they cry; and although nobody can see it but themselves, the world good naturedly takes their hallucinations as evidences to show that insanity is wisdom, and impudence noble disinterestedness.

The following anecdote is related by M. Haimont as a fact coming under the immediate notice of the narrator:—

“Last winter, during the month of the Ramadan, I was at the divan of the governor of Rosetta. When there, a *saint* was brought in on the shoulders of a man, who said that an Arab had given a blow with his stick to the *saint*, and that he had met with this latter bemoaning his treatment in the bazaar. The governor immediately issued an order to dispatch two soldiers in quest of the person who had given the blow; and while his order was being executed, he, a man of sixty years of age, had the saint brought up, and overwhelmed him with caresses, gave him sweetmeats, sugar plums, etc., and even went so far as to kiss his hands. The poor Arab who had been so unfortunate as to strike the crazy body, was soon brought in, with his arms tied behind him. He was asked why he had struck this *worthy saint*, and without waiting for an answer, he was thrown down and ordered to receive lashes until the *saint* should intercede for him. About a hundred lashes having been given, and the *saint* not seeming in any great hurry to ask for his forgiveness, I could not, says M. Haimont, bear it any longer, and I obtained pardon for the poor sufferer, who was obliged to go and kiss the hands and feet of the person who had just before been lashing him.

“There is another of these itinerant maniacs at Cairo, whose reputation is prodigious. He is an exception to the usual treatment of this class; since, though sub-

ject to violent fits of anger and madness, during which he throws whatever comes into his hands at the passers by, he is still allowed to go at large. One day, when I passed by his habitual haunt, he threw a stone at me, which very happily only glazed my clothes. This man is forty years of age, strong and well made; he has the reputation of performing many miracles; and though covered with filth and a disgusting eruption of the skin, he is caressed by the women."—*Journal of Health.*

ABERNETHY ON OVER-FEEDING.

THE importance of recognizing and teaching that most individuals, men, women, and children, in modern society, eat more than is good for them, is so manifest that we quote the following passage from Abernethy, which shows that he fully grasped this key-stone of successful practice:—

"There can be no advantage in putting more food into the stomach than it is competent to digest, for the surplus can never afford nourishment to the body; on the contrary, it will be productive of various evils. * * * * Nature seems to have formed animals to live and enjoy health upon a scanty and precarious supply of food, but man in civilized society, having food always at command, and finding gratification from its taste, and a temporary hilarity and energy result from the excitement of his stomach, which he can at pleasure produce, eats and drinks an enormous deal more than is necessary for his wants or welfare; he fills his stomach and bowels with food which actually putrefies in those organs; he also fills his blood-vessels till he oppresses them and induces disease in them as well as in his heart. If his digestion be imperfect, he fills them with unassimilable substances, from which nutriment cannot be drawn, and which must be injurious. In proportion as the powers of the stomach are weak, so ought we to diminish the quantity of our food, and take care that it should be nutritious and as easy of digestion as possible. . . . We should proportion the quantity of food to the powers of the stomach, adapt its quality to the feelings of the organ, and take it at regular intervals thrice during the day. A patient lately gave me the following account of his own proceeding with respect to diet. He said, 'When thou toldest me to weigh my food, I did

not tell thee that I was in the habit of weighing myself, and that I had lost fourteen pounds' weight per month for many months before I saw thee. By following thine advice I have got rid of what thou didst consider a very formidable local malady, and upon thy allowance of food I have regained my flesh, and feel as competent to exertion as formerly, though I am not indeed so fat as I used to be. I own to thee, that as I got better I thought thy allowance was very scanty, and being strongly tempted to take more food, I did so; but I continued the practice of weighing myself, and found that I regularly lost weight upon an increased quantity of food; wherefore I returned to that which was prescribed to me.'"—*The Medical Age.*

CROWDED ROOMS.

AN old English work entitled the "Philosophy of Medicine," relates the following anecdote, which we quote with comments by the editor of an excellent journal current in the early part of the present century:—

"A lively young lady, who came to *Bath* to put herself under the care of Dr. M. Adair, gave a rout, and insisted that the doctor should be of the party. The room was *small*, and the company very *numerous*. He had not been long seated at the card-table, before a young gentleman, his partner, *fell into a swoon*. The doors were immediately thrown open to afford him fresh air, and the sash lifted up, and both the gentleman who swooned, and the young lady, Dr. Adair's patient, who were invalids, were much injured by the sudden exposure to a current of cold air. How the rest of the company were affected, says Dr. Adair, I had no opportunity of knowing; but my own feelings and sufferings, for many hours after I retired from this oven, convinced me of the dangerous consequences of such meetings. On declaring, a few days after, to one of my brethren, a man of humor, my resolution of writing a bitter philippic against routs, he archly replied: 'Let them alone, Doctor; how could this place otherwise support *twenty-six* physicians?'

"This fact, says our ingenious correspondent, to whom we are indebted for this article, serves to show better than a thousand arguments without it, the danger of injury from confined air in close apartments. Hence we see that

when we invite our friends to enjoy with us the pleasures of the social circle, we may incautiously be the means of rendering both them and ourselves miserable, by the poison of a corrupted atmosphere. Besides, how often do we find hundreds, and thousands, of individuals occupying a room with closed doors and windows, for an hour or two together! Much of the yawning, and dullness, and inattention of religious assemblies, is often produced by similar causes, though usually ascribed to a different origin. Crowded assemblies would do well to recollect that they are rendering the atmosphere absolutely poisonous, at the rate of at least a gallon a minute, or a hogshead an hour to an individual; and they are making it more or less impure and unwholesome with every breath. This happens, too, when the atmosphere is the most pure and dense. In hot weather, as the air is highly rarified, and other causes of impurity exist in greater abundance, it is poisoned at a much more rapid rate than in other circumstances; and this should remind us of the necessity of a stricter attention to ventilation.

"Our unenlightened readers may be edified by the following—

"RECIPE FOR A ROUT.

"Take all the ladies and gentlemen you can collect, and put them into a room, with a slow fire. Stew them well. Have ready twelve packs of cards, a piano-forte, a handful of prints or drawings, and put them in from time to time. As the mixture thickens, sweeten it with *politesse*, and season it with wit, if you have any; if not, flattery will do, and is very cheap. When all have stewed well an hour, add some ices, jellies, cakes, lemonade, and wines; the more of these ingredients you put in, the more substantial will your rout be. Fill your room quite full, and let the scum run off!"

Silk-worms and Tape-worms.—An Irish woman, needing some silk and some tape, sent her husband for them. The silk was shown, but the buyer thought the price too high. The clerk explained that all silk goods were dear, owing to some disease at this time prevalent among the silk-worms. The tape was next examined, and the Irishman thought that a little stiff as to price. "And indade, sir," says he, "is there likewise a dezase a-pre-vailin' among the tape-worms?"

WORK A LAW OF NATURE.

WORK is so thoroughly a law of nature for man as well as animals, that any organ left inactive decays from day to day. Thus, the well-being of an organ is indissolubly connected with its activity. One of the most curious illustrations of the above principle is the reaction which the amputation of a limb exercises upon the brain. That organ regulates the movements of every member of a healthy body; but if one member be wanting, then the respective portion of the brain has nothing more to do, and consequently exhibits a tendency to wither away. Several instances have already been recorded which indicated a probable injury to the brain, resulting from deficient activity in some portion of the body, and now M. Bourdon has communicated to the Paris Academy of Medicine a case of brain-wasting arising from the amputation of a limb. A soldier, whose left arm had been removed some forty years ago, lately died from inflammation of the brain after thirty-six hours' illness, and the *post-mortem* examination showed that one side of the brain presented differences from the other. During the later years of the man's life, the leg corresponding with the amputated arm gradually became lame, the injury done to the brain having, it is considered, reacted upon the leg.—*Sel.*

HOW TO WALK.

IN walking we have undoubtedly the natural mode of progression for man, and it affords us means of exercise which, taken all in all, cannot be surpassed by any other one form of exercise. It is a mistake to suppose that the leg-muscles alone are involved in walking, for there is also an important action of those of the trunk and shoulder as well. This will be understood when we remember that while the weight of the body is transferred alternately from one foot to the other, the whole trunk must be balanced accordingly, so that the main trunk muscles are thus being constantly contracted and relaxed. At the same time each arm is swung forward with the opposite leg, and the corresponding muscles are thus brought into play. The exertion required for walking varies very much with the speed. A brisk medium pace is, perhaps, the easiest, if it is to be kept up for some time; but when we try to walk at the fastest possible rate,

there is, perhaps, no mode of progression which requires such an effort, or which brings into play a larger number of muscles. This, however, may be left out of consideration until we come to more violent exercises. When walking is adopted as the chief mode of exercise, care should be taken to avoid the strictly so-called "constitutional" walk. There should always, if possible, be an object in view, and a pleasant companion is an agreeable, as well as a useful, addition. We cannot walk healthily if the feet are cramped or pained; therefore see that the boots are an easy fit, and that the heels are low. One of the great advantages in walking as a means of exercise, is that it may be used by all, and is everywhere available, and it is so important as a general exercise that, whatever other form of exercise be selected as the chief one, walking should always be introduced as an element in addition. For this purpose it has been adopted as part of the training for rowing and running, while an old prize-fighter used to tell us how he sometimes walked thirty miles a day when he was training for a "big fight."

Every healthy person, man or woman, should be a good walker, able at any time to walk six to twelve miles a day at least, and for double that when gradually brought up to it. The points to be attended to are: to see that the walk be brisk and vigorous, not of a loitering or dangling kind; that there be some object in the walk besides its being a routine constitutional (*i. e.*, not like the staid promenade of the orthodox ladies' school), and if possible in pleasant company; that there be no tight clothing, whether for the feet or body, which will constrain and impede the natural movements of the limbs and trunk; and that the walk be taken as far as possible in the fresh country air. In regard to this latter particular, although towns are increasing so rapidly as to make it almost a journey to get out of them on foot, still we have so many suburban tramways and railway lines that in a few minutes we can find ourselves in the country, where the air is fresh and pure.

Whenever an opportunity presents itself for a little climbing in the course of a walk, it should be taken advantage of. We gain variety of muscular action, as well as increase the exertion, and we get into regions of purer air and fresher breezes at the same time.

What may be considered as the weak

point in walking as a mode of exercise is the comparatively small play which it gives to the muscles of the shoulders and chest, while it is still less for those of the arm. This should be compensated for by the use of light dumb-bells or Indian clubs, or some other form of exercise which brings into play the arms and shoulders. One of the forms of exercise which requires the action of the muscles of the arms and shoulders as well as those of the trunk and legs, is swimming. This, however, for many reasons, cannot be used as a means of exercise except by a few and at certain seasons of the year, but where possible it should always be practiced. The great pity is that boys and girls do not learn it, as a rule, while at school. Every large town should be well provided with swimming-baths, and if it could be made compulsory for all scholars at a certain age—say twelve—to learn to swim, it would be a great advantage to all concerned, and would be the means of saving many valuable lives.—*Health.*

THE DAMAGING EFFECTS OF TOBACCO.

THE deleterious influence of the tobacco habit is becoming so apparent to all intelligent and observing physicians that no one now attempts to apologize for the use of the filthy weed by a resort to any of the old sophistical arguments by which it was for so many years propped up against the dictates of both common sense and conscience, and we constantly meet in the popular and professional literature of the day the most unjustified condemnation of its use and a clear portrayal of its evil effects. The following summary of the influence of tobacco poison upon young men is from the *Cincinnati Lancet and Clinic*:—

The use of tobacco by growing boys is so generally recognized as pernicious, that it is extraordinary that measures are not urged upon those having the care of youth, to prevent the habit. Already it has been prohibited in the United States Naval Academy at Annapolis, at the United States Military Academy at West Point, in the Phillips Exeter Academy, New Hampshire, and in various other enlightened educational institutions.

This was not the result of prejudice or hobbyism. If any set of men are free

from these vices of learning, it is the naval surgeons, and it was especially from them, and particularly from Dr. A. L. Gihon, U. S. N., that this attack on the weed began. The indictment laid against it charged—

1. That it leads to impaired nutrition of the nerve centers.
2. That it is a fertile cause of neuralgia, vertigo, and indigestion.
3. That it irritates the mouth and throat, and thus destroys the purity of the voice.
4. That by excitation of the optic nerve, it produces amaurosis and other defects of vision.
5. That it causes a tremulous hand and an intermittent pulse.
6. That one of its conspicuous effects is to develop irritation of the heart.
7. That it retards the cell changes on which the development of the adolescent depends.

This is a formidable bill of particulars, and yet each of these charges is preferred by the best authority, and, what is more, each is substantiated by an abundance of clinical evidence.

Testimony is also adduced from the class records of schools and colleges, which indicates very positively that the effect of tobacco on the mental faculties is deteriorating. The best scholars are not tobacco users; non-smokers take the highest rank in every grade, and whether we look at the exceptionally bright students, or compare the average of those who use and those who refrain from tobacco, the result shows the same.

With these facts staring us in the face, it becomes the duty of every school-master and every parent to set himself resolutely against the beginning of this injurious indulgence.

It is, indeed, no easy matter to prohibit it successfully. There is a curious attraction about this nauseous plant which has never been explained. A habitual consumer of it cannot explain its fascination. It has extended over the world with marvellous facility.

Nevertheless, we believe that the youth of America are intelligent and ambitious enough, in the aggregate, to be trusted. If the consequences of tobacco-using are plainly stated by an authority that a lad respects, it will often lead him to drop the habit, or to refrain from beginning it, when threats and punishments would not. The latter he regards as an exercise of arbitrary power, the former appeals to his

reason and good sense. It is the duty of a physician to express himself plainly on this subject, and he can only do so by condemning the habit, in boys at any rate.

AN INSTRUCTIVE CONTRAST.

[THE following very sensible words were written by an observing correspondent of a Philadelphia journal nearly fifty years ago. The observations made are too good to be forgotten.—ED.]

I have recently had an opportunity of contrasting the appearance of an aged and a young man of sedentary habits, whose history may serve as a warning to some of our readers. The one is seventy-five years of age; yet from his erect form, firm movements, and cheerful and healthy countenance, he seems not to have reached the age of sixty-three. He is of about middle height, strong and muscular, having none of that pallid and emaciated appearance which is so common among literary men of the present generation; although the fact that he has been a laborious instructor of youth for about half a century, would naturally have led us to other expectations. There is no appearance of decay in any of the mental faculties; on the contrary, he composed, in my presence, at the request of a friend, an original article on a given subject, that exhibited all the vigor and activity of youthful intellect, that would have done honor to the ablest periodicals of our country. His religion, too, wears none of that somber hue, which in an instructor is so peculiarly uninviting, and which often counteracts the natural tendency of the most important precepts, even when delivered with all the solemnity which their importance demands.

The other person seems, in some respects, to belong to a different race of beings,—pale, feeble, emaciated, and sickly, with slender and enervated muscles, and with an anxious countenance. At only thirty-five years of age, he seems scarcely younger than the former; and affords a striking specimen of the evils of premature mental development, in dooming a towering mind to perpetual imprisonment in a feeble body, and subjecting both to consequent premature decay and dissolution.

Whence this surprising difference? It is claimed that physical peculiarities may be *inherited*, even from a generation quite remote from us. In the present case, how-

ever, there is no evidence of any such transmission; but we have *prima facie* evidence that causes exist fully adequate to the production of present appearances. In such a case, it is unphilosophical to refer to others more remote and obscure.

The education and habits of the two persons have made the difference. One of them was born in an age when it was not so fashionable as now, to sacrifice health of body for the sake of intellectual attainments; when, if less Greek and Latin were *acquired*, less vigor of body was lost during the process; when, too, it was not deemed indispensable to push the pupil through his course of study at the earliest period possible, as if the salvation of a country or of the universe depended on his appearance upon the world's great theater by the moment he was eighteen years of age. Until he was twenty years old, he was engaged in agricultural and other manual labors, receiving no other instruction than what was afforded to the mass of the community at that time. At the age of twenty or twenty-one, he commenced a course of study, and subsequently to this became a useful minister and instructor. But through the whole period of his long life, whether employed in instructing himself or others, he has never failed to use much physical exercise in the open air, daily, both from choice and a conviction of its utility.

The other person, though born within the same boundaries of country, had the misfortune to be subject to a train of influences less happy. Particular circumstances, together with certain accidental occurrences, restrained him from taking part in the sports and other pursuits of those of his own age, and so his mind was easily directed to books and study as sources of amusement. His rapid advances in his studies became a theme of conversation among his friends and acquaintance, and no pains was spared to aid him in his progress. The desire of pleasing his friends, emulation, and perhaps the love of learning for its own sake, all combined to fix his attention and occupy his time, chiefly in mental efforts. By the time he was eighteen, he had completed his academical studies, and acquitted himself with honor. When engaged as an instructor, and in other avocations demanding much mental exertion, the habits of study he had acquired led to the neglect of physical exercise, till, involved

in the horrors of dyspepsia, he discovered, almost too late, his error, and has long been doomed to a state of physical debility which will not only in a measure disappoint the hopes of his friends, but materially diminish his own usefulness and happiness.

By a more rational education, the elder individual to whom I have alluded, escaped those deteriorating influences to which the other was subjected; and though his mental faculties might have been longer in unfolding, yet the process was vastly more in harmony with the development of his physical frame and moral powers. In the enjoyment of full health, by alternating labor with sedentary employments, he has been able to sustain such a degree of mental exertion as would have destroyed a *modern* student, and to continue his labors to *threescore and ten!*

The younger, on the contrary, a sufferer perpetually from premature mental effort, undertaken without regard to suitable relaxation and daily physical exercise, is sustained amid a burden of care and fatigue by that resolution and determination, I had almost said *desperation*, which rational philanthropy and Christian benevolence, quickened by a sense of his own woes and a knowledge of their cause, can alone produce. A course, however, which must, in all probability, cut short, even of the narrow limits of threescore and ten, a life devoted without reserve to the best interests of mankind.

Too long has it been the predominating purpose of parents and instructors to elicit *mind* merely, to expand or at least to fill the intellectual domain, come of physical and moral well-being what might. A prodigy in intellect has been hailed as Heaven's special favorite, and either directly or indirectly held up as a worthy object of universal admiration and imitation, forgetting what injury is done to the moral character, or to the health. For my own part, if I rejoice at all at precocious mental development, it is with much trembling, lest it should bring in its train the ruin of the body and the contamination of the soul. Let mind be developed, but no faster at any given time than is consistent with the cultivation of moral character, and firm, vigorous, and increasing health. The moment we overstep these natural limits, not the mind only,—not the particular faculty which is overstrained, alone,—but the whole system suffers. "Whether one member suf-

fer, all the members suffer with it, whether one member rejoice, all the members rejoice with it," is alike the language of experience and of revelation.—*Journal of Health.*

OLD AGE AND HOW TO ATTAIN IT.

A FAVORITE gift in Japan is a bronze stork standing upon a turtle. Both are long-lived animals. The latter is fabled to attain a thousand years of happy existence, when its tail spreads out like a fan and it begins to show signs of its venerableness. Such a gift expresses in a delicate and suggestive way the wish that the recipient of the present may be blessed with a long and prosperous life. Nor is this all. It is a symbol of the Japanese faith that length of days is a Divine benediction, a source of serene joy, and an occasion for grateful salutations. And so it is, for, says the wise man, "The hoary head is a crown of glory, if it be found in the way of righteousness." Gray hairs are naturally associated with the prudence and wisdom gathered from fruitful decades of experience, and ripened under wide and varied reflection. Hence the word "sage"—a wise man—is synonymous with old man; and in some countries, as in China, for example, respect is paid to individuals in proportion to their respective ages. When one of the most distinguished Mandarins of the central flowery kingdom asked William H. Seward, "How old may your honor be?" he was not intending to insult our great statesman, as we, according to our Western foolish sensitiveness about letting our age be known, might imagine; the Mandarin meant on the contrary, to compliment the ex-Secretary of State on the kindly providences which had guarded him so long, and to show him the deference becoming such a living accumulation of manifold observations and thoughts.

If, then, old age be a thing so desirable, every legitimate means should be employed to secure it. It is not simply an inheritance, or as G. H. Lewes used to say, "a talent." Like most other prizes in this world, it can be won, in many cases at least, by due attention to sanitary laws and mental habitudes. Though the limit for most people seems to be the one fixed by the inspired writer at threescore and ten, yet very many surpass this boundary, and rejoice in vigorous usefulness and happiness when well into the eighties, and

sometimes when beyond ninety. Gæthe, for example, was over eighty when he finished the second part of Faust, his greatest work; Michael grew to nearly ninety while watching the construction of the dome of St. Peter's; Titian still painted with fine effect in his ninety-ninth year; and, indeed, Mr. Bailey, in his records of longevity, gives a catalogue of 3,000 or 4,000 cases of old age verging closely on 100 years, or exceeding it, and not a few of them reaching as high as 150 years. And with the increase of civilization the period of human existence has been lengthened. M. Flourens, a French physiologist of great authority, published some time ago a treatise on "Longevity," in which he maintained that most persons might, by prudence and care, prolong their lives to the good round figure of 100 years. Nothing is more certain than that our environment has much to do either in multiplying or diminishing our days. In a state of knowledge, freedom, and comparative plenty, as in England, the rate of mortality is only two and a quarter per cent per annum; while under the ignorance, and despotism, and scarcity of Russia, it is three and a half per cent all over the empire, and in some provinces much greater. Sufficient food and clothing, a requisite amount of sleep, mingled labor and recreation, avoidance of undue exposure, and, above all, a mind free from corroding cares and killing worry,—these are the conditions favorable to weaving a long fabric from the loom of life. "It is not work," said the Earl of Derby, "that kills, but anxiety." How, then, shall one be free from anxiety? Our Lord has pointed out the way. Put your trust in him. Take no thought, *i. e.*, no fretful, solicitous, painful thought, for the morrow. So shall thy days glide by in sweet serenity, and you will be gathered, after scores of years of usefulness, to your fathers in peace.—*The Christian at Work.*

Increase of Beer Drinking.—The last census shows an enormous increase in the production of malt liquors, chiefly lager beer, in the United States, during the ten years between 1870 and 1880. In the former year the quantity made was valued at \$55,000,000. In 1880 it reached \$101,000,000. During the same period the increase in the production of distilled liquors was comparatively small, the values of the product being \$36,000,000 in 1870, and \$41,000,000 in 1880. Surely

there is plenty of work for temperance reformers for some years yet. The present generation is reaping the consequences of the drunkenness of the preceding, one of the worst of which is the hereditary predisposition to the use of stimulants. Through the medium of hereditary influence, one drunkard in the present generation may make half a dozen sots in the next.

STARCH IN FOOD.

As soon as a piece of bread is put into the mouth, an abundant flow of saliva takes place; and in fact it needs no actual tasting to induce this flow, for even the sight or smell of anything nice is quite sufficient to "make the mouth water," as we express it. The saliva is poured into the mouth by three pairs of glands, to the extent of some twenty ounces a day. It consists, in great part, of water, with a little salt and a peculiar substance called ptyaline, which possesses the property of changing starch into sugar, the change being accomplished most completely when the starch is dissolved or baked, and at a temperature of about ninety-eight degrees Fahrenheit, the normal temperature of the body. Although this ptyaline is present in the saliva to the extent of only one part in five hundred, yet on its presence and action, the heat, and consequently the life, of the body is largely dependent; hence the importance of avoiding any unnecessary waste of it, such as frequently and unnecessarily accompanies smoking. Hence, likewise, we see the importance of chewing the food slowly and thoroughly, that it may be all brought under the influence of the ptyaline; and thus we can understand how indigestion, or dyspepsia, may be caused by hasty chewing or by excessive spitting, the starchy portion of the food in either case lying in the stomach in an undissolved mass.

Bread-making, we have already stated, is a form of cooking. The heat of the oven has converted the outside of the bread into sugar; and the starch in the inside has in fact been boiled in the steam of the water which the dough contained, so that it has become capable of being readily converted into sugar. The porous nature of the bread favors this conversion; for the saliva easily penetrates through the whole of the spongy mass; and the change is still further assisted by the wa-

ter which the bread contains, to the extent of some forty per cent. Biscuits, on the other hand, being as a rule dry and non-spongy, are less suitable for ordinary use, although containing in the same weight far more food-material than bread.

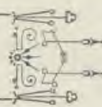
It may surprise some of our readers to be told that the starch of bread has small nutritive properties. Its sole office is that of a heat-producer; and just like the coal of the engine, the starch or sugar is burned up inside us to keep up the temperature of the machine. It is the gluten, the sticky, tenacious matter in the grain, which is the nutritive, flesh-forming material; but in the present article we have no space to follow the changes which it undergoes in the system, for we are simply treating of starch at present; and we trust we have made it clear how it is changed into sugar, and thus made soluble and fit for absorption into the juices which keep the body at a uniform temperature and in good repair.

It is a common but mistaken notion that sago and tapioca are very nutritive. On the contrary, they consist almost wholly of starch, with only about three per cent of gluten, so that unless cooked with milk or eggs, they form a very insufficient food. The same is the case with arrowroot; hence it is a great mistake to feed an invalid or a child on such materials. They are no doubt useful as easily-digested heat producers, but they must be cooked with milk or eggs before they are of much use for natural nutriment; and many a child has been starved to death through its parents' ignorance of this fact. It is true, medical men often recommend arrowroot for those in delicate health, as it is of great importance to keep up the natural heat of the body with the least exertion of the digestive organs; but it cannot be too widely known that arrowroot, pure and simple, is a mere heat-producer; and milk, soup, or other suitable flesh-forming food, must be given with it, if the child or invalid is to be kept alive. On the other hand, semolino, hominy, lentil-meal, pea-flour, etc., contain a much greater amount of flesh-forming material than sago, arrowroot, etc.—*Chambers' Journal.*

—When we see a tightly-laced woman trying to enjoy a good laugh, with a smile on her mouth and tears in her eyes, we think of the dear old hymn, which begins, "Let joy be unconfined."



TEMPERANCE AND MISCELLANY.



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

Conducted by MRS. E. E. KELLOGG, Superintendent of Hygiene of the National W. C. T. U.

BEAUTY.

The loveliest eye is that of faith,
Which upward looks to God;
The neatest foot is that which has
The path of virtue trod.

The sweetest lips are those that ne'er
A word of guile have spoken;
The richest voice is that of prayer,
One ne'er a vow has broken.

The prettiest hair is that which Time
Has silvered o'er with gray,
Or covers o'er an honest head,—
Its beauties ne'er decay.

The fairest hand is one that's oft
In deeds of kindness given,
The purest heart is one that Christ
Has sanctified for Heaven.

—Sel.

SKETCHES OF TRAVEL, NO. 7.

BY MRS. E. E. KELLOGG.

THE ART GALLERIES.

PARIS has two wonderful treasure-houses of art, the Louvre, in which no picture is placed until the artist has been dead at least ten years, and the Luxembourg, devoted to the productions of the living painters and sculptors of France. Both were formerly used as the residences of royalty. The Louvre is the most extensive, and is a magnificent palace, the creation of a series of luxury-loving rulers from Francis I. to Napoleon III. It comprises a succession of buildings surrounding a quadrangular court, which can be entered from the streets through lofty archways in each of the four sides of the palace. The Louvre with the Tuilleries, another royal palace which was united to it on the north side by Napoleon III., but was nearly destroyed during the siege of Paris, covers an area of twenty-four acres.

The lower floors of the Louvre are devoted to libraries and museums of Egyptian, Assyrian, Grecian, and Etruscan antiquities. In the great halls above are arranged with most perfect taste the choicest works of art of every description. Here one may walk for hours over acres of floor made of smoothly polished pieces of wood, through room after room, lighted from above, with ceilings heavy with gilded decorations and exquisite frescoes, amid gleaming marble pillars, dazzling mirrors, and every adornment that wealth or taste could devise, with miles of

beautiful paintings, the marvelous productions of world-renowned artists, covering the walls, while mosaic tables, elegant vases, rich cabinets and cases full of rare and precious things fill up all interspaces. The gallery of paintings is one of the most extensive in existence, numbering nearly eighteen hundred and fifty pieces. Guido's "Ecce Homo;" Raphael's "Holy Family;" "The Marriage at Cana," by Veronese; "The Joiner's Family," by Rembrandt; and Murillo's "Conception," are among the chief works of this wonderful collection. One large hall is entirely filled with the paintings of Rubens. The gallery of sculptures contains some of the most beautiful masterpieces of ancient statuary to be found in the world, among which are the "Venus of Milo," and "The Fighting Gladiator."

The Luxembourg is less pretentious in size, but is no less remarkable for the beauty of its adornments and the value of its collection, which numbers among its exhibitors Rosa Bonheur, Müller, Arry Sheffer, and De la Roche.

THE COLONNE DE JUILLET,

Or, as it is sometimes called, the Column of Liberty, is a lofty shaft one hundred and fifty-three feet in height, surmounted by a gilt figure of the Genius of Liberty, erected upon the spot where once stood the Bastille, an ancient fortress and prison in whose dark, damp dungeons many a poor victim was immured without warning or trial. It was in the Bastille that the "man of the iron mask" was confined. Who this strange prisoner of State was is still a secret, though many conjectures have been made and much written upon the subject. No one but his appointed attendant is known to have ever seen his face. He wore a black velvet mask which enveloped his head and face and was fastened with steel springs in such a manner that he could not remove it without immediate detection, and the official to whose care he was intrusted was under royal orders to take his life immediately should he attempt to reveal his identity, as he seemed anxious to do. Twice he wrote something on different articles, and succeeded in giving them to persons not in the secret of the mystery; but his efforts were discovered and the recipients of the articles both died very suddenly, having been poisoned, it was supposed. These circumstances seem to indicate that the prisoner was a man of shrewdness and learning, and probably a person of eminent rank, and that his persecutors were conscious of committing a crime of no common magnitude in thus confining him and excluding

him from all intercourse with mankind. Many suppose him to have been the half-brother of Louis XIV. the then reigning sovereign, and a co-heir to the throne of France.

During the Revolution of 1789, the Bastille was destroyed by the populace, who regarded it as an obstacle to liberty, and its useless key now hangs in the hall at Mount Vernon, having been presented by Lafayette to Washington. It was on the site of the Bastille also that the good archbishop of Paris was shot, during the struggle of 1848, pleading the while with both feudal parties to cease their strife, and dying like his Master with a prayer for his murderers upon his lips.

Inscribed on the column are the names of more than six hundred victims who lie buried beneath it, and who fell during the same Revolution.

THE GOBELINS.

One of the most interesting excursions during our stay in Paris, was made to the government manufactory of Gobelin tapestry. During the reign of Louis XIV. the art of weaving tapestry was brought from Flanders, and a manufactory established by a man named Gobeelen, on the outskirts of the city. The manufactory is still in existence. In the exhibition rooms we saw imitated with marvelous delicacy and finish the finest of oil-paintings. Each minute line and shade faithfully reproduced, and the effect so exactly alike that it was impossible, without the aid of a glass, to tell which was the tapestry and which the oil-painting from which it was copied. Beautiful flowers, charming landscapes, historical scenes, and portraits of royal personages so exceedingly life-like that one almost felt ill-mannered to gaze at them, make up a collection of woven pictures worthy of a place beside the old masters. The cost of these tapestries is one hundred pounds sterling per square foot, and so highly are they valued that they are only made for the nobility, or as presents to foreign rulers.

We passed through the workshops, and saw the workmen weaving their wonderful productions, standing behind the vertically suspended frames in which the warp of the tapestry is placed, and plying back and forth through one or two threads of the warp at a time, one of the many scores of little bobbins filled with bright colored silks and wool which hang, each by its thread, from the uncompleted picture. Each stitch or line thus formed is carefully pressed into its place with the pointed end of the bobbin before another is made.

The entire work is done by hand, and it often requires from five to twenty years to complete a picture. The progress is slow, and the work difficult. Day after day the artist toils with only the knotty side of the work before him, always carefully studying the pattern which is hung just beside him, till at last the warp is all concealed, and turning the frame over, there is a masterpiece so perfect in design and color that it is best suited to adorn the home of royalty. It was an apt illustration, we thought, of the Christian laborer's life, who, having Christ for a pat-

tern, toils on through discouragement and trials, seeing only the earthly side, till by and by the work, completed and immortalized, shall adorn the mansion of the Eternal King.

UNFERMENTED WINES OF THE ANCIENTS.

MENTION is made in the most ancient writings now extant of the use of wines as a very common drink; but whether in all cases we are to understand by the term wine, the fermented juice of the grape, will admit of considerable dispute. It is more than probable, that at first the juice of the grape, and perhaps of other fruits, was simply expressed, and drank without further preparation. At what period the use of fermented liquors became general, it is impossible to determine. We admit it to be improbable, that the use of an exhilarating beverage prepared by fermentation, could have continued very long unknown in those regions of the earth where the vine grows freely. The first portion of its fruit, remarks Henderson, which had been pressed by accident or design, and allowed to remain for a short time undisturbed, would be found to have acquired new and surprising properties; and repeated trials would soon prove the value of the discovery. By degrees, the method would be learned of preserving, for constant use, the beverage so obtained; and various processes would be resorted to for enhancing its grateful qualities. The knowledge of the art would rapidly spread, and its simplicity would recommend it to universal adoption. All this is perfectly true, but, at the same time, it is nevertheless certain that the simple, unfermented juice of the grape was a very common drink among the ancients, even after fermented liquors were extensively manufactured; and it is to this beverage, destitute of inebriating properties, that the term "wine" appears to have been first applied: its daily use among the ancient Greeks and Romans is noticed by writers of both nations of unquestionable authority, who have transmitted to us also minute accounts of the various plans adopted to preserve it unchanged from year to year.

It is highly probable, also, that the wines in common use among the Egyptians, as well as among the Hebrews, were unfermented. This will explain the frequent allusion which is made in the Old Testament to "the juice of the grape," or to the drinking of the "pure blood of the grape." That the juice of the grape, simply

expressed, was drunk anciently, even by the kings of Egypt, would appear, from the passage in Genesis, where the butler, relating his dream to Joseph, says, "And I took the grapes, and pressed them into Pharaoh's cup, and I gave the cup into Pharaoh's hand." And a friend has ingeniously suggested, whether the terms wine and strong drink of the Scriptures may not have designated generally, the one the simple, and the other the fermented juice of the grape.

For the following account of the unfermented wines of the Greeks and Romans, we are indebted chiefly to the splendid quarto of Henderson:—

The juice that flowed from the gentle pressure of the grapes upon one another, as they were heaped in the baskets or troughs, previously to their being trodden, was in the first place carefully collected in the vessels in which it was intended to be preserved, and set aside till the following summer, when it was exposed, during forty days, to the strongest heat of the sun. As it was procured from the most luscious grapes, and kept from the contact of the external air, the fermentation which it underwent would be very slight, and it would retain in perfection the full flavor of the fruit. This liquor appears to have been first made at Mitylene, in the island of Lesbos, and was held in high estimation.

Sometimes, however, when the quantity of the juice thus obtained was either too small, or not sufficiently saccharine to enable it to keep without further preparation, that collected in the vat, before the grapes were subjected to the press, was put into a vessel of a particular shape, which was properly coated, and secured by a well-pitched cork, and then sunk in a pond, where it was allowed to remain about a month, or until after the winter solstice. When taken up, it was commonly found to have lost all tendency to ferment, and might be preserved, unchanged, during a whole year or more. In this state it was considered as something between a syrup and a wine. When, instead of being placed in a fresh-water pond, the vessel was plunged into the sea, the liquor was thought to acquire very speedily the flavor of age. To this practice the oracle given to the fishermen, requiring them to dip Bacchus in the sea, may be supposed to allude.

On other occasions, when the juice of the grapes was deemed too thin and wa-

tery for the production of a good wine, as was almost always the case in rainy seasons, it was boiled down to a greater consistence, and a small portion of gypsum was added to it. The Lacedamonians, we are told, were in the practice of reducing it one-fifth part, and keeping it four years before it was drunk; others were satisfied with the evaporation of a twentieth part of the bulk. Sometimes, however, the inspissation was carried much further, and the boiling prolonged till one-third, one-half, or even two-thirds of the liquor were evaporated.

The liquor obtained from the juice of rich grapes, and reduced by evaporation to one-third, appears to have been drunk as a wine, and may be regarded as corresponding to the boiled wines of the moderns; but the other degrees of inspissation were chiefly employed for the purpose of correcting weak must, and for preparing the various condiments, which were resorted to for the purpose of heightening the flavors of the ancient wines. They were, in fact, identical with the *saba* or *raisine* of the French, and the *sapa* of the Italian, which are still used for culinary purposes, and which are made according to the same rules.—*Journal of Health*, 1832.

EVOLUTION.

An eminent writer pitches into the advocates of evolution who have been making such a stir during the last few years, after the following fashion:—

It is amusing, perhaps more so than folly ought to be, to see an ignoramus stand up and prate over evolution. It does not disturb him to be reminded that nature seems to have gone out of the business of evolution. That is nothing. He can trace any thing backward, the horse to the time when he was five-toed, and the five-toed back to when he was web-footed, and the web-foot back to fins. But it is a sad thought that all upward progress has ceased. Evolution has ceased to evolve. Engravings of wheat and cattle and men found on the pyramids prove to us that none of these have changed. Four thousand years have gone by and the first specimen of a better man does not appear. There is no sixth sense, or third eye, or winged shoulders, or telescopic eyes,—nothing to show that we are links in the progression upward.

Nature has no longer a laboratory or a pattern shop, in which she is evolving better forms of anything. There is no such thing as a plant or a grain or a tree leaving off some of its habits and taking on new ones, so as to become a different order of things. Strawberries are not approaching the size of water-melons. The fox, unmolested by traps and chains, is free to develop into something better, but he does not incline. The fact is that which was built a ferry-boat, remains a ferry-boat, and what was built Great Eastern will always be Great Eastern and it is just as true that elephants never lose their trunks, nor essay to carry more than one; the wild horse never affects a horn, nor do wild cattle abandon the fashion of two. The schools of mackerel never graduate whales. Catastrophes have occurred in which the lives of thousands of species have suddenly been arrested, and the bodies of many have been preserved in stone. The surprise never yet overtook a creature that was on the way up higher into a new and unknown species, nor do existing forms give any signs that they tend to invent new and untried organs. Neither is there any such thing conceivable that we can trace backward through the successive links of the progress of a species, without coming, at last, to the first link, which had no predecessor, and which could not have created itself. The whole system of evolution is without facts or even analogies to support it. Its wisest supporters are cautious not to make assertions; they say, May it not be so? It is reasonable to suppose, etc. All true science is based on facts; evolution is not so based, and it has no claims to be a science.

RESPONSIBILITIES.

IT is a high, solemn, almost awful thought for every individual man, that his earthly influence, which has a commencement, will never through all ages, were he the very meanest of us, have an end! What is done, is done, has already blended itself with the boundless, ever-living, ever-working universe, and will also work there for good or evil, openly or secretly, throughout all time. But the life of every man is as the well-spring of a stream, whose small beginnings are indeed plain to all, but whose ulterior course and destination, as it winds through the expanse of infinite years, only the Omniscient can discern. Will it mingle with

neighboring rivulets as a tributary, or receive them as their sovereign? Is it to be a nameless brook, and will its tiny waters among millions of other brooks and rills increase the current of some world's river? Or is it to be itself a Rhine or Donau, whose goings forth are to the uttermost lands, its flood an everlasting boundary-line on the globe itself, the bulwark and highway of whole kingdoms and continents? We know not: only in either case we know its path is to the great ocean; its waters, were they but a handful, are here, and cannot be annihilated or permanently held back.—*Carlyle*.

NURSING SORROW AND SEEKING SYMPATHY.

BY HAROLD VAN SANTVOORD.

IT is an accepted fact that no mortal escapes sorrow and pain during his earthly pilgrimage. Life has its lights and shades in its shifting scenes and events, and its ebb and flow as it throbs in the veins of every living creature. Pain has its uses and value as a chastener of morals and manners. It is an omnipresent agent that pierces the soul and convulses the heart of nature. And each one knows his own sorrows best.

While many sorrows are a part of the soul's dispensation, and must be endured, others are neither ordered of God or of nature, and are self-inflicted. As if the pains and aches and heart-pangs nature prescribes were not enough, man must add more, and study the art of making himself miserable. "Many people are busy in this world," said Jeremy Taylor, "gathering together a handful of thorns to sit upon." An American essayist, with little sympathy for the morbid class, pilloried one of these forlorn creatures, who "caught cold in coming into the world, and has been adding to it ever since." Everybody who has read Dickens recalls that strange, whimpering old lady, Mrs. Gummidge, who was happiest when most forlorn, and contented only when inflicting her misery on others. The malcontents court misery from deliberate choice, and are as fanatical and vain as the benighted Hindoos who cut themselves with knives to placate their divinities.

Good spirits are at the foundation of mental and moral health. "Hope and good cheer are doctors by hereditary right." They are diplomated by nature,

exacting no fees, and have a rare faculty for smoothing the creases out of the soul, and so setting the body loose from an irritating and unwholesome contact. It is said of Lord Holland that he came to the breakfast-table with the air of a man who had met with a singular good fortune. Such a frame of mind is worth more to a man than the purse of Fortunatus. Good spirits, if they could be bought at shops and appropriated to our bodily use, would soon close the dispensaries and sweeten the atmosphere.

But it is a significant fact that multitudes of men are sitting on thorns, and borrowing trouble, and looking on the dark side, and tearing the lint off their wounds, and worrying over trifles. They are making themselves unhappy over the weather and the fit of their coats. Their attitude is a perpetual reminder that the mass of mankind has treated them with withering scorn and done them an irreparable injury. In sober fact, the world is too intent on its own business to put a straw in their paths. Neither will it humor the snarlers and growlers who sulk in corners like spoiled children, waiting to be coddled, petted, and patted on the back. Under the lens of self-analysis their misery is found to be of their own seeking. Joseph de Maistre said, "I bow myself to the earth before the men who have succeeded in instructing, consoling, and relieving their fellow-creatures who have made real sacrifices for the sake of doing good,—those heroes of silent charity who hide themselves and expect nothing in this world." And where a life is thus consecrated to good work, what time is left for an analysis of the emotions?

Honor those who live to do good, and who would scorn to be seen lighting the fires of their martyrdom. If they have scars to show, they keep their coats on their backs, and coming daily under the dispensations of God are inured to plain, hard living. The morbid sentimentality which delights in nursing its sorrows and noising its griefs is without the pale of sympathy. Infirmities are best kept to one's self. Sympathy is soonest enlisted on the side of quiet, unobtrusive grief and silent suffering. Men in robust health engaged in active pursuits avoid the mollycoddles who whine and snarl, complain of their corns and tight boots, and figuratively limp through life on crutches. Charity passes the door of egotism and maudlin pride, and pulls the latch-string

of patience and humility. Only as the meek and lowly in heart invoke a higher aid than that of man, the sympathy comes they are seeking after.—*Illus. Christian Weekly.*

THE CAT AND THE SMOKER.

WE all know about pussy and her playful, prankish little family; and many stories are told of the wisdom of the cat.

We can tell you a story about a very sensible cat which we are well acquainted with. She had one kitten left, and she had her home in a small room, or closet, where her kitten stayed. It was a snug, cosey place, but she did not like her quarters very well.

A stranger came to stop at the house who used to go into this little room every day and smoke! This, pussy did not like, as she was a well-bred cat. One day her kitten seemed stupid, and puss seemed to think something must be done at once. So she took her kitten by the neck, and carried it up stairs into a nice, large, airy bed-room.

The people who lived there thought that was no place for the kitten, and carried it back. But puss thought differently, and pretty soon the kitten was in the bed-room again. He was carried back repeatedly, but the wise old cat had no thought of having her kitten learn to smoke; she was a minister's cat, and was too well brought up to have a smoker in her family; and so she carried that kitten up stairs by the neck *five times in one day*, and she finally conquered, and they let her put her kitten where she pleased.

So the little chap is growing and climbing, and frolicking about the house; and when the man who smoked heard about it, and found how offensive tobacco smoke was to the cat and *all the rest of the family*, he stopped smoking! So you see *a cat's good example* may be useful even to a man who has been in college for years.—*Little Christian.*

A Valuable Recipe.—For preserving the complexion, temperance; for whitening the hands, honesty; for sweetening the breath, truth; for removing stains, repentance and faith in Christ; for improving the sight, observation; a beautiful ring, the family circle; for improving the voice, civility; to keep away moths, good society; to temper the whole, humility; an enduring garment, charity.

TEMPERANCE PARODY ON "JOHN ANDERSON MY JO."

John Alcohol, my foe, John,
When we were first acquaint,
I'd siller in my pockets, John,
Which noo, ye ken, I want;
I spent it all in treating, John,
Because I loved you so;
But, mark ye, how you've treated me,
John Alcohol, my foe.

John Alcohol, my foe, John,
We've been ower lang thegither,
Sae ye maun tak' ae road, John,
And I will tak' anither;
For we maun tumble down, John,
If hand in hand we go;
And I shall hae the bill to pay,
John Alcohol, my foe.

John Alcohol, my foe, John,
Ye've blear'd out a' my een,
And lighted up my nose, John,
A fiery sign atween!
My hands wi' palsy shake, John,
My locks are like the snow;
Ye'll surely be the death o' me,
John Alcohol, my foe.

John Alcohol, my foe, John,
'Twas love to you, I ween,
That gart me rise sae ear', John,
And sit sae late at e'en;
The best o' frien's maun part, John,
It grieves me sair, ye know;
But "we'll nae mair to you town,"
John Alcohol, my foe.

John Alcohol, my foe, John,
Ye've wrought me muckle skaith;
And yet to part wi' you, John,
I own I'm unco' laith;
But I'll join the temperance ranks, John,
Ye needna say me no;
It's better late than ne'er do weel,
John Alcohol, my foe.

THE LITTLES ARE THE LARGER.

It is not merely that the littles have their places and part in making up the larger; everybody admits that: but it is that, in a sense, the littles are in themselves the larger; not everybody recognizes that as a truth.

It is the thin edge of the blade that does the cutting. Not in the massive hilt, but in the attenuated point, of the dagger, lies the danger of that weapon. Old soldiers have no such fear of heavy artillery, as of light infantry. They do not dread the ponderous round shot, or the shrieking Parrott shell, as they do the hissing bullet that pierces the air and the tissues of life, like a flying needle. It is said that the cost of the fences in America is greater in the aggregate

than the cost of the buildings. It is certainly the case that the smaller items exceed in amount the larger ones in every man's cash account. And when it comes to the troubles and worries of life, who will say that it is the great things rather than the little ones which make up his daily burden, and that cost him his keenest heart-pangs?

All great discoveries are made through observing the little things rather than the larger ones. It is the man who watches the swinging lamp, or the falling apple, or the flying kite, or the twitching muscles of the frog, or the convulsive lifting of the kettle-cover, or who pores in study over the lenses of the microscope, who brings to light new forces in nature, and new helps to toil, and to power, and to health. More has been learned concerning the material universe beyond our globe, by the examination of the single rays of light from the distant orbs, under the scrutiny of the spectroscope, than by all the survey of the vast orbs themselves in the limitless sweep of the telescope. And the great scholar in any sphere always shows his greatness rather in his new uplifting of an overlooked little in his realm of research, than in his setting in a new light the great truths which even an untrained eye could see, and an unskilled mind could recognize the meaning of.

Many a man who could nerve himself up to bear the amputation of a limb, or who could move forward unflinchingly into the thick of battle, shrinks like a child from the thought of having a tooth pulled, or an inflamed finger lanced. The very smallness of the demand for courage stands as a barrier to heroism. As there are many poisons which kill surely in small doses, but which work their own cure in larger portions, so there are many trials and causes of suffering which are overpowering and deadly in proportion to their seeming insignificance. Those who could bear great griefs courageously, and who could grandly meet great emergencies, are powerless in the presence of discomforts and annoyances which are large enough to be a reality, but too small to create a demand on all the energies of mind and heart. And so, as in many another sphere, the little troubles prove to such sufferers the larger ones.—*The Sunday-School Times.*

—Self-trust is the essence of heroism.

CANON WILBERFORCE.

ALL temperance workers have heard of this champion of temperance reform, and will be interested in reading the following brief sketch of this career as an advocate of temperance:—

“Canon Wilberforce, of Winchester, England, is a most earnest temperance worker. His story of taking the pledge, as related by him at Exeter Hall, is as follows:—

“Should you become ill, instead of resorting to Dr. Brandy, try Drs. Rest, Quiet, and Do-nothing. Before I became an abstainer, I was much subject to fainting fits. I even fainted in the pulpit, and my life was a burden, and when I had made up my mind to abstain, my medical man came from London, and said, ‘If you do, you will probably die. You want the whip for your constitution.’ I did not believe him, and I said, ‘Very well, Doctor, then I’ll die, and there’s an end of it.’ But I have not died. And when I met that medical man more than a year after, I said, ‘Now, Doctor, what do think of it?’ He said, ‘You beat me altogether. I was never more mistaken in any case in my life. And now let me tell you, that if there was no such thing as alcohol, I should have to put up my shutters. Nearly all the illnesses that come before me have in one sense or another, come from that; not always from personal indulgence of the patients, for sometimes it is hereditary.’”

“In November, 1873, Canon Wilberforce took the pledge and founded a temperance society in his own parish. Since that day an improvement which can only be called remarkable has taken place in the district. More than 2,000 persons have taken the pledge from the Canon’s own hand, and temperance meetings are held regularly in his parish.

“Canon Wilberforce has always most strongly pleaded for Gospel temperance, and insisted that the church should be in the forefront of the movement, and that ‘Love to Christ’ should be its inspiring motive.

“In 1875 he read an able paper at the Church Congress at Stoke-upon-Trent, on ‘The Best Means to Counteract Drunkenness,’ the result of which was the bringing of several clergymen into the temperance ranks, among whom we may specially mention Canon Farrar and Canon Duckworth.

“As Canon of Winchester (to which he was appointed in 1876), he preached his famous temperance sermon, ‘Sound an Alarm,’ in St. Paul’s Cathedral, which was speedily published, and obtained a circulation of about 50,000 copies. That all classes are needed in this crusade against drink has constantly been pressed home by the Canon in his platform and other utterances.”

—A French lady recently died at the advanced age of ninety. Her will contained this provision: “I leave to my physician, whose enlightened care and wise prescriptions have made me live so long, all that is contained in the old oaken chest in my boudoir. The key of the chest will be found under the mattress of my bed.” The heirs were much disturbed. The fortunate physician arrived. The chest was opened, and found to contain solely all the drugs and potions, still intact, which the doctor had given his patient for twenty years back.

POPULAR SCIENCE.

—The world’s annual production of iron is more than nineteen million tons.

—From recent experiments it appears that the greatest depth to which light can penetrate in the sea is about three hundred feet.

—The growing scarcity of the rubber-tree in its native forests, has led to the attempt to cultivate it in Mexico. The present prospect is that the effort will be very successful.

—There are five times as many species of insects as of all varieties of other living creatures together. There are not less than 750,000 different species, according to our best scientific authorities.

—Everybody does not know that nails can be readily driven into hard wood, even when well seasoned, by dipping the point in lard or oil. Many experienced carpenters employ this means of avoiding great annoyance.

—By a registering apparatus, contrived for the purpose, the movements of the wings of different insects have been counted. It is found that while the common fly vibrates its wings 330 times per second, the honey-bee makes 190 strokes, and the dragon-fly only 28.

—Alcohol was discovered by a chemist who died A. D. 923. The same man discovered oil of vitriol.

—The common nettle in this country has been recognized only as a pest to be avoided or destroyed; but now comes the report that in Germany this weed is being extensively cultivated, and an immense number of textile articles are manufactured from its fiber. A Dresden manufacturer has obtained from it the finest thread known to the trade, of which sixty miles in length weighs only two and a half pounds.

Liquor from Wood.—A Dutch firm are engaged in the manufacture of alcohol and paper from wood. The wood is first heated with hydrochloric acid, then fermented and distilled, the residue being converted into paper after proper manipulation.

The Most Abundant Metal.—The most abundant of all the metals is aluminium; but it is not found free. It exists chiefly in the compound commonly known as clay. It is one of the lightest of the metals, and possesses properties which would render it extensively useful if some cheap and efficient method for separating it from its combinations could be devised.

Egyptian Flowers.—A few months ago several royal Egyptian mummies were discovered, each of which was decorated with a garland of flowers, most of them being so perfectly preserved that the species could readily be identified. The colors were as perfect as flowers recently prepared for an herbarium. From this discovery it appears that the flora of Egypt has not perceptibly changed during the last 3,000 years.

A Wrinkle Worth Knowing.—The removal of screws from woodwork is often difficult when they have been long in place, sometimes necessitating the breaking of a door hinge or the splitting of a piece of woodwork in order to accomplish the end desired. All difficulty may be avoided by applying to the head of the screw for a few minutes the end of an iron rod heated to redness. Screws that have been driven into place are pretty sure to make trouble when removed.

Cement for Rubber.—Powdered shellac is softened in ten times its weight of strong water of ammonia, whereby a transparent mass is obtained, which becomes fluid after keeping some little time without the use of hot water. In three or four weeks the mixture is perfectly liquified, and when applied it will be found to soften the rubber. As soon as the ammonia evaporates, the rubber hardens again,—it is said quite firmly,—and thus becomes impervious both to gases and to liquids. For cementing sheet rubber or rubber material in any shape to metal, glass, or other smooth surfaces, the cement is highly recommended.

Gas Eruptions.—Several eruptions of sulphureted hydrogen, a most deadly gas, occurred not long since at Missolanghi, which were of such magnitude as to greatly terrify the inhabitants, many of whom were nearly suffocated. The morning following one of the eruptions the sea was found covered with dead and dying fish. The eruption was accompanied by an earthquake shock. When we consider what immense quantities of deadly gases are pent up in the earth, it is marvelous that immense loss of life is not frequent from this cause. In the vicinity of the now nearly extinct volcano, Solfatarale, near Naples, Italy, there are numerous places in which deadly vapors of various sorts escape from the earth in great quantities, sometimes seeming to come out of the soil itself without any visible opening. Only an exaggeration of this constant action would be required to extinguish all animal life over many square miles of territory.

Animal and Vegetable Stings.—It is well known that the effect of a stinging nettle on the skin agrees very closely with the sensation produced by the sting of a bee or wasp. But the great similarity is not limited to the feelings it causes, but, what may not be so well known, the cause of the irritation produced on the skin is essentially the same. It may be considered as definitely settled that formic acid is present in the poison sac of the bee sting, in the so-called bee poison. The same corrosive acid also occurs in the sting of the nettle. Some species of caterpillars have formic acid in some of their hairs, which they seem to be able to shake off at will, and when a person touches such a caterpillar the poison penetrates the skin wherever it is moist, and causes burning, itching, and inflammation. These poisonous members preserve their irritating powers even after the death of the worm. This accounts for reliable statements that visitors to collections of caterpillars have suffered from exanthematous eruptions on the neck. "Many hairy caterpillars cause itching and burning of the skin when touched, and sometimes it gives rise to swelling and redness. This depends on the fine hairs, which produce the same effect when they float around in the air. Many ladies who visited the caterpillar room of the naturalist Reaumur, had a breaking out on the neck."

As regards the irritative action of stinging nettles and other similar vegetables, it depends, as already stated, on its formic acid. The point of the nettles is brittle as glass, and by the lightest touch penetrates the skin and breaks off, pouring out its acid and causing the burning sensation.

In this little notice, frequent mention has been made of formic acid. In conclusion it may be stated that it gets its name from the ant (*formica*), because it was first found in them. If had been found first in the bee or nettle it would have received another name. If an ant runs over a piece of blue litmus paper, he will leave a red streak. Put a stick in an ant hill, and they will squirt strong acid on it.—*Humboldt.*

GOOD HEALTH.

BATTLE CREEK, MICH., NOVEMBER, 1883.

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

TERMS, \$1.00 A YEAR.

A HYGIENIST ABROAD.

A MONTH IN VIENNA.

BEFORE our first week in Vienna had expired, we were daily going through the following program:—

At 7:30 A. M., special instruction at the Polyclinic, in diseases of the throat and larynx, with an hour's practice in treating patients afterward; at 9 A. M., clinic on diseases of the skin; at 10 A. M., surgical clinic by the eminent Prof. Bilroth, who astonished the world a few years ago by removing a cancer from a man's stomach (The patient died, but that was to be expected. The operation was quite a success, and has since been performed upon several patients, who are yet living, and enjoying excellent health); at 11 A. M., the study of tubercular vascilli under Prof. Stricker; at 12 M., instruction and exercises in the treatment of the ear, under Prof. Politzer; at 1 P. M., special surgical work with Dr. Wölfler, First Assistant to Dr. Bilroth; and at 3 P. M., work in the microscopical laboratory of Prof. Kolisko; at 5 P. M., a private study, with the assistant professor of Pathology, of the result of all the post-mortem examinations made in the hospitals during the day; at 6 P. M., study and practice in diseases of the eye, with the assistant of Prof. Arldt, the oldest specialist in diseases of the eye in Vienna; between 7 and 8 we snatch a breath of fresh air and a few mouthfuls of food; at 8 P. M. exercises at our own apartments in removing foreign bodies from the larynx, stroking the vocal cords, performing sham operations on the interior of the larynx, exploring the throat, ears, and nasal cavity with various instruments,—all of which operations were performed on a professional dummy in the person of an old lady who obtained her living by allowing herself to be maltreated in this manner.

To relieve our reader's mind from any misapprehension, we ought to state just here that the old lady assured us many times that none of our operations gave her any pain. The kind-hearted creature generously volunteered to allow us to wash out her stomach, or explore it with an electric light. She was certainly the most convenient manikin we have ever met anywhere, as she had by long practice ac-

quired such unusual delicacy of touch in the internal structures, as to be able to correct us instantly, in her pleasant German tongue, whenever we failed to direct the probe to the point designed.

When through with our old lady, we had letters and notes for articles to write which occupied our time till midnight, unless we had a visit from a good friend we were so fortunate as to find, who frequently came to aid us in gathering together the fragments of the German which we had learned years ago at school, and which at first seemed of little more use to us than Greek, but afterward astonished us by the rapidity with which it freshened up under the influence of a German sky, German diet, and nothing but German, German, German, from morning till night.

Then we went to bed, and quickly dropped off to sleep, notwithstanding the hard mattress underneath, and a huge, obnoxious feather-bed above. The execrable feather-beds, for blankets, are universal in Germany; so it was no use to do otherwise than smother our compunctions, and endeavor to make the best of it. We usually succeeded in getting to sleep with the mountain of feathers towering high above the bed-posts over us; but we inevitably awakened during the course of the night to find that, during our unconsciousness, we had rebelled, and kicked the monstrous bag upon the floor. We could not conceive of a more uncomfortable covering during sleep. It is impossible to make one of these great round sacks cover the whole person at the same time. A foot or a knee, an elbow or a shoulder, is certain to be protruding somewhere, and not without considerable risk of being frost-bitten on a cold winter night; for the great earthen thing, used for a stove, which stands up in a corner, and looks like a cup-board, or a secretary, or a money safe, or a huge picture-frame with a pedestal, or almost anything you are pleased to call it but a warming apparatus, is an exceedingly poor substitute for one of our American heaters. We should not like to be dependent upon one of these slow-going stoves on a January night, with the thermometer a few degrees below zero, if the fire should happen to go out; for the chances are ten to one that we should freeze solid, even if we succeeded in kindling the fire, before ever the clumsy piece of

masonry would get warmed through sufficiently to make us warm. The usual custom is to build a fire in one of these awkward affairs in the morning, and then depend upon the heat left in the stove to keep one warm till the next day. We never shall forget how astonished our waiting-girl looked when we rung for her to build a second fire some time in the afternoon of a cold raw day in April.

But the obnoxious feather-beds and earthen-ware stoves are partially atoned for by the absence of paper with poisonous colors upon the walls, and of dusty carpets upon the floors. The walls are either calcimined or frescoed, and the floors are made of hard wood, inlaid in geometrical figures, and waxed and rubbed until they reflect your face like a mirror. There is no chance for dust or bacteria or consumption germs to find a lodgement on such a floor as this. Every particle of dirt shows its presence at once, and is brushed away; but oh, such poverty of pure air! The windows are all made double, and cushions placed between, so as to make the entrance of a stray whiff of air, now and then, beneath the sash impossible. We did not see a ventilating flue in all Germany, or any provision whatever for either letting in fresh air or letting out foul air, except in some of the hospitals, where now and then a single pane of glass was hung upon a swivel in such a way that, by tilting the top outward a little air might be admitted; but the wards were so poorly heated by the wretched stoves, that we have serious doubts whether a breath of pure oxygen ever gets into those dens of disease except by accident, during the cooler months of the year.

But now that we have mentioned hospitals, we ought to add something further on the same subject.

Vienna is world-famous for its great hospital, one of the largest—perhaps the largest—in the world. It is really a village by itself. You enter it from one of the principal streets of the city, passing under a great archway which ushers you into a large open square, the center of which is occupied by trees, flowers, shady walks lining the sides, leafy bowers, little thickets of lilacs and other flowering bushes, fountains, and here and there among the shrubbery little chapels dedicated to the Virgin Mary. If the day is a fair one, the walks and lawns and seats will be thronged with the inhabitants of this City of the Sick, clad in their long gowns, all dressed exactly alike, except that the men wear checked gowns, and the women pure white. Picture to yourself, if you can, the grotesque appearance of a thousand invalids, suffering with every imaginable form of disease, some hobbling about with crutches, some with heads enveloped in immense turbans, others with eyes closely bandaged and led about by companions, perhaps minus an eye or a nose or an ear, the missing member having been destroyed by some disease or acci-

dent. Here comes a man with a face all done up, nothing appearing except his eyes above and his two lips below. What can be the matter with him? He came into the hospital the other day minus his nasal organ. Now, thanks to the skill of Dr. Billoth, a new nose, fashioned from the skin of his forehead, is growing on as a substitute for the missing member. A very good substitute it will be when it is all finished and nicely rounded out by the deft fingers of the nose builder. The surgeon blocks out the work, but nature puts on the polish, and in six months from now, when the raw place upon his forehead is all healed over, and the redness has disappeared from the lines of union, you would never dream of the metamorphosis that has taken place in this man's physiognomy. You would probably suspect that he had met with an accident some time, such as a serious burn, or a severe bruise on the face, or something of the sort. For a time, his new nose will seem odd to him. If he touches it with a fragrant flower, to inhale the odor, or if he wipes it with his handkerchief, it will seem to him that he has touched or rubbed his forehead; but by and by the nerves become accustomed to their new place, and, for all practical purposes, his new nose is just as good as the old one.

But you don't want to listen to a complete inventory of these poor unfortunates and their myriad maladies, and so we will pass on through another archway, into another open square almost exactly like the preceding, though not quite so spacious. You will notice that the hospital buildings extend completely around each great square, two stories in height, and are entered at many points by means of doorways, each of which bears its number, also that of the court from which it opens. We will pass on into another square court, and still another, and, turning right or left, we will find other courts extending in both directions; and so we may wander on and on until we are quite lost in the labyrinth of arches and turnings and courts, and are obliged to inquire our way back to the main entrance.

In this hospital every form of human malady is treated. Each class of diseases has its particular portion of the extensive buildings assigned to it, and here the various professors hold their clinical lectures, which are either delivered in the hospital rooms, or in the wards themselves, or in small amphitheatres adjoining. Probably at no other place in the world are there such opportunities for studying disease in every form as here. We found the professors exceedingly affable and obliging, and ready to assist us in every way to make our brief stay of the greatest possible advantage.

We found here many of our own countrymen, as well as English and French physicians, who, like ourselves, were bent upon gathering the greatest amount of information in the shortest space of time.

Everybody seemed to be hard at work, except the German students, who appeared to take things more leisurely. Perhaps it is true in Vienna, as in other parts of the world, that "a prophet is not without honor but in his own country and among his own kin;" or perhaps the phlegmatic temperament of our German friend disposes him to devote more time to play and less to work than his American professional brother.

Here we are just opposite the doorway leading to Prof. Bilroth's operating amphitheater. It is just his hour, and perhaps you will be interested to drop in with us. A patient is on the table all ready. One of the half dozen attendants is administering the chloroform, and a noble-looking old gentleman, with a kindly face and a magnificent physique, is explaining the nature of the case, and of the operation which he has to perform. The poor patient is suffering with that most terrible of human maladies, cancer, and the part affected is the larynx, or that portion of the upper air passage which contains the vocal cords. The disease has extended to such a degree that the passage is nearly closed, and breathing next to impossible. "Well," you would say, "what does the professor propose to do for such a case? Should he not administer the chloroform a little more freely than usual, and let the poor fellow die easily?" By no means. The motto of the physicians of Vienna is, "While there is life, there is hope;" and if that hope consists in a surgical operation, the operation shall be done, even if the chance for life is but one in ten thousand, and so the eminent professor proposes to remove this poor man's larynx, which you see he has already nearly accomplished, and shortly you will see him slip in place a silver tube, through which the man may breathe freely. In the course of a few weeks, the wound will be healed, leaving a permanent opening, and then, by further exercise of ingenuity, he will furnish the voiceless patient with an artificial larynx, containing a number of vocal cords, by means of which he can speak, though in a monotone, of course, as artificial cords are capable of making but one tone. But this tone can be modified by the tongue, lips, palate, and other accessory organs of speech, into any variety of sounds which can be uttered in that tone. If he gets tired of one tone, he can have two or three sets of vocal cords, which he can introduce at will, and so modulate his voice from a deep base tone to a shrill falsetto.

We must not pause so long in a single apartment, or we shall never get through this great establishment.

As we step out into the court again, and walk along, we pass the unpretending doorways over which are inscribed the world-famous names of Stollwag, Arldt, Jaeger, Hebra, Kaposi, and others. The last name, by the way, has a little romance about it.

The professor, now the leading authority on skin diseases since the death of the elder Hebra, was formerly known to the professional world as Cohn. Suddenly Cohn disappeared from view. No one knew what had become of him. There was no account of his death, and none of his having fled to foreign parts. He had simply dropped out of knowledge in some incomprehensible way.

The secret was this: the eminent specialist of skin diseases wished to marry a daughter of his venerable teacher, Hebra, but the latter objected on account of his Jewish name, and so one night, when Cohn retired to rest, he dropped off with his old garments his old name, and awoke the next morning, Kaposi.

Here we are at the entrance of the Pathological Institute. Underneath is a long room, in which are arranged in coffins the bodies of patients who have died in the hospital, whose friends claim the privilege of burying them. We may look in through the open door, by going down a flight of stairs to the left, and, as we do so, we see the man in charge of this department carefully sorting out labels, on which are written the names of the deceased, their ages, and other particulars, and tacking them onto the coffins. How he ever prevents their getting mixed up and transposed is a mystery not easily solved, and we would not wish to vouch that such an accident does not happen now and then. A hearse is just coming in to take away one of the three coffins ready for burial, and we will run up stairs and take a moment's peep into Prof. Stricker's famous laboratory.

In this little work-shop have been made some of the most important of modern discoveries in relation to the structure of the human body. Here is our table, and with the apparatus scattered over it we will make a careful study of the so-called tubercle bacillus discovered by Prof. Koch of Berlin, and believed by him to be the cause of consumption. Prof. Stricker believes Koch to be in error in his views on this point, and so we are studying his side of the question, hoping by comparing the arguments of both to be able to arrive at the real truth.

The other morning we had the pleasure of meeting in this interesting place, our friend, Prof. Heitzman, of New York, one of the most noted microscopists in America, who has come here to work up a special subject with Prof. Stricker, during his summer vacation.

Some of you will perhaps be interested to know that the Medical Department of the University of Vienna, one of the leading medical institutions in the world, has a Professor of Hydropathy, or water-cure. Dr. Winternitz occupies this chair, and has a cold-water clinic three or four times a week, at the Polyclinic, a few rods from the great hospital. We called in there the other day to see him, and found him prescribing wet bandages for the abdomen, cold com-

presses for the throat, chest-wrappers for the lungs, foot-baths for the head, cool shower-baths for a general tonic, plain diet, and other sensible things which are not wholly unfamiliar to us. He received us very politely, and took us down stairs to the basement, where he had everything fitted up for the demonstration of his sovereign remedy. Sitz-baths, full-baths, foot-baths, shower-baths, douches, sprays, packs, etc., were all in vigorous operation. The room was rather cold, not over 55°, and the water still cooler, so that a number of patients groaned and squirmed and shivered when the great streams of water came pouring down upon them; but they were quickly rubbed and spatted till a fine reaction occurred, and the Doctor assured us that the results were excellent, although, to us, the dose seemed rather severe.

The Professor invited us to visit his institution ten or twelve miles out of Vienna, which we accordingly did the next day, driving out over the beautiful hard road in a light, covered carriage, as the sky threatened a storm. We found Kaltbad a charming little place up on the mountain side, supplied with water by a gushing spring, clear and cold, hundreds of feet higher up. The Doctor owns the whole village, it being almost entirely occupied by the patients of the establishment, who number, during the summer months, somewhere from three to five hundred. Water and a carefully-regulated diet, are almost the sole means relied upon in the treatment of patients, although the Doctor uses a very little medicine now and then, in special cases. The appliances in use seemed to us rather crude, compared with those we have been accustomed to employ in the Sanitarium, but they were certainly superior to those of any other establishment we have seen abroad, if we except the splendid institutions at Baden Baden. The courteous assistant physician showed us all about, and explained very fully the workings of the institution. He proposed to give us a little lunch, "schwartz-brod und saur milch" (black bread and sour milk), the staple articles of diet in the establishment; but we suddenly recollected that our time was too limited to allow us to prolong our stay. Sour milk and black bread are the leading articles of diet among the poor, though perhaps we should add *beer*, which is certainly used much more freely than water in Germany. We have many times seen German laborers making an entire meal of black bread and sour milk, with beer. We have frequently seen women laborers making a meal of black bread and water, though we do not recollect having seen, in Germany, a single man, among the laboring class, eating his dinner without the beer. American ladies would certainly be amazed to see the German women at work along with their husbands upon the street, hauling stones, digging ditches, making pavements, collecting garbage, building public buildings,—in fact, in every place where one sees men, women are also to be seen. The principal difference in their employment seemed

to be that the women did the hardest kinds of work, and did the most of it, and did their work without smoking pipes, and without drinking much beer, which could not be said of the men.

Here is a great brick building going up. The brick and mortar are all carried by women, upon their heads. Young women of eighteen or twenty, and old women whose locks are white,—or would be if they were thoroughly washed,—are trudging along together with great piles of mortar upon their heads, every one as straight as a straight-edge, with strong arms, ruddy cheeks, and bright eyes, the very picture of robustness and health,—no high-heeled shoes on their feet, but good substantial boots, and no long skirts dangling about their ankles. Their dresses clear the ground by at least ten inches. A well-informed gentleman assured us that these women are considered more valuable, as common laborers, than men. Being more industrious, they accomplish considerable more work in a day than the average man, and hence employers are willing to give them equal pay. We cannot say that we believe the kind of employment described is in any way advantageous to the women of Germany, as the women of that class were usually coarser looking than the men were; but they work well, and there may be some apology for their employment in the fact that a large share of the able-bodied men are in the army. We were informed that the standing-army of Austria has twelve hundred thousand men; while eight hundred thousand more soldiers are held in reserve. One thing we observed in the laboring women, which we consider noteworthy: when we met them upon Sunday holidays, we found them still retaining the same good sense in dress that they observed on week days. They still wore boots, but not so coarse and heavy as those worn when they were laboring, and their skirts still lacked eight or ten inches of reaching the ground. One of these women would probably feel as ill at ease in a pair of French boots, as a man would feel in a trailing dress, or a monkey entangled in the same ridiculous trapping.

But it is time to leave Vienna, as we have many other places to visit, and so we will not stop at present to tell you of the curious one-sided wagons, and the big and little carts drawn by huge dogs, sometimes harnessed alone, and sometimes making a team with a man or a woman, a boy or a girl for a partner; or of the absurd way in which everybody works on Sunday, and wears a sanctimonious face on a holiday; or of the spacious avenues, with their triple drive-ways and double rows of trees; or of the parks, and gardens, and palaces, and many other wonderful sights which ought to be seen to be appreciated.

Next month, if you are not tired of following us in our journeyings, we will take you on a little excursion among the Alps.

—"Life is not to live, but to be well."

HOW OLD PEOPLE DIE.

Most old persons die from overfeeding or exposure. In old age, the resisting power of the system is very greatly lessened, and a degree of exposure or indiscretion which might have been borne with impunity a few years earlier in life, may be sufficient to disturb the vital machinery sufficiently to produce fatal results. Excess in eating is perhaps a more general cause of hastening dissolution in the old than any other form of excess. The diminished bodily activity renders less food necessary to supply the wants of the body; and when the amount of food taken is not proportionately reduced, the system becomes clogged, the blood gross, exciting, and filled with imperfectly elaborated material, the blood-vessels are surcharged, and, in consequence, the liability to apoplexy or some other form of paralysis is very greatly increased. Heavy feeding is absolutely dangerous for a man above fifty years of age. The blood-vessels are weakened in old age, sometimes to a very remarkable extent; and the fullness and congestion of the brain which result from excess at the table are almost as fatal as a dose of strychnia or a leaden bullet.

Excess in the use of meat is especially to be condemned in elderly persons. Flesh food is stimulating to the cerebral circulation, at the same time that it produces a tendency to plethora. Statistics show that the chances for life are much better for an elderly person in this country than in England, which may be attributable to the excessive use of flesh food in that country.

At this season of the year old people need to take special care to avoid getting chilled. Cold is one of the most deadly enemies of old age. A large share of the elderly people who die, succumb to the influence of cold, inducing pneumonia. An abundance of warm clothing, with warm but well ventilated rooms, is essential to the old during the cold season

of the year, and they should avoid the exposures which younger persons may endure without injury.

FASHION'S TORTURES.

WE have read with horror of the torturings of the Roman Inquisition during the latter years of the Dark Ages, and as we have looked upon the numerous ingenious devices for inflicting pain, which remain in the various museums of Europe silent but truthful witnesses to the atrocities of a fiendish fanaticism which, under the guise of religion, gave loose rein to the worst passions,—the thumb screws, the pincers, the jaw dislocators, the rack, etc., we could almost hear the groans and shrieks of the poor victims whom cruel fate delivered into the hands of human fiends. The sympathies of the whole modern Christian world have been aroused again and again by the rehearsal of the monstrous cruelties practiced in the name of religion.

According to the *London World*, Dame Fashion has recently adopted the means and methods of the inquisition. Not content with the misery and suffering which she has been able to inflict with such instruments of torture as narrow-toed shoes with paper soles and stilted heels, French corsets, and sundry other kindred follies, she has devised a means by which to apply the old inquisitorial rack for the purpose of increasing the height of women who find themselves below the fashionable standard.

This new device for fashionable torture, says the *World*, is based upon the fact that we are taller in the morning than at night, because the body, while resting in a horizontal position, regains by its elasticity what it has lost in height during the day by the operation of gravitation. "Moreover, the use of the corset has demonstrated that the feminine form is elastic. The waist may be compressed, but a compensating expansion takes place in other parts of the body. Whenever a

cubic inch of flesh is pushed away from the region of the waist by the corset, it makes its appearance elsewhere. In fact, the corset re-arranges its wearer, and diffuses her waist, instead of partially annihilating it. Now, if half a woman's waist can be transferred from her belt to her shoulders, why should it not be possible to increase her height by squeezing her whole body in an elongated corset? This is what the intelligent inventor has done, and it is by a combined system of pressure and stretching that short women are now made long.

"The woman who is to undergo this process is incased in a very tight corset, and her feet are placed in shoes weighted with fifty pounds of lead each. She is then placed in a machine consisting of a ring which encircles her waist and is suspended from the ceiling at such a height as to prevent her feet from touching the ground. The pressure of the corset forces the upper part of her body upward and the weight of the shoes stretches her from her waist downward. Of course, the bones of the human body cannot be artificially elongated, but the joints can be stretched. It is estimated that the extreme length to which the spine can be stretched by the process thus described is two inches, and that the knee, ankle, and hip joints can be stretched an inch and a half more. Thus three inches and a half can be added to the height of almost any woman who has the courage to undergo the trouble and pain necessarily connected with a stretching process lasting, with brief interruptions, during five or six months."

Robert Collyer on Diet.—The eminent clergyman once remarked, "One great reason why I never had a really sick day in my life was that as a boy I lived on oatmeal and milk, and brown bread, with butter once a week, potatoes, and a bit of meat when I could get it, and then oatmeal again."

The Scotch country boy rarely tastes a

morsel of flesh food, and so far as we were able to observe, he does not suffer at all by comparison with his English cousins, or with the average American farmer's boy, in point of native intelligence or physical development. Oatmeal is acknowledged to be the best of foods for horses, and experience shows it to be of equal rank as a food for man.

Disease in Cattle.—An exchange publishes the following:—

"A startling report comes from Chicago in relation to the cattle shipped to that city, to the effect that quite a percentage of the stock found in the yards is affected with cancer, and the matter has been placed in the hands of the health commissioners, for the inspection of all cattle or other animals slaughtered for the market. The use of meat from cancerous animals poisons the blood, and induces fever similar to fever from other causes. The health commissioner expresses the belief that a number of deaths have resulted in Chicago from the consumption of meat sold without the knowledge of the health authorities. This state of affairs suggests the importance of caution in the use of meat offered in the market. All flesh is subject to disease, and if there is the taint of disease in the animal used for food, that disease will be transferred to the human system, in the process of assimilation."

We doubt the correctness of the above report as regards the nature of the disease, as cancer certainly cannot be regarded as a frequent disease among animals, but we have received sufficient evidence from a variety of sources to convince us that a vast amount of disease in human beings is the result of the use of the flesh of diseased animals as food. There is certainly a great necessity for a searching investigation and the most rigid inspection. But will our inspectors look sharply enough to discover the torpid livers, disordered kidneys, sluggish skins, and other weak and functionally diseased emunctory organs

which occasion a clogged and impure condition of the tissues and undoubtedly are really more serious causes of disease than pleuro-pneumonia, trichinæ, Texas disease, or hog cholera. Everybody knows that the fattening process, as it is usually conducted, is a disease-producing process. The great increase of adipose tissue is chiefly due to an accumulation in the system of the debris and waste which ought to be eliminated. And yet the majority of people will insist that this filth-clogged tissue, flavored with the elements which should have been eliminated in the bile, the urine, the perspiration, and other excreta, this poison-laden beef, mutton, and pork, is toothsome, palatable, and food greatly to be desired.

Ventilation in a Bee-Hive.—The "little busy bee" seems to be somewhat of a sanitarian; it at least understands the necessity for an abundant supply of fresh air, and adopts original methods of its own for securing it. A well-informed writer asserts that "a bee-hive is as pure inside as the open air outside, in spite of all the cells of closed wax that, to a casual inspector, seem as if impervious; for it is known to observers of their manners and customs, that although a bee-hive has only one door in it, and no windows, all through the night and day from twenty to thirty bees fix themselves on the floor of the hive, and cause ventilation by flapping their wings. At night the number is increased, and in this the bees show their sagacity over many nations and peoples of the world, who believe night air from outside to be injurious, and ignore the fact that the night air of our sleeping-rooms, when these are shut up, is of the densest poison. The wing-flapping wafts the fresh air through the hive; and when four or five bees fall out exhausted, others take their places so as to keep the air fresh. In the warm weather, when the honey-making becomes more vigorous with the opening flowers, the fanners are seen flitting outside of the hive in front of the

door, to add to the air, as a captain of a ship claps on more sail when the exigencies of his voyage demand it."

An Ancient Cure for Gluttony.—The Vegetarian Almanac describes a custom which prevailed among the ancient Gauls which must have been an effectual cure for gluttony, as it must certainly have been an efficient preventive. It appears to have been a fashion "among that abstemious and hardy people to wear a metal ring round the body; the size of this ring, to speak in modern language, was regulated by Act of Parliament. This ring was worn round the body, just in that part where we see modern Britons wearing paunches; any man who outgrew in circumference his metal ring was looked on as a lazy glutton, and, consequently, was disgraced.

"The ancient Gauls lived very abstemiously; they were very brave, very strong, and very hardy; their food was milk, cheese, berries, and various sorts of herbs. They made bread out of nuts, and they dressed themselves in garments woven from the wool of the sheep and the hair of the goat. They never destroyed any useful domestic animal for food, but they were great hunters of wild beasts. Their religious customs were similar to those of the ancient Jews, and many have supposed that they were a remnant of that people. Their descendants were the first inhabitants of the British Isles, and they were finally exterminated by the Saxons, so that we have none of their element in Britain at the present day."

—A doctor undertook to explain to his little daughter the difference between the allopathic and the homœopathic schools of medicine. He told her that homœopathy meant "small quantities," and allopathy meant "large quantities." His daughter, catching the idea, promptly exclaimed: "Then I know what Mrs. Parker meant when she said sister Mary was out of proportion; she's got a homœopathic nose and allopathic feet!"—*N. Y. Journal.*

The Price of Human Blood.—A New York Judge has a curious question before him for settlement. It seems that a gentleman stopping at one of the hotels in the city was advised by his physician to undergo the operation of transfusion. A colored waiter was called in to furnish the blood, and eight ounces of the vital fluid were drawn and injected into the patient's arm. A small fee was paid to the negro, and the hotel was also paid something for the extraordinary service required of the waiter; but the colored gentleman has concluded that he was insufficiently paid, and has brought suit for the sum of \$250. As human blood has not yet become a commodity of trade, there is no standard of value, and the judge before whom the suit is brought must decide the question how much per ounce human blood is worth. Possibly the question may arise whether any known difference in quality will be regarded as affecting its money value, or whether the purchaser will have any redress in case a certain quantity of the article purchased should turn out to be of poor quality, infected with some constitutional disease, as consumption, scrofula, syphilis, or general depravity. All persons who expect to be obliged to undergo the operation of transfusion, will look forward with much interest to the result of the suit now pending.

—M. L. Fourment adds his testimony in support of the fact that salting is not usually fatal to trichinæ in pork. Indeed, according to his observation, salting protects the parasites by rendering the meat less easily influenced by heat in cooking. This is another item for the users of swine's flesh to think upon.

—Dr. Richardson, the eminent English physician and scientist, asserts that the misery of the women of the poorer classes of the population in England is more than doubled by the use of tea, which only soothes or stimulates to intensity the after-coming depression and languor.

Bread vs. Beef.—In a recent report to the Royal Society of England, Sir John Bennet Lawes, Bart., LL. D., F. R. S., F. C. S., and Joseph Henry Gilbert, Ph. D., LL. D., F. R. S., V. P. C. S. (certainly very titled authorities), present facts drawn from a long series of experiments which show conclusively that wheat meal and other whole-grain preparations are in no way inferior to butcher's meat, either as flesh formers or as heat formers. This at once silences the long-used argument that animal food is essential for the purpose of maintaining the strength.

—M. de Lesseps, the eminent French engineer, rears his children in the greatest simplicity. In diet, dress, and all habits of life, he endeavors to make their conditions as nearly natural and healthful as possible. He attributes his own remarkable vigor and vitality at an advanced age to the fact that his father entertained the same views respecting child rearing, and brought him up "like a young savage," at least in many respects. He asserts that "the children of the rich are overfed, overdressed, and under-exercised."

—A few weeks ago a citizen of Warsaw, Ind., was reported as lying at the point of death with trichiniasis, the result of eating a small piece of pork two weeks previously.

Talks with Correspondents.

AN enthusiastic reader of GOOD HEALTH, who has been taking the journal for nearly three years, and "would not do without it for twice the price of it," and wishes "it were bigger," offers the following inquiries:—

"Do you consider popcorn healthy?"

"Why is it that the water in which potatoes are boiled, with skins on, is considered poisonous, when it is claimed that potatoes roasted are the most wholesome? Surely the chemicals which are considered poison in the water where potatoes are boiled is retained in the baked ones."

Answer.—Parched corn is a perfectly wholesome article of food, and will sometimes be re-

ceived by the stomach when almost everything else is rejected. It ought to be eaten at meals, however, not in the evening, just before going to bed, which we believe is the common custom.

The inquiry raised by our correspondent respecting the poison of potato skins is an ingenious one, and we do not recollect having ever seen any researches on the subject reported. It is well known that the skins of potatoes, especially when the potatoes have been exposed to the air and sun by being only partially covered by dirt, contain a poisonous substance allied to belladonna, known as *solanine*, which is a deadly poison, even in small doses. The amount contained in a single potato, however, is very minute indeed. The peculiar flavor present in the skin of boiled potatoes and the water in which potatoes are boiled with their skins on, is certainly not present in the skins of potatoes which have been baked, and it is possible that the poison is either destroyed by the high degree of heat, volatilized, or it is dissipated.

Edenic Diet.—"A Hygienist" makes the following inquiry:—

"Will you please give, in the next number of GOOD HEALTH, your opinion of what is known as the 'Edenic Diet' of uncooked grains and fruits? I see it recommended by Dr. C. E. Page in his book, 'The Natural Cure,' and by Gustav Schlickeysen in 'Fruit and Bread,' and it has, I understand, been adopted by several persons in California, with, as they claim, very decided benefit."

Answer.—It is not probable that Adam and Eve were provided with a cook-stove, or any other means of artificially preparing their food, and it may be considered probable that man, like other animals, was originally designed to eat his food in the state in which nature prepares it; and if a person is willing to confine himself strictly to the frugivorous diet and nature of human species, there is no doubt but that prime health can be maintained without the aid of cookery.

Fruits are prepared, by the process of ripening, for ready and easy digestion by the stomach and other digestive organs. Nothing digests more quickly than a ripe apple. This is not true, however, of grains and vegetables. The nutritive elements of these classes of food require the action of heat to bring them into the same condition which is brought about in fruits by the process of ripening. Hence, we would not advise any one to attempt to live upon raw grains and vegetables. While it might be possible to maintain life, it would by no means be for the best interests of the digestive organs to adopt such a dietary. We know of no objection whatever to the cooking of food. The heat, in various ways, simply performs a sort of preliminary digestive process, rendering the elements more easily soluble in the digestive juices than they could otherwise be.

For the Sick Room.

Linseed Tea.—This simple domestic remedy is often useful in cases of colds in children, favoring both free expectoration and perspiration. The following is a good method for making it:—

Two tablespoonfuls of linseed, unground; one quart of cold water; heat to boiling point, then allow to boil two minutes. Strain, and add the juice of a lemon and sugar. Take a glassful warm every hour or two.

Sore Eyes.—A simple form of inflammation of the eyes, very common in children, is known as catarrhal conjunctivitis, or cold in the eyes. The mucous membrane is red and swollen, and covered with a viscid secretion by which the lids are stuck closely together in the morning or when the child awakens from a long sleep. The white of the eye is very greatly congested, and the mucous lining of the lids has a velvety appearance.

TREATMENT: The eye should be protected from bright lights, and should be given as perfect rest as possible. A spray of tepid water should be used several times a day by means of the fountain douche. Small compresses wet in cold water and changed every few minutes, should be used when the inflammation is quite severe; and should it be very intense, the cloths should be cooled by laying them on blocks of ice. A solution of alum, one or two grains to the ounce, may be dropped into the eye once or twice a day with advantage. The edges of the lids should be anointed with vaseline or sweet-oil to prevent their adhering together. Poultices, patent eye lotions, etc., should be entirely avoided. A mucilage of quince-seeds or sassafras pith is sometimes found very grateful to the eye, soothing the irritated surfaces. This form of sore eyes is communicable, and hence care should be taken that the disease is not conveyed from the patient to other children.

Ventilation of Sick-Rooms.—Those having care for the sick should know that a sick person requires, as a rule, at least one-half more fresh air than a well person. And when it is recollected that the average adult needs at least three thousand cubic feet of fresh air each hour, it will at once be seen that a sick person requires so large an air supply that some special means must be adopted for securing it. Sick persons are often very susceptible to drafts, taking cold on the slightest exposure, so it may not be possible to open the windows of the sick room itself. In such cases, when no other means is provided, ventilation must be secured through an adjoining room, the connecting door being left open, and the windows of the vacant room opened wide, so as to secure

an abundant supply of fresh air, which will enter the sick room by currents established through the open door. When this method cannot be adopted, the air may be introduced through a box of a length equal to the width of the window frame. One side of the box should be left open, and the opposite side should be covered with wire cloth of medium fineness. By this means, the currents of air will be so broken up, that no drafts will be felt.

TAKING COLD.

THE following very sensible remarks from the *London Lancet* are particularly appropriate at this season of the year:—

Catarrhs should receive careful consideration instead of the neglect which they generally meet with until they have fastened on the part affected so much as to excite the attention, and perhaps alarm, of the sufferer. Here, however, we propose to say a few words about the causes of chills.

A person in good health, with fair play, easily resists cold. But when the health flags a little, and liberties are taken with the stomach or the nervous system, a chill is easily taken, and, according to the weak spot of the individual, assumes the form of a cold, or pneumonia, or, it may be, jaundice. Of all causes of "cold," probably fatigue is one of the most efficient. A jaded man coming home at night from a long day's work, a growing youth losing two hours' sleep over evening parties two or three times a week, a young lady heavily "doing the season," and young children at this festive season overfed, and with a short allowance of sleep, are common instances of the victims of "cold."

Luxury is favorable to chill taking. Very hot rooms, soft chairs, and feather-beds create a sensitiveness that leads to catarrhs. It is not, after all, the "cold" that is so much to be feared as the antecedent conditions that give the attack a chance of doing harm. Some of the worst colds happen to those who do not leave the house, or even their bed; and those who are most invulnerable are often those who are most exposed to changes of temperature and who, by good sleep, cold bathing, and regular habits, preserve the tone of their nervous system and circulation.

Probably a good many chills are contracted at night or at the fag end of the day, when tired people get the equilibrium of their circulation disturbed by either overheated sitting-rooms or underheated bedrooms and beds. This is especially the case with elderly people. In such cases, the mischief is not always done instantaneously, or in a single night. It often takes place insidiously, extending over days, or even weeks. It thus appears that "taking cold" is not by any means a simple result of a lower temperature, but depends largely on personal conditions and habits affecting especially the nervous and muscular energy of the body.

LITERARY NOTICES.

THE AMERICAN TEACHER is the title of a new monthly magazine, published by the New England Publishing Co. of Boston, and is the union of the very successful monthly magazines, THE PUBLIC SCHOOL, THE PRIMARY TEACHER, THE TEACHER'S COMPANION, and THE KINDERGARTEN MESSENGER. It is a 32-page quarto, full of valuable matter relating to the principles and methods of education, as interpreted by our best teachers and writers on the subject. Its editors are T. W. Bicknell, the educational editor and publisher of Boston; W. E. Sheldon, former editor of the Primary Teacher; and W. N. Hailmann, the able expounder of Kindergarten methods.

The first number of this magazine is exceedingly interesting and valuable. The articles are practical, cover a wide range of topics, and are written by some of our ablest teachers. Subscription price, \$1.00 per year.

COFF'S U. S. SALARY LIST AND CIVIL SERVICE RULES.—This is a recently-issued book of 160 pages, containing a large amount of solid information. It is prepared by Henry N. Coff, a lawyer of Washington, D. C. All the government salaries are given in the book, from President Arthur's \$50,000 to the postmaster's \$500, and all salaries of the officials of the Treasury, Interior, Navy, Custom Houses, and fully 20,000 federal offices arranged by States and Territories. Specimen examination questions for admittance to the Civil Services throughout the country, are added. The price of the book is 35 cents.

THE WESTERN EDUCATIONAL JOURNAL is a wide-awake monthly, devoted to educational interests, and published at No. 85 Fifth Ave., Chicago. It contains departments of science, art, music, bibliography, and critical reviews of current literature. Its aim, according to the prospectus for the present volume which began with the September issue, is to battle for the pure in literature, the solid in education, the useful in science, the just in politics, and the right, the good, and the true in religion and life. With such a purpose, and with its excellent corps of editors, numbering among its list some of the best educators of our land, the success of the Journal is assured. Subscription price, \$1.00 per year.

THE ELECTRA, of which we have received the October number, is a *belles lettres* monthly for young people, and one of the best magazines for the young we have ever seen. The articles are largely historical, biographical, or otherwise instructive in character; while each number contains a department entitled, "The Reading Club," in which is marked out a monthly course of study for its readers. It is published at Room 3, Courier Journal Building, Louisville, Ky. Terms, \$2.00 per annum.

Publishers' Page.

Our New Departure.—In response to our suggestion of a new department devoted to Domestic Medicine, we have received so many letters expressive of interest in the subject and an earnest desire that it may be made a more prominent feature of the journal than heretofore, we have fully decided to begin the next volume with the new department added, and trust that in so doing we shall add to the interest and usefulness of the journal to such a degree that all our present subscribers will remain with us, and will feel interested to call the attention of their friends to the journal, and if possible induce them to subscribe. GOOD HEALTH is designed to be a missionary, proclaiming the doctrine of "health by good living," and the publishers invite all who are interested in the mission of the journal to lend their influence to aid in the extension of its sphere of usefulness.

A New Plan.—We have in preparation, to be ready in a few days, a new premium to be entitled "A Manual of Health and Temperance." This work will consist of about two hundred and fifty pages, nicely bound in cloth; and in addition to the valuable matter which it contains, consisting of practical hints on almost all subjects relating to health, and the sixty-four page summary of scientific arguments against alcohol and tobacco, it will be illustrated by four colored plates. Two of the plates will exhibit in a graphic way the effects of alcohol upon the stomach; and the other two will illustrate practical hygienic topics. The book will include a set of directions for the detection of adulteration in common articles of food and drink,—a test for bad water, which will enable any one to determine, with a reasonable degree of certainty, the condition of their water supply, as regards health; a test for carbonic acid gas, so simple that it can be used by any one for testing the condition of the air of dwellings, churches, lecture-rooms, etc.; a test for wall-paper and fabrics containing arsenical colors, which will be accompanied, in each book, by a specimen of arsenical paper. Next month we will publish a complete table of contents of the new work, and expect to have it ready for agents within two weeks from the present time.

The retail price of the work will be 75 cents per copy. It will be supplied with GOOD HEALTH for the small sum of 25 cents; that is, every new subscriber to GOOD HEALTH sending \$1.25 will receive a copy of the book and the journal for one year.

While in Paris, we had the pleasure of making the acquaintance of Dr. Dujardin-Beaumez, who stands in the front rank among medical scientists in France, and whose experiments on the effects of alcohol upon human beings and lower animals have contributed much toward the establishment of a scientific basis for the temperance reform. The professor kindly presented us with a copy of the report of his experiments up to within a short time. The report is full of interest, and we shall take great pleasure in giving our readers, from time to time during the next year, translations from this valuable volume.

We are now preparing a new list of prizes, which will be ready for next month.

We learn with great regret through a telegram received at this place a few days since, of the death of Eld. J. N. Andrews, at Bale, Switzerland. The particulars of his death have not yet been received, but it was undoubtedly the result of the disease of his lungs, from which he had been suffering for many years. Eld. Andrews was a man of deepest piety, a most genial nature, and was a sincere, faithful friend. His death will be mourned as an irretrievable loss by all who enjoyed his acquaintance.

We would call attention to the advertisement of the Sanitary Supply Company. All of the articles advertised, we can recommend as not only wholly unobjectionable from a health standpoint, but as almost indispensable to those who wish to conform to the requirements of health, especially in matters of dress. Agents, especially lady canvassers, can do a very profitable business in introducing these goods, and at the same time enjoy the satisfaction of knowing that they are engaged in practical missionary work of a most noble character. Persons who wish to engage as canvassers for these goods should address, for agent's terms, SANITARY SUPPLY CO., *Battle Creek, Mich.*

We would call attention to the advertisement of the "Dietetic Reformer and Vegetarian Messenger," which appears in our advertising pages this month. The journal is devoted chiefly to an exposition of the principles of vegetarianism. Each number is replete with interest to those who are interested in the subject.

A day or two ago, we sent a set of Temperance Charts to Mr. T. H. Gibbs, Ottawa, Kansas, as a premium for forty-two subscription to GOOD HEALTH which he has sent in to this office. We shall be glad to use a good many sets of these charts in this manner. A description of the charts will be found on another page.

On receipt of fifteen cents, we will send four Lectures, by Dr. Kellogg, on the following important subjects:—"The Liver," "Rational Treatment of Consumption;" "How to Get Well Fast;" and "The Physical Effects of Alcohol and Tobacco." The price of these Lectures, singly, is five cents.

We are constantly receiving letters of commendation of our various food preparations, a list of which is given in the advertising pages, under the head of "Invalid Foods." These foods are all prepared with very great care, and are exactly what they profess to be. The demand for them is constantly increasing, as they become better known.

The American Public Health Association will hold its annual meeting for this year at Detroit, Mich., Nov. 13, 1883. The meeting will be attended by leading sanitarians from all parts of the United States and Canada. The occasion is expected to be one of great interest to all who appreciate sanitary science.

Those who really make a business of canvassing for GOOD HEALTH, nearly always succeed well. An agent recently sent us fifty-two names of annual subscribers, as the result of a few days' work in connection with other canvassing work in which he was engaged at the same time.

THE SANITARIUM.

A sanitary Convention is to be held at Ionia, Mich., early in December, under the auspices of the State Board of Health.

The Sanitarium Health and Temperance Society is still flourishing, interesting meetings being held twice a month.

Miss Pruden reports herself considerably improved, and determined to be well sometime. She expects to spend the winter in Washington.

Eld. Hutchins of Vermont, so well known to hundreds of our old patients as chaplain of the institution for some time, is spending a few days at the Sanitarium.

The last news from Mrs. Leadbetter reports her as enjoying very comfortable health, able to be about, and better than any of her physicians had believed she ever could be.

Mrs. Mathews recently returned to her home in New York, and sends back word that she finds herself much better than she supposed. Has already gained nine pounds in flesh, and is still improving.

Miss B., of Milwaukee, who came to us a few weeks ago one of the most emaciated invalids who ever entered the institution, reports a gain of nine pounds within the last three weeks, on good hygienic food.

Judge Sherwood and family of Kalamazoo are spending the winter at the Sanitarium chiefly for the benefit of Mrs. Sherwood, who has been a very great sufferer for many years. Her friends will be happy to learn that she is making very satisfactory improvement.

Battle Creek is getting to be a great railroad center. Three important roads form a junction here at the present time, and another is projected to run through this city. The centering of so many roads here, coming as they do from different and remote parts of the country, affords patients ready facility for reaching the Sanitarium at a minimum of expense and trouble.

We were all delighted to receive a visit from Hon. B. K. Elliott, Chief Justice of the State of Indiana, and were sorry he could remain but a week. We hope the Judge will be able to tear away from his arduous duties for another vacation during Christmas and New Years.

We have recently had a short visit from Mrs. Nutting, whom many of our old patients will remember as one of the feeblest of our numerous family, three or four years ago.

After more than twelve years of suffering, she has recovered a very comfortable degree of health, and the present prospect is that, unless some accident befalls her, she will be a very infrequent patron of doctors and sanitariums for some years to come.

The numerous friends of Miss W., of Allegan, will be pleased to know that the few weeks of her stay with us have enabled her to add eighteen pounds of flesh. And although she had been confined to her bed for three years, having taken scarcely a step during the whole period, she is now able to walk ten rods, the daily distance being gradually increased from day to day. Her ambition is to be able to walk a mile without stopping, when she expects to receive an honorable discharge from the institution.

Many who became interested in the case of "Charlie," the little boy who came to us so terribly afflicted with a peculiar form of epilepsy a few months ago, will be delighted to learn that the little fellow returned home two or three weeks ago perfectly restored to health, having had no symptom of his former trouble for two months, although when he came to us he was having from twenty-five to thirty fits every day. He had gained nearly twenty pounds in flesh, and had become so plump and rosy that those who saw him when he arrived would scarcely recognize him as the same boy. The most gratifying fact of all was that he had fully recovered his naturally bright mental qualities, which had become seriously impaired by the terrible disease from which he was suffering.

Sanitarium Training School.—A number of ladies have already arrived to attend the Training School for Nurses, at the Sanitarium, announced to begin Nqv. 1. This is a rare opportunity for persons who wish to become professional nurses, or who simply desire to become expert in the art of nurse-

ing, for the benefit of their own families. We have received so large a number of letters from persons who desire to attend, but who will be unable to reach here before the middle of November, that the opening of the course will be postponed two or three weeks. Those who arrive before that time, however, will be at once occupied in a profitable manner, so that no time will be lost. Graduates from the School who become proficient, will be guaranteed situations. Further information respecting the course will be in the advertising pages of this journal.

New Apparatus.—Two large pieces of apparatus recently arrived from Chicago, where they have been for some time under process of construction, which are destined for use in the department devoted to diseases of the lungs and throat. One is to be used in connection with the oxygen treatment.

The Physical Exercise Department.—Every patient who is not actually bedridden, receives a prescription for exercise, the kind and amount being regulated by the patient's condition. The large airy gymnasium affords a most favorable place for healthful exercises of all sorts, and is occupied at all hours of the day.

Every week, new apparatus of some sort is added to the large number already in use. The varied and pleasant character of the exercises serves to occupy the time of patients in an agreeable manner, and their systematic use develops the symmetry of the body, aids circulation, digestion, and the general vital process necessary to recovery from chronic disease.

The following is a partial list of the exercises prescribed for patients, the exact amount of exercise to be taken each day and the amount of daily increase being specified in each case:—

<i>Walking,</i>	<i>Carriage-Riding,</i>
<i>Horse-back Riding,</i>	<i>Lifting,</i>
<i>Calisthenics,</i>	<i>Indian Clubs,</i>
<i>Rowing,</i>	<i>Pulling Weights,</i>
<i>Arm Rotating,</i>	<i>Fore-Arm Exercise,</i>
<i>Arm Flexion,</i>	<i>Back Exercise,</i>
<i>Trunk Lifting,</i>	<i>For Round Shoulders,</i>
<i>Velocipede,</i>	<i>Chest Exercise,</i>
	<i>Miscellaneous Exercises,</i>

Ear Department.—Next month we will give a report of a few notable cases of deafness recently treated in our ear department. The

success in this department is certainly most gratifying, scarcely a single case among the large number treated proving wholly unimpressible by treatment, though nearly all have been cases of many years' standing and very unpromising.

A FEW INTERESTING SURGICAL CASES.

THE surgical operations performed at the Sanitarium within the three months ending Nov. 1, including a few days in July, numbered in all ninety-two. The following is a list of the various operations with the number of each class:—

For repair of laceration of the neck of the womb,	6
For repair of laceration of the perineum,	3
For relief of obstructive dysmenorrhœa,	8
Vaginal raphe for relief of proclitidia or complete prolapse of the womb,	2
Removal of polypoid tumor of the womb,	2
“ “ urethral tumors,	4
“ “ breast for cancer,	2
“ “ cancer of breast by caustic paste,	1
“ “ “ nose,	1
“ “ “ eyelid,	1
“ “ suspicious growths in other regions,	2
“ “ dead portion of lower jaw,	1
Operation for internal hemorrhoids,	7
“ “ external “	2
“ “ varicocele,	3
“ “ phimosis,	2
Operations upon the eye—	
Strabismus, or cross eye,	2
Obstructed nasal duct,	1
Enucleation, or removal,	1
Removal of nasal polyp,	2
“ “ morbid growths in throat and nose,	22
“ “ cicatrix for relief of contracted finger,	1
Operation to establish permanent opening into chest cavity in case of chronic pleurisy,	1
Setting broken bones,	3
Operation upon lacerated elbow,	1
Miscellaneous operations and surgical cases treated not included above,	6

To the above we will add the following brief summary of a few of the more interesting cases, our space being too limited to allow of anything more than a very brief mention:—

Cancer of the Breast.—The cases operated upon were each of several years' standing, and had developed unmistakable characteristics of the disease. The axillary glands were enlarged. The mammary gland and all lymphatic glands in the axilla and neighborhood, whether enlarged or not, were carefully removed. In the first case, the entire wound, with the exception of one small point, healed by immediate union, so that the stitches were removed on the third day. In the second case, a considerable portion of the wound refused to unite by immediate union, but ultimately healed

nicely. Nearly three months have elapsed since the first operation, and several weeks since the second, and as yet there is no sign of the reappearance of the disease, although both cases were of the most unfavorable class.

A third case of cancer of the breast, which had been badly treated by a cancer doctor, was successfully treated by the use of the arsenical paste, as employed at the Great Cancer Hospital in London, under charge of Dr. Marsden.

Epithelioma of Eyelid.—The patient, a woman of fifty, had suffered for some years with an ugly sore located at the outer angle of the eye, and involving nearly one-half of the lower lid. It had recently become so active as to justify the belief that it had assumed a malignant character. We applied the cancer paste of the London Cancer Hospital, and in less than six weeks a perfect cure was effected, and with very little pain or inconvenience.

Mr. —, twenty years of age, had suffered for a number of years with varicocele, and to a very extreme degree. One week after the operation he was able to be about, and a few days later was discharged wholly cured.

Mrs. F. had for six years suffered extremely with complete prolapsus of the womb, the greater portion of which protruded from the body whenever she was upon her feet. Examination showed an enormous double tear of the neck of the womb and great enlargement of the womb and vagina, the uterus measuring about five inches in depth, although the patient was just at the conclusion of the meno-pause. An operation was first performed for the purpose of repairing the torn uterus, which reduced the size of the organ considerably, but as the prolapsus was still unimproved, another operation was performed, by which a raphæ was formed in the enlarged vagina, upon which the womb might rest. The operation was perfectly successful, and the patient was completely relieved.

Mrs. G. had suffered in the same way for ten years; but as the change of life had occurred, and the womb become very small, it was not necessary to perform any operation for the laceration. The operation for raphæ was completely successful.

Mr. K. had suffered with chronic pleurisy of the left side for about two years. Examination showed a large amount of fluid in the chest. Air was also present. He had been under the care of various physicians, and at one time was in a hospital for some weeks, but failed quite

rapidly. The fluid was removed so far as possible by aspiration, and then a permanent opening made through the chest wall to allow ready escape of the purulent fluid. Through this the chest cavity was washed daily. The graver symptoms have improved somewhat, and at present the patient is doing well.

Mrs. A. had for twenty years suffered much from the results of a rupture of the perineum during childbirth. She was wholly relieved by an operation, and returned home greatly improved in every way.

Mrs. L. had for many years suffered most severe pain at the menstrual period in consequence of an extreme flexion of the womb. An operation for dilatation of the neck of the womb and straightening of the organ resulted in entire relief.

Mrs. H. had suffered for a number of years from constant irritation of the bladder, being obliged to relieve the bladder from twenty to forty times in the twenty-four hours, and always with great pain. She had been under the care of numerous specialists. Examination showed a number of small tumors in the urethra, catarrh of the bladder with contraction of the organ, and antelexion of the womb, the body of which rested upon the bladder. By removal of the morbid growths, the use of bladder douches, and relief of the uterine displacement, a perfect cure was effected.

SPECIAL DEPARTMENT FOR DISEASES OF THE NOSE AND THROAT.

THE great prevalence in this country of catarrhal diseases affecting the nose and throat, has led us to devote considerable attention, for several years, to the treatment of this special class of ailments. Between two and three years ago, we established a special department for the treatment of this class of diseases, the arrangements for which we have been gradually perfecting, through the addition of new apparatus and improved methods, gathered from various sources. We have constantly under treatment in this department from thirty to eighty cases, and with the increasing experience and improved methods and appliances, we are able to attain a degree of success which is, to say the least, very gratifying to both physicians and patients. This class of ailments can only be successfully treated by a proper combination of general and local measures, and it is probable that the failure to recognize this fact accounts for the prevalent opinion that nasal and pharyngeal catarrh are

usually incurable without a change of climate. The experience of ten years in the treatment of hundreds—we may say thousands—of cases of this sort, warrants us in saying that these very common and annoying maladies are readily cured, when proper means are employed for a proper length of time. The following are a few of the most interesting cases, out of one hundred and sixty treated within the last three months :—

Mrs. H. had suffered for many years with nasal catarrh, and had occasional thickening of the mucous membrane to such an extent that both nostrils were nearly closed. After a few weeks of preliminary treatment for the purpose of getting the membrane in a more healthy condition, an almost painless operation with the galvano-cautery relieved the difficulty very promptly. She is now able to breathe through the nose freely. Many persons are suffering in a similar way without being aware that the constant breathing through the mouth, necessitated by the nasal obstruction, is the certain cause of diseases of the throat.

Mrs. S. had been troubled for years with constant irritation in the throat, and a continual slight discharge, greatly increased by taking a little cold. Upon examination, we found in addition to the chronic catarrh of the pharynx and the postnasal region, a number of morbid growths of considerable size. Most of these were situated above the lower margin of the soft palate, but a few were partially visible, hanging down below the margin of the soft palate. These morbid growths were removed by a snare, galvano-cautery, scissors, and the proper treatment administered for the chronic catarrhal affection, with the result of causing the unpleasant symptoms to disappear within a few weeks.

Mrs. K. had suffered for a number of years with constant itching irritation at the upper and back part of the throat, which was not relieved by any means of treatment adopted, and was only aggravated by the constant efforts to clear the throat, which were excited by the irritation. The patient also complained of constant dropping at the back of the throat.

Examination showed slight enlargement of the pharyngeal tonsil,—a gland, or rather group of glands, located at the extreme back portion of the nasal cavity, or the vault of the pharynx. In consequence of the chronic congestion of these glands, an excessive quantity of mucus was secreted, which occasioned the unpleasant "dropping" of which the patient complained. By the application of remedies to the seat of the disease, the relief afforded the patient was almost

instantaneous, and continuous treatment, for the proper length of time, was the only requisite for a complete and permanent cure.

Mrs. S. had suffered in the same manner described in the preceding case, except that the itching sensation in the throat extended to the ear on one side. Examination showed the same condition described in the preceding case, and, in addition, irritation of the eustachian duct, the tube extending from the throat to the ear. Further examination showed that the ear had become very considerably impaired by the extension of the disease through the eustachian duct. This case was also promptly relieved by the application of proper remedies to the seat of the disease, and the hearing was quite restored by the inflation of the ear with the eustachian catheter and the Pollitzer bag, and application of remedies through the same means.

Mrs. B. had suffered from nasal pharyngeal catarrh for many years, and was subject to frequent attacks of tonsillitis. An examination showed both tonsils so greatly enlarged that the passage through the throat was nearly closed. The whole back of the throat was in a greatly diseased condition, being nearly covered by patches of enlarged follicles. The constant profuse discharge from the back of the throat gave the patient great annoyance. Examination of the nasal pharyngeal region, with the rhinoscope, showed great enlargement of the pharyngeal tonsil, which hung down in masses nearly one-third of an inch in length, and clustered so closely together as to look like a single mass. By the removal of the enlarged tonsils by the galvano-cautery and other applications to the morbid growths at the vault of the pharynx, the patient was quite relieved of the numerous unpleasant symptoms.

Mrs. L. had suffered for years with nasal polypus, which kept up a constant discharge from the nose, and obstructed the breathing to such a degree as to cause the patient very great discomfort, besides giving the voice a nasal tone. The polypus was removed with a snare, to the patient's great relief; but as another polypus made its appearance near the site of the old one, it became necessary to apply the galvano-cautery, in order to destroy the morbid tissue entirely.

Mrs. — had suffered for several weeks with extreme hoarseness, the voice being scarcely above a whisper, and extremely husky in character. The patient could not produce vocal sounds above a very low pitch. Examination of the larynx

showed intense congestion of one of the vocal cords, and other evidences of sub-acute inflammation in various parts of the larynx. After a few weeks' treatment, the hoarseness is nearly gone, and the evidences of inflammation have mostly disappeared. A few weeks' thorough treatment will effect an entire cure.

Mr. G. suffered with most profuse and offensive nasal catarrh, which had resulted in partial deafness, the patient's hearing being not more than one-quarter as acute as normal. Examination showed a swollen condition of the whole nasal mucous membrane and a very large morbid growth in the left nasal passage. The application of various remedies soon relieved the swelling of the membrane, and the morbid growth was effectually removed by the galvano-cautery, which was applied with very great ease, as the patient had a cleft palate.

Mr. X. had suffered for many years with irritation of the throat, which affected the voice and produced huskiness and weakness of the muscles of the throat. Examination showed a relaxed and swollen condition of all the soft palate, elongated uvula, and a dilated condition of the veins at the back of the throat. The veins were so greatly enlarged that they could readily be seen traversing the throat in every direction, the small ones running into larger ones, like a river with its tributaries, on a map. Astringent applications soon relieved the relaxation of the uvula and soft palate. By the application of the galvano-cautery, the enlarged veins were destroyed, when the irritation and discharge quickly disappeared.

Each one of the above cases is typical of a large number treated for similar conditions, with similar results. There is no class of diseases which, with our improved facilities, we feel greater satisfaction in treating than diseases of the nose, throat, and larynx. Next month we will give other illustrations of this class.

TWO HELPERS' MEETINGS.

ABOUT twice a month the numerous family of helpers at the Sanitarium, upwards of one hundred in number, gather in the large gymnasium for the purpose of considering the interests of the institution, hearing explanation of rules and regulations relating to helpers, and other matters of profit and interest. On these occasions remarks are made by one or more of the managers, of a character calculated to enlist the interest of helpers in their work as aiding in a philan-

thropic enterprise, and to inspire them with such enthusiasm as will lead them to conscientious faithfulness in the performance of their duties, and a personal interest in the welfare of the institution.

At a meeting of the Sanitarium helpers, held some weeks ago, Dr. Kellogg made some very interesting remarks upon the subject of health reform as regards diet. He spoke of the superiority of fruits, grains, and vegetables, as compared with animal food. By carefully perusing the history of nations, it will be found that the people who have distinguished themselves physically and intellectually have not been those possessing carnivorous propensities. The advocacy of vegetarianism, the two-meal system, and the use of whole-wheat flour, are not new ideas that are being foisted upon the people as an experiment. It is the primitive plan, as is evidenced by the annals of the ages, and abundance of living testimony can be adduced to prove that it is the better way. Among the marvels exhumed from the long-buried cities of Pompeii and Herculaneum, were loaves of brown bread still retaining their original form. The bread in these cities at the present day is nearly an exact counterpart in form and material.

The doctor remarked that he found it possible to live in a strictly hygienic manner during his recent visit to Europe. In nearly every city the brown loaf could be obtained, and in many places unleavened bread, wholesome if not quite as palatable as at the Sanitarium. The doctor, as is well understood, has been a strict vegetarian for years, having entirely discarded the third meal, while the amount of labor he has performed is simply marvelous. The doctor's remarks were replete with interest, and any brief recapitulation from memory would seem but a burlesque upon that which was apparently so opportune.

Excellent remarks were made by others, evincing an interest and zeal in the work of practical reform.

It was decided by vote to dispense with the evening lunch, which had, in many cases, come in to supplement the regular two meals of the day. Although several weeks have passed, the practical working of the plan seems very satisfactory, and many already appear "fairer and fatter in flesh;" and so the good work goes on.

The following week Dr. Lindsay addressed the lady helpers of the Sanitarium upon the subject of dress. In her usual clear and forcible manner she explained the effects of the

fashionable style of dress upon the physical system. The disastrous results arising from compression of the waist, suspending the clothing from the hips instead of the shoulders, and insufficient clothing of the extremities, etc., were made very apparent.

A healthful dress is one that does not impede the circulation of the blood, or interfere with any of the functions of the organs of the body. It permits grace of motion and freedom of action by being so loose and free from pressure upon any part as not to interfere with muscular contraction, or cause atrophy or weakness of the internal organs. Muscular inaction and lessened blood supply are due to compression of the waist, which is many times secured by unyielding steels and whalebones. The modern dress of women is guilty of every outrage against free muscular action, hence an enemy to graceful motion and symmetry of form.

In the living organism there is a process of death and decay continually going on. The dead, worn-out cells which compose the human body would soon become deadly poison and destroy the body itself were it not for fresh supplies of oxygen taken into the lungs with every breath. The tight corset, or waist, by cutting off one-half or two-thirds of woman's breathing capacity, makes her body a cesspool and charnel-house of decay. How can the bloom of health glow on her cheek? The heart needs room to beat its sixty or seventy times a minute, in order to propel pure air to every part of the body. If hindered or embarrassed in its work in any way, the extremities must suffer most, on account of being at a greater distance from the vital organs. Tight dressing crowds the important internal organs out of their natural positions, and gives them nothing but impure blood to pump to the remoter organs of the body for their nourishment. If the waist be unduly compressed, the intestinal fluids cannot perform their work in a way to render the blood fit to accomplish the repairing processes of the body.

The liver, both a secreting and a blood-making organ, and all the digestive organs are often crowded out of place, and the liver almost cut in two by pressure around the waist. No wonder women have cold feet, hot heads, weak spines, dyspepsia, and a host of other ills too numerous to mention, to say nothing of the many special diseases peculiar to the sex which often render existence a burden heavy to be borne!

Then there are the mental and moral diseases

due to love of dress. The time wasted on dress would, if spent in reading and mental culture, render the working girl as cultivated as any lady in the land. The money worse than foolishly wasted might be judiciously used to benefit others, or be carefully invested for the inevitable "rainy day." It is pitiable to witness the exhibition of envy and bitterness due to the unhallowed rivalry among women in all ranks of society to outshine each other in rich and extravagant attire. And what of the others of our sex who have sold their souls for a few short years of sinful pleasure, that they may dress in gay attire?

We who are helpers at the Sanitarium want to be governed by higher motives than the world. We want to respect our moral, mental, and physical natures, and so shape every action of our lives that we may grow stronger in body, stronger in mind, and stronger in moral principle, and to-night we want to apply that principle to our dress. Let us be actuated purely by the principle of right because it is right. May every one of us, then, have the grace to act from this motive, and then we shall act wisely for ourselves, wisely for the interest of the Sanitarium, and all others with whom we come in contact.

Mrs. Dr. Kellogg exhibited a figure secured during her recent visit to Europe, representing the Venus of Milo. This model is everywhere recognized as representing one of the most perfectly proportioned human figures that has ever been given to the world, and it is very evident there has never been any unnatural compression of the waist. She remarked that the question under consideration had a moral as well as a physical aspect; that "we are not our own, but are bought with a price," therefore to mar the work of God, or pursue a course that will abbreviate life, is manifestly a sin against the Creator.

The evils resulting from errors of dress are similar to those arising from the use of alcoholic stimulants—deceptive, because so gradual in the work of death which they ultimately accomplish. We should ever consider it a privilege, as well as a duty, to glorify God in our bodies and spirits, which are his.

Excellent remarks were also made by Mrs. Hall, the matron, and by Dr. Kellogg, who presented special reasons why it was desirable that simple and healthful dresses should be worn by the lady helpers at the Sanitarium, necessary, in fact, in order to successfully attain the objects for which the institution was

founded; viz., the promulgation of correct modes of living as well as to relieve the sick of their maladies.

The following resolutions were then presented, and severally voted upon, being in each instance adopted by a nearly unanimous vote:—

Resolved, That we believe a simple, healthful dress to be the proper dress to be worn at the Sanitarium.

Resolved, That we will individually adopt such a dress.

Resolved, That the rules of the institution should be so modified as to require all helpers to dress in a simple and healthful manner.

A paper reading as follows was then presented and signed by nearly all present, and afterward by others, the total number of signers being fifty-two:—

"We, the undersigned, lady helpers of the Sanitarium, agree to adopt a style of dress which shall be healthful, modest, becoming, and economical.

"A healthful dress must not interfere with freedom of movement, must be as light as is compatible with warmth, evenly distributed over the body, the principal weight to be sustained by the shoulders instead of the hips, loose, and free from any unyielding steels or whale-bones in the form of corsets.

"A modest dress is one which adorns the wearer without attracting undue attention to her person.

"A becoming dress is one suitable to one's age, complexion, occupation, and station in life.

"An economical dress is one made of good, inexpensive material, neat and plain, and within the wearer's income."

—A liquor-seller presented his bill to the executor of a deceased customer's estate, asking, "Do you wish my bill sworn to?" "No," said the executor, "the death of the deceased is sufficient evidence that he had the liquor."

—According to a prominent New York City newspaper there has been a considerable falling off in the consumption of beer since the recent exposures of the poisonous adulterants which are used in its manufacture.

—An English physician records a case of remarkably severe hysteria cured by bread pills after many other measures of treatment had failed.

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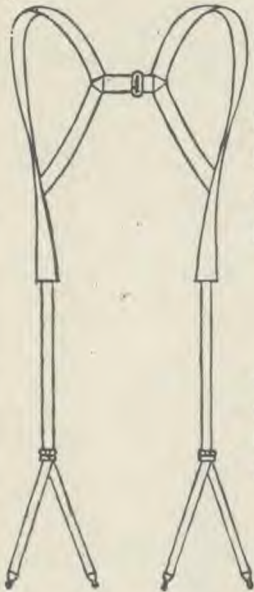
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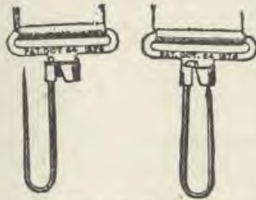
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FIG. 1.



SWIVEL HOOKS.

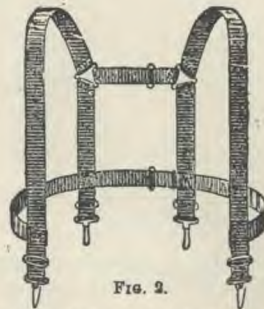


FIG. 2.

Mrs. E. B. Lyman, the popular lecturer to ladies, "On dress, and its relation to female diseases," says: "Pathology demonstrates the fact that during the past 15 years, that class of diseases peculiar to females has been steadily on the increase, and the verdict is almost universal among those physicians who make a specialty of these difficulties, that they are largely the result of the improper mode of dress adopted by our women. First, from its being too tight, or so inconveniently arranged as to prevent the free action of the internal organs. Second, from the great number of bands, with heavy skirts, resting entirely upon the delicate walls of the abdomen, causing the intestines to fall down upon the organs in the pelvic cavity. Owing to the flexible nature of the abdominal walls, **no weighty** clothing should be permitted to rest upon the hips, but should, instead, be supported from the shoulders entirely."

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