GOOD HEALTH.

A JOURNAL OF HYGIENE.

MENS SANA IN CORPORE SANO.

VOL. 20. BATTLE CREEK, MICH., MARCH, 1885. NO. 3.

TEA-TASTERS.

NEW YORK has within the district below the city hall, nearly one hundred and fifty firms whose sole business is the importation and wholesaling of tea. Since this commodity was first imported by the East India company in 1615, it has steadily risen in the estimation of the world, until at present the trade gives employment to hundreds of thousands of men, and exchanges yearly hundreds of millions of dollars. In 1875 the importation of tea into England alone was 200,000,000 pounds, and at least one-half as much reached our shores at San Francisco from China, Java, and Japan. There was a slight falling off in the importations until 1880, when the trade revived again with all its wonted life, and at present, notwithstanding the complication between China and France, the trade is more important than it has ever been.

Engaged in this immense trade is a class of men who are known as tea-tasters, and who, in their way, control the market, make one kind of tea popular, and in fact exercise the same influence as wine-tasters do in the wine trade. Each firm employs at least one tea-taster, and the salaries range from $5,000 a year to even a partnership in the business of the great importing-houses. But these experts pay the penalty for their proficiency, in having their systems undermined by continuous tea-sipping. After perhaps five years of experience they become nervous, are afflicted with insomnia, and are especially liable to zymotic diseases.

Entering the counting-room of any one of the wholesale dealers in tea, one will observe a big round table standing in the center of the room. It has a revolving top, and is very often handsomely inlaid. This is practically the counter upon which all the buying and selling of the house is done. On these tables, placed within a short distance of the edge, are ranged dainty tea-cups. A large silver kettle is simmering over a spirit lamp near by, and the steam forces itself through the spout with a musical hissing that must be extremely pleasant to hear amid the dreary round of business. On a stand in the middle of the table is a tiny pair of scales, on one of the saucers of which is a 5-cent silver piece. About this table the tea-tasters assemble to decide on the merits of any particular growth, or finally decide whether or not the firms which they respectively represent desire any of the stock before them. A sample of the tea is taken and weighed on the scales. The sample weighs the same as the silver piece. This small quantity of tea is then poured into the cup, and the boiling water is allowed to flow over it until the cup is half full of the infusion. The tea-taster stirs the tea, and lifts the leaves on a peculiarly shaped silver spoon to inhale the aroma. Sometimes he takes a sip of the infusion, and after holding it in his mouth for a few seconds, he relieves himself of it. Big brass cuspidores are placed around the table, and into them go the tea which has been tasted and the contents of the cups.

It is by this means that a sample of tea is decided upon. The tasters inhale tea aroma, and pronounce upon the quality of the importation, and gossip most learnedly upon its fineness, tastiness, body, and similar qualities which go to make up tea par excellence. In cases where there has been a heavy importation, samples of each quality are weighed and tried by the tasters, then the quality and price are decided upon.

An expert tea-taster who is not familiar with the business transactions of the firm which has imported a large quantity of tea, can detect, not alone the age, the strength, flavor, and fineness, but also is able to tell almost without error even the district in China where the teas have been grown, and whether they have been cultivated by cooly labor. The development of the sense of smell is remarkable in thus detecting from an extremely small quantity of tea the history of its growth. When a large invoice is assorted, the facts concerning the various samples are placed on the bottom of the cups or saucers. Then they are changed about, and the trade admitted to make its purchases. The infusions are tasted again by the buyers, and selections are made by the flavor alone.

The result of this system is that great quantities of tea must be consumed in these peculiar transactions. In a comparatively busy season, a tea-taster sips four or five hundred cups of tea in a single day. It is difficult to make an average for the year, but it cannot be far from two hundred cups a day. It is only the better qualities of the tea infusion that are sipped and ejected. The poorer teas are simply tested by the aroma from the leaves after the infusion. The better classes of the black teas, such as the Canton, Foo-chow-foo, Hung-nuey, Oopack, Kaison, and Oonam, are almost always tested by sipping, and sometimes even by swallowing the infusion of the leaf. The green teas, as the Shanghai, Puig-suey, Moyune, Imperial Moyune, and Canton, are oftentimes tested by sipping, but most generally by their aroma alone. The teas which are held in the highest favor are of Japanese growth, the Gunpowder and Young Hyson. Although these are green teas, the Chinese growths of green teas are becoming unpopular, notwithstanding that ten years ago they had the command of the market.

The effect of this constant drinking of tea, although in almost inappreciably small quantities, is extremely injurious. Although little is swallowed each time a sample is tasted, the frequent repetition of the dose is what proves to be detrimental. The small particles of the incompletely moistened leaf are absorbed by inhalation when the test is made from the aroma of the infusion alone; there is also an absorption through the mucous membrane of the throat, and hence into the stomach of the comparatively dry leaf. A silver 5-cent piece weighs eighteen grains. Estimating the amount of tea that is used in two hundred test-cups, it would give about one-half pound of tea, the essence of which is either inhaled or swallowed. The immediate result is a feeling of stimulation that is for a time extremely pleasant, but the pleasantness of the sensation, after an experience of it, gradually wears away, and leaves a feeling of great lassitude, which often leads to a desire for a stronger stimulant than the tea, in order that the proper tone of the system may be retained. Then insomnia comes, and oftentimes a tea taster has been compelled to relinquish his employment in order to save his life. Of course, such are extreme cases, but when great cargoes of tea are received by the importers, the condition of the tea-taster, after the invoices have all been sampled, is by no means an enviable one, despite his liberal salary. A somewhat singular fact in connection with the methods of a tea-taster is that he is never a tea-drinker. Should he take large quantities of tea at any one sitting, his ability to detect the almost inappreciable differences of flavor between them would be almost, if not totally, destroyed.—*New York Commercial Advertiser.*

STARVATION.

[In the case of cannibalism, referred to in the article which follows, a captain and crew subsisted some days upon the flesh of the cabin-boy, whom they killed when he was apparently at the point of death. The writer of the article is evidently unacquainted with the remarkable exploits of Dr. Tanner and Mr. Griscomb, who abstained from food forty and forty-two days respectively.—Ed.]

The recent case of cannibalism at sea opens up some curious questions as to the effects which fasting has on the moral nature of man. To the superficial observer, death by starvation simply means a wasting of the body, a horrible agony, an increasing weakness, a lethargic state of the brain, and a sleep from which there is no awakening; but is this all that it means? While this is going on, let us consider whether or not the intellectual faculty, and with it the power of distinguishing right from wrong, is also undergoing a process of wasting and death, even before that of the material part; for

however dangerous it may be to received opinions, to associate the material nature of brain with the moral nature of our being, we are bound to do so to elucidate some of the facts connected with this case.

Reasoning by analogy, we find that in many cases of bodily disease, the state of the mind is the first indicator of the mischief going on in the system. Take even such a simple thing as indigestion, which, as every one must know, is only a manifestation of a deranged stomach, and what do we find?—That the lowness of spirits induced by this affection may vary from slight dejection and ill-humor to the most extreme melancholy, sometimes inducing even a disposition to suicide. The sufferer misconceives every act of friendship, and exaggerates slight ailments into heavy grievances. So in starvation, the power of reasoning seems paralyzed, and the intellectual faculty dazed, really before the functions of the body suffer, or even the wasting of its tissue becomes extreme. Such being the case, the unfortunate individual is not accountable for his actions, even if they be criminal in character, long before death puts an end to his sufferings.

The most deep-rooted and powerful feelings of human nature—the love of a mother for her offspring—are perverted in cases of starvation; for we read in Josephus that during the siege of Jerusalem under Titus, mothers ate their own children. A similar case is mentioned in Scripture as occurring during the famine in Samaria (2 Kings 6:29); if, in such a case, the intellectual faculty was not utterly disorganized, no amount of human agony would account for such complete perversion of nature.

Referring to this state, Aitken observes: "A depression of the nervous system is very early manifested in the impaired energy of all the vital functions, the weakened condition of the intellectual faculties and *moral feelings*, and diminution of the general sensibility." As vital activity and mental power are simply the manifestation of consumption of material, unless the supply of that material in the shape of food is kept up, a progressive waste of both must necessarily ensue; and that which depends for its manifestation on the material—that is food—must be the first to go, that being in this case the intellectual faculty, power to distinguish right from wrong.

An old writer (Guianerius) says: "Anchorites, monks, and the rest of that superstitious rank, through immoderate fasting have been frequently mad," showing that even in early times the fact was known and believed, that want of food perverted the higher attributes of the mind before it destroyed life.

What are the symptoms of death from want of food; and how long can man subsist without solid or liquid nourishment? According to the experiments of Chossat, death takes place in from eight to eleven days, and after 40 per cent of the weight of the body is consumed. Now, as this means more of certain tissue than others, it may be interesting to mention those that suffer most. The fat wastes 93 per cent of its weight; the blood, 75; the spleen, 71; the liver, 52; the heart, 44; the bowels, 42; and the muscles, 42. On the other hand, the following parts waste much less: thus the bones waste 16 per cent; the eyes, 10; the skin, 33; the lungs, 22; and the nervous system,—the nerves, —*only 2 per cent.* The points worthy of attention are the almost total consumption of fat before death takes place; in fact, death by starvation is really death by cold. As soon as the fat of the body goes, —and fat is the principle that keeps up the heat,—death takes place; the temperature of the body diminishes but little until the fat is consumed, then it rapidly falls.

Chossat, whose experiments on dumb animals are most painful to read, is of the opinion that death from exposure to intense cold, and death from starvation are one and the same, as, in the torpor of death from want of food, the application of warmth to the body immediately restored consciousness, showing that heat is closely related to the principle of life, as manifested through the nervous system in its more subtle sense.

The symptoms of starvation from want of food are severe pain at the pit of the stomach, which is relieved on pressure; this subsides after a day or two, but is succeeded by a feeling of weakness and "sinking" in the same region; then an insatiable thirst supervenes, which, if water be withheld, thenceforth becomes the most distressing symptom; the countenance becomes pale and cadaverous; the eyes acquire a peculiarly wild and glistening stare, and general emaciation soon manifests itself. The body then exhales a peculiar fetor, and the skin is covered with a brownish, dirty-looking, and offensive secretion. The bodily strength rap-

idly declines, the sufferer totters in walking, his voice becomes weak, and he is incapable of the least exertion. The mental powers exhibit a similar prostration; at first there is usually a state of stupidity, which gradually increases to imbecility, so that it is difficult to induce the sufferer to make any effort for his own benefit, and on this a state of maniacal delirium frequently supervenes.

Before death takes place, the body appears to be undergoing putrefaction, so that though it seems to waste in one way, the power of the system to eliminate the effete products is paralyzed, and these, instead of being burnt off, as they are when the proper nourishment of the tissues is going on, remain and decompose; in no other way can the fetor during life be accounted for, and the rapid decomposition after death. This accounts, also, for the fact that the cholera, fever, and blood-poisoning are so much more fatal in the badly-fed than they are in the well-to-do; the low state of the vitality induced, prevents the elimination of the poison, and the sufferer dies, not by the virulence of the disease, but by his inability, through weakness, to throw it off. Pestilential diseases always follow in the wake of famine, and destroy more people than perish from actual starvation.

To show how long life may be carried on with a very little food, the following case may be interesting: In February, 1862, a man thirty-six years of age was discovered in a stack near Morpeth, dying from starvation. All attempts to rally him failed, and he ultimately died. He was an intelligent man, and had been editor and proprietor of a penny journal, called the *Falkirk Liberal*. A diary was found in his possession containing entries of his condition from Feb. 8 to 25, from which it appeared that during the *seventeen* days he had twice tasted a piece of bread, but that for the last *thirteen* days he had been entirely without food. During the first ten days of the thirteen he was able to obtain water, but on the eleventh day he found his legs were useless, and he lost all motive power in his lower extremities, so that half his body appeared to be dead.

There is also the well-known case of the fat pig that was buried in its sty under thirty feet of the chalk of Dover Cliff for one hundred and sixty days, and which was dug out alive at the end of that time, reduced in weight from one hundred and sixty pounds to forty pounds, or no less than seventy-five per cent. ("Trans. of Lin. Soc.," vol. 11, p. 411.) The extraordinary prolongation of life in this case may be attributed to the retention of the *heat* of the body by the non conducting power of the chalk, and to the retention of its moisture by the saturation of the air in its immediate vicinity, and restriction of its movements.

As might be expected, the old can live longer without food than the young. In youth, the growth of the body causes more rapid consumption of nourishment, and the supply and the waste are more quickly gotten rid of; further than this, the nervous system, though more buoyant in youth, is less stable, so that the young perish quickly when the supply of food is cut off, from the want of sustaining power in the nervous system. This was illustrated in the recent case of cannibalism, the boy being in a dying state, when the men, so far as their muscular power was concerned, were strong enough to accomplish the terrible deed they did.

In the case of the Welsh fasting girl, death took place after deprivation of food for eight days. During the first few days she was cheerful, but later on it was found she could not be kept warm; she then lapsed into a state of torpor, from which she could not be roused, and died.

Four men and a boy were imprisoned in a mine from April 11 to 19; they had access to water, but no food, between those dates. When liberated, they all recovered, the damp atmosphere and their access to water being powerful factors in their aid.

Another curious fact to be observed in those who recover after prolonged starvation, is their unwillingness to be questioned on the subject, and their inability to give any coherent version of their sufferings and feelings, showing plainly that the mental power was too torpid to take impressions at the time. In the recent case of cannibalism, their suffering was aggravated by intense thirst, but they seem to have been able to give a graphic account of the horrors of their situation, which is not usually the case.

The history of starvation points to this fact, that the moral sense dies before the physical being; and some interesting intelligence may be gathered by a study of this subject in its broadest basis as a national question, where it relates to the intellectual and social qualities of race in ill-fed and well-fed countries.—*Health*.

EXERCISE.

BY ARTHUR NEWSHOLME, M. D.

In the strict sense of the word, exercise signifies the performance of its function by any part of the body; thus, digestion is exercise of the stomach, respiration is exercise of the lungs, thinking is an exercise of the brain. But the term has become restricted in its application, and now is chiefly applied to muscular contraction —the exercise of the muscles of the body. Here, again, there has been a restriction of the term exercise in the ordinary sense, to the contraction of voluntary muscles, those under the control of the will. Involuntary muscles, which are concerned in the carrying on of the unconscious organic functions of life, are not directly controllable, and so their growth and state of nutrition cannot be regulated. There are two sets of involuntary muscles which are of special importance, the heart and the muscles of respiration. The heart contracts, that is, it is exercised, at least sixty times per minute; the respiratory muscles contract about seventeen times per minute; and this amount of exercise goes on throughout the whole day. But although we cannot make our hearts beat quicker by a direct volition, and cannot breathe more rapidly than usual beyond a few seconds, yet a brisk walk will cause increased action of the heart and respiratory muscles, as well as a vigorous contraction of the muscles directly concerned in walking. And there can be no doubt that the vermicular contractions of the intestines are to some extent increased by voluntary exercise, through the indirect excitation of the whole system; thus, exercise is an important element in the treatment of constipation.

The muscles are estimated to contain about a fourth of the whole blood of the body. Even during muscular rest (so far as this is possible, for nearly every posture involves the exercise of certain muscles), the ultimate molecules of which the muscle is composed become oxidized to a certain extent. By exercise this oxidation or combustion is increased. To live is to oxidize; to exercise is to oxidize more actively. It is necessary for the health of the body that the molecules of which it consists should be disintegrated and die, to be replaced at frequent intervals by new materials from the blood. The strength of the body, and of every part of it, is in proportion to the activity of its nutritive changes. In the same proportion as disintegration is hastened by muscular activity, so always is the flow of blood bearing the renewing material. Thus, active exercise, if not excessive, increases the action of the heart, and so strengthens this organ likewise.

It is a common fallacy to suppose that exercise wears out the human machinery, just as it will wear out any piece of human mechanism. On the contrary, it increases the working power of the muscles, owing to the self-renewing powers they possess.

During the period of growth, that is, up to the age of about twenty-five, the new materials added to a muscle when it is exercised exceed the old, and so a gradual increase in bulk and power occurs; even after this age the same may occur, owing to the fact that very few attain to the normal development of their muscular powers in the earlier part of their lives.

The same rules as for muscular exercise apply to brain exercise. The more the brain is exercised,—if proper intervals of rest are allowed, and the muscular development is not allowed to lag behind,—the more perfectly the brain will perform its functions. The powers of memory—observation, judgment, speech, etc.—may be greatly increased by careful cultivation and persistent attention. The great danger, is of not equilibrating the muscular and nervous functions. One sees a nervous, excitable boy with overwrought brain, feeble muscles, and a tendency to premature decay; or a young athlete whose mental powers are far from vigorous. The ideal condition is where neither mental nor muscular culture is neglected, but both are co-ordinated to the production of the perfect man.

Effects of Healthy Exercise—1. *The nutrition of the muscles* is improved by exercise. The blood which they contain is increased, and in consequence of this increased afflux of blood and the more rapid disintegration going on in the muscles, they become harder and larger, and respond more readily to the commands of the will. In other words, the volume, density, and energy of the muscles are increased.

2. *The action of the lungs is increased by exercise.* Dr. E. Smith found that if the air inspired while lying down be represented by unity, the amount inspired when erected is 1.33; when walking at the rate of one mile per hour, 1.9; at four miles per hour, 5; at six miles per hour, 7; riding on horseback, 4.05; swimming,

4.33. Or, putting it in another way, under ordinary circumstances a man inspires 480 cubic inches per minute; if he walks four miles an hour, he inspires 2,400 cubic inches; if six miles an hour, 3,260 cubic inches.

At the same time the amount of carbonic acid gas expired is correspondingly increased. Its amount bears a nearly constant relation to the amount of muscular exercise, and consequently the amount of carbonic acid eliminated in various forms of exercise affords a just estimate of their relative value. If the carbonic acid resulting from respiration is not quickly gotten rid of, as in ill-ventilated warehouses and shops, especially where the work is severe, the substance of the muscles soon becomes loaded with carbonic acid, and their activity diminished. For this reason, if for no other, it would be economical for large employers to provide an abundant supply of fresh air to their work people.

Besides the presence of abundant oxygen (from the air), and an easy and complete riddance of the carbonic acid produced by muscular exertion, it will be evident that a third factor is required in the performance of muscular exercise, viz., a supply of carbon; this is obtained from the assimilated food, brought to the muscles by means of the blood.

Not only does muscular exercise increase the activity of respiration, but the size of the lungs is increased, and their *vital capacity*, that is, the amount of air capable of being expired after a forced inspiration, is considerably increased. Corresponding with this increase of vital capacity, exercise, especially that in which the arm and chest muscles are systematically developed, increases the size of the chest. A perceptible difference in the circumference of the chest may be noticed after only a few weeks' methodical exercise.

3. *The action of the skin is increased.* Sensible perspiration is commonly induced, but less readily in those habituated to hard work. Insensible perspiration is always increased, the amount of water escaping in a gaseous condition being at least doubled during moderate exercise.

4. *The temperature of the body* is not perceptibly increased, so long as the skin continues to act. Every muscular contraction involving oxidation also necessitates the production of heat; but this is counteracted by increased evaporation from the skin, and by the circulatory current carrying the hotter blood to every part of the body, and so rapidly equalizing its temperature. But although the actual temperature is not increased, it is rendered more equable, owing to the increased force of the heart's contractions. Chilblains are due to the defective circulation of the blood, and can in most cases be cured by active exercise aided by warmer clothing and an abundant supply of oxidizable food.

5. *The heart and blood-vessels.* By exercise the heart's action is increased in frequency and force. The pulse usually increases from ten to thirty beats per minute above the rate while at rest. After prolonged exercise it may temporarily fall below the normal standard.

6. *The digestive system* is aided indirectly, though active exercise impedes digestion. Following exercise, one has an increased appetite, digestion becomes more perfect, and absorption of food is more rapid, owing to the loss of water by the skin. The effect of exercise on appetite and digestive power is greater if the exercise is taken in the open air; and outdoor exercise is in this way a valuable aid in the treatment of indigestion.

7. *The nervous system* is improved in nutrition and power by a moderate amount of exercise. In fact, a certain amount of muscular exercise is essential for a healthy mind. The intellect is only made less active by excessive exercise; and in this case it is probably because no time is devoted to mental culture, rather than in consequence of any direct effect of excessive muscular exercise on the brain.—*Hygiene.*

TO BE CONTINUED.

EFFECT OF BOILING UPON MILK.

It is well known that boiled milk has a totally different taste, as well as different physiological effects from unboiled milk. According to Schriener, the peculiar odor and taste of boiled milk are due to sulphureted hydrogen, as can be easily proven. If milk is placed in a flask fitted with an upright cooler, and then boiled, sulphureted hydrogen gas escapes from the tube, and will blacken lead paper. After the milk has been poured out of the flask, enough sulphureted hydrogen gas will remain to give the reaction as well as the smell. Milk that has been boiled, on standing, will not curdle as soon as that which is not boiled, as every housewife knows. But Schriener says that it curdles sooner than unboiled milk if acids are added. He placed 10 c.c. of milk, diluted with

25 c.c. of distilled water, in a flask, and added dilute sulphuric acid containing one-half gram acid to the liter. A certain definite quantity of acid was always required to produce a visible coagulation. Fresh milk which had been boiled always took 10 to 12 per cent less of this acid than it did before boiling. The action of rennet upon milk is also affected by boiling. He found in numerous experiments that were made with the milk of different animals, that ten times the quantity of rennet required to curdle raw milk was insufficient to produce this effect upon boiled milk of the same kind and at the same temperature (95° F.) in ten times as long space of time. The quantity of acid or of rennet necessary to curdle a given volume of fresh milk was found to depend upon the quality of the milk; *i. e.*, the amount of dry substance or total solids. The milk of different kinds of cows kept upon the same food required different amounts of acid. If equal quantities of rennet were added to different samples of milk, the time required for coagulation at a given temperature increased with the amount of dry substance in the milk. The quantity of acid required to coagulate milk from the same cow at different periods increased regularly from calving to the time of drying up, corresponding to the constant increase of solids in the milk during the period of lactation. The total increase of solids for the whole period was 11 to 13 per cent in the Frieslander breed of cows, and 12 to 16 per cent in those of Simmenthaler breed.—*Land and Water.*

CRUSTY ADVICE TO WHITE FOLKS ON BROWN BREAD.

BY A BLACK MAN.

I NEBBER could understandify why I always get out ob temper over dis white bread question, but I do. When I tink how de people ar 'frauded in dis matter, someting seems to burn up widin me wid all de furnace power ob a ton o' coals. It makes me wonder what I'm made of. When dis poor old nig was n't much bigger dan a good-size nob o' coal, some one taught him dat man was made ob dust. Since den I've found out dere are a great many kinds ob dust, and darefore a great many kinds ob men; and I hab come to de 'clusion de kind dat I'm made ob must be coal dust, and dats why I get so red-hot sometimes, in fact always, when I see folk bein' cheated.

"Half a loaf is better dan none," as de proverb-mongers say. Guess dey mean half a quartern loaf. Of course it is, but half a quart of half-and-half, according to de tippler, is better still.

Seems to me dat most people hab only half a loaf, when nature meant dem to hab a whole one. Day hab de white half dat is nearly all starch, and all de other part is given to de rabbits and pigs. De good ole Book says, "Look not on de wine when it is red;" and I wish it said, "Look not on de bread when it is white," for de Englishman is worse dan cheated when he eats bread de same color as himself. Say dat darkness am light, disease am health, write a big book to prove dat happiness and pain are both de same, but for goodness' sake, for breakfast's sake, for dinner's sake, for de sake ob ebbery meal in de day, do n't call a white loaf de "staff of life," because it's a fib dat can nebber come true.

My heart is full of sorrowment when I see a poor woman go into a shop and put down good money for bad bread. I often meet dem in de morning wid a half-quartern fib peeping out from under dair shawls, believing, poor tings, dat dey are taking home to dair little ones a two-pound chip off de "staff of life." It's nothing ob de kind. If bread had always been white, it would nebber had been called a staff, but a broken stick.

Dare are thirteen minerals in de human body, and dey are all packed away in dat lovely little loaf called a grain ob wheat. Dey are all in dat same little loaf, for good old Mother Nature hid dem dere wid her own kind hands. Den let no one in future steal anyting from dis odd little bread-basket, which our Father has so richly stored wid physical blessings.

"Give us dis day our daily bread," is a prayer dat loving Father God and good old Mother Nature are always answering. Go into de cornfield, pick an ear, rub it in your hands, and out will roll into your palm a dozen lovely little golden loaves, all baked by de sun; and de learned men say dat each one contains all dat is wanted to feed de body. Den how dare we to throw any ob it aside? What an insult to "our Father" to tell him, by our refusal ob de staff of life *perfect*, as he sends it, that we know better dan he who made us, and dat his great gift is better for us after certain parts hab been taken away dan it would be if we ate it all. Dis goes against de *grain* awfully. Do n't go

to de "Harvest Festival," and thank God for his bounty and goodness, if you mean to go home and eat white bread directly after, because dat am insulting God and your own health too. If you hab yet to learn how to use his gifts to your own good and his glory, go and learn to be wiser at once.

It costs de farmer many pounds for manures of different kinds dat de wheat may be perfect; and after money, hard work, and nature hab done all dair work in de most perfect manner, de miller takes dis beautiful golden grain all to pieces, unpacks all the marvelous 'gredients wid which it am stored, and actually has de wickedness to take some ob it away, and throw it to de pigs and rabbits, and other poor relations, when Nature sent it all for us. Some one ought to put dat miller into another shop. Dere is one kept by Government, where dey got a mill worked by de feet—dat's where he ought to go, for we can't 'ford to be treated in dis way. Nature sends us all, and he only gives us half. Dis game ob opening other people's letters, taking out all the stamps, and giving 'em back de white paper, ain't right nohow. In some tings it don't matter if we're cheated or not. Your hand will be just as good and useful for all honest work if dat ring on your finger is after all only worth fourpence, though you paid twenty pounds for it. De smallest acts of kindness dat hand may bestow on de poor, God will bless, even if dere is no ring dare at all.

Dare! I've said what I tink of such willful unwiseness, and I'm willin' to lend my pen to any one who will use it on de same topic. Let us follow up de subject, right to de bery door ob ebbery baker in de land. Come, gentlemen ob de Press, whose turn is it? Don't let dis poor untutorvated ole nigger hab de ink-bottle all to hisself ober dis vital question. I shall be roun' dis way agin next year, and if I find de matter hab been allowed to drop, I shall out wid my pen and pick it up agin.—*Evans's Annual.*

Frequency of Ear Disease.—In a German medical journal a Dr. Buskner gives an interesting result of inquiries made by himself and other aural surgeons as to the statistics of ear disease. They may be summed up as follows: One out of every three persons in middle life does not hear so well with one ear as with the other. An examination was made of 5,905 school children, of whom 23 per cent presented symptoms of ear disease, and 32 per cent a diminution of hearing power. The liability to disease in the ear increases from birth to the fortieth year of age, and decreases from thence to old age. Men are more subject to ear affections than women, in the proportion of three to two. The external ear is affected in 25 per cent of sufferers, the middle ear in 67 per cent, and the inner ear in 8 per cent of total cases. The left ear is more frequently affected than the right, in the proportion of five to four. Acute affections of the middle ear occur less frequently in summer and autumn than in spring and winter, and of the total number of cases in the ear clinics, 53 per cent are cured, 30 per cent are improved, 7 per cent are unimproved, and three-tenths of 1 per cent end fatally.

OPIUM-SMOKING.

THE practice of smoking opium for the purpose of producing a false excitation, a half sleep accompanied with agreeable dreams, had long existed in India and Persia when the English, toward the close of the last century, thought of introducing it into China. In 1785 the India Company exported to the Celestial Empire more than 4,000 cases of opium, representing a total of about 300 tons of 2,200 pounds. The habit extended so rapidly, and at the same time gave rise to so unquieting effects, that the Chinese Government was obliged to fight against it, and to forbid, under pain of death, the consumption of a drug that was recognized as so pernicious. Smuggling continued to throw vast quantities of the prohibited merchandise into the empire, however, and the process by which it was done is related by Lafond as follows: "The smugglers operated openly. . . . In the afternoon their boats, which were light and slender, and manned by from sixty to eighty oarsmen, prowled along the coast, watching for a favorable moment, which, skillfully seizing, they shot out like a flash and succeeded in reaching a ship. In the twinkling of an eye the opium was taken out of the cases, and the balls were passed from hand to hand to the Chinese sailors, who took them on board with wonderful address. These balls, weighing about three pounds, were small enough to be hidden and landed with facility. All the smugglers had the upper part of the body naked, and the face covered with a black silk handkerchief, not only as a disguise, but also to protect

themselves from the smoke of the gunpowder fired at them by the custom officers" Owing to the complicity of the mandarins, they had rarely to fear anything else, in fact, than a few blank shots. But if the affair became more serious, each one jumped into the water, carrying his supply of opium with him, and the captain showing the visitors a boat free from suspected goods, could not be disturbed. In 1839, however, the magistrates resolved to make an example, and ordered the public execution of a Chinaman who had been convicted of the fraud, and the destruction of 20,000 cases of opium that belonged to the English, and had been landed by them. The English did not hesitate to defend the great benefits of their illicit commerce by force. This people, so jealous of its own liberty, but having so little respect for the rights of others, when such rights interfere with its mercantile interests, extorted, at the cost of a war (1840–42), from a weak and disarmed enemy, and with an indemnity of more than a hundred millions, and the possession of Hong Kong, an imperial authorization to sell its opium in certain ports. In 1864 its ships introduced into China more than 3,000 tons of opium; in 1866, nearly 4,000; and in recent years these figures have been much exceeded! The Chinese are passionately fond of smoking opium, and in order to procure the material at a lower price, they have begun the cultivation of the poppy upon a large scale in the Southern provinces.

Now we find the English themselves smoking opium and consuming morphine! It is the beginning of a just return of things here below. A day will perhaps come in which these too covetous merchants will be obliged to go to China to buy a product that the excess of consumption will have rendered insufficient in their own markets. The English have not failed to protest against the assertion that the effects of opium are pernicious. According to some of them, opium-smoking is a beneficial habit, or at least a harmless one, and this opinion has more than once found an echo among ourselves. "But," says Mr. Morache, "if the smoker allows himself to go to such a verge that, in order to feel the same effects, he has to take more and more, his digestive functions in the first place and then the cerebral ones (intelligence and innervation) will feel the effects of it. The same succession of phenomena occurs as in alcoholism, and from this it is natural to suppose that the action is nearly identical. Perhaps, however, the troubles remain longer, limited in the functions of nutrition. It is not rare to meet with opium-smokers who have for years been reduced to a characteristic emaciation, who have the dyspepsia badly, whose intelligence, a little slow, perhaps, awakens very well under the influence of the drug, and who in this state of excitement perform prolonged intellectual work. Sooner or later, however, they fall into a state similar to that of chronic alcoholism, with the same general phenomena—convulsive attacks and finally general paralysis." Other authors portray the effects produced by opium with darker colors, and we are inclined to believe that they come nearer the truth.

Large numbers of Chinese begin to smoke opium from childhood. The doses are at first small, but they gradually become larger and more repeated. Certain individuals consume as much as three or four drachms per day. Some reach such a result at the end of two years, when they have scarcely attained an adult age. Toward the age of forty or forty-five, the smoker is often reduced to the last degree of marasmus, and is dead to social life. He is a sort of pale, fleshless specter, with an atonic, vitreous look. He dies amid sufferings that the narcotic no longer calms, devoured by a hunger that he is no longer in a state to satisfy.

The opium-smoker is the slave of his passion. If he tries to break with it, without minute precautions, he runs the risk of succumbing to the effects of a quick poison, just as the symptoms of an intoxication are seen to occur in arsenic-eaters at the moment they cease to consume arsenic. But it is rare that the opium-smoker gives up his habit voluntarily, and he never suffers any interruption in it unless he cannot buy the drug; but before being reduced to such an extremity, he will use all means, lawful or otherwise, to procure that which has become his food. He is not the only one to suffer from so detestable a passion. Opium is expensive, and the time passed in consuming it is necessarily profitless. In order to pay for opium, money is made out of everything, and wife and children, when they are not sold, are abandoned to misery.

This is not all. The degeneracy of the individual is transmitted to his descendants, the race degenerates, and decadence becomes imminent. Who will ever be able to say in what measure the intro-

duction of opium into China has contributed to the ruin of that great nation?

For those who might pretend that we are exaggerating, we terminate this note by the following extract from a recent memoir of Dr. Macgowan, of Wenchow:—

"The customs reports for 1881 show first, that, taking 3 *mace* per day as the mean quantity of opium consumed by each individual, the foreign market would suffice to supply only one-millionth of the population; secondly, that the population of China is about 300,000,000; and thirdly, that the indigenous production is at least equal to the importation. Consequently, the smokers of opium represent only a third of one per cent of the population. In admitting, as a rule (and the exceptions are very rare), that the male element of the population is alone addicted to this habit, and that no subject below the age of twenty has yet become a victim to it, we get a more precise idea of the number of smokers, for we know that the number of men over twenty years of age is about 60,000,000. We may say, then, that 1 out of 60 of the adult male population consumes foreign opium, and the same number the indigenous drug. In other words, 3½ per cent of the male population over the age of twenty smoke opium. My own researches in regard to the indigenous consumption would tend to prove that it is more than four times greater than that of imported opium. . . . If we consider that the offspring of the opium-smoker who has not yet reached the last stage of decrepitude is certainly degenerate, and inherits a *penchant* for this degrading habit, the magnitude of the evil seems to defy the calculations of the statistician, and escapes the appreciation of the political economist.—*Science et Nature.*

A COMICAL STORY.

SOMEBODY tells the following story, the comicalities of which teach a useful lesson for persons who do not know that a sick boy or a sick man let alone will usually "get well in the nat'ral way," and stopping treatment when a person is swallowing nauseous drugs is often the only requisite to a speedy cure.

"That matter about your fish buyin' reminds me of what happened two summers ago to my sister, or ruther to her two little boys—or, more correct yit, to one of 'em. Them was two cur'ous little boys. They was allus trading with each other. Their father deals mostly in horses, and they must have got it from him. At the time I'm tellin' of they had traded everythin' they had, and when they had n't nothin' else left to swap, they traded names. Joe, he took Johnny's name, and Johnny, he took Joe's. Just about when they'd done this they both got sick with sumthin' or other, the oldest one pretty bad, the other not much. Now there ain't no doctor inside of twenty miles of where my sister lives. But there's one who sometimes has a call to go through that part of the country, and the people about there is allus very glad when they chance to be sick when he comes along. Now this good luck happened to my sister, fur the doctor come by jist at this time. He looks into the state of the boys, and while their mother has gone down stairs he mixes some medicine he has along with him. 'What's your name?' he says to the oldest boy when he'd done it. Now as he had traded names with his brother, fair and square, he was n't goin' back on the trade, and he said, 'Joe.' 'And my name's Johnny,' up and says the other one. Then the doctor he goes and gives the bottle to their mother, and says he: 'This medicine is fur Joe. You must give him a teaspoonful every two hours. Keep up the treatment and he'll be all right. As for Johnny, there's nothin' much the matter with him. He do n't need no medicine.' And then he went away.

"Every two hours after that Joe, who was n't sick worth mentionin', had to swaller a dose of horrid stuff, and pretty soon he took to his bed, and Johnny he jist played around and got well in the nat'ral way. Joe's mother kept up the treatment, gettin' up in the night to feed that stuff to him; but the poor little boy got wuss and wuss, and one mornin' he says to his mother, says he: 'Mother, I guess I'm goin' to die, and I'd ruther do that than take any more of that medicine, and I wish you'd call Johnny and we'll trade names back again, and if he do n't want to come and do it, you ken tell him he ken keep the old mink-kin I gave him to boot, on account of his name havin' a Wesley in it.' 'Trade names,' says his mother, 'what do you mean by that?' And then he told her what he and Johnny had done. 'And did you ever tell anybody about this?' says she. 'Nobody but Dr. Barnes,' says he. 'After that I got sick and forgot it.' When my

sister heard that, an idee struck into her like you put a fork into an apple dumplin'. Traded names and told the doctor! She'd all along thought it strange that the boy that seemed wuss should be turned out, and the other one put under treatment, but it was n't fur her to set up her opinion agen that of a man like Dr. Barnes. Down she went, in about seventeen jumps, to where Eli Timmins, the hired man, was plowin' in the corn. 'Take that horse out of that,' she hollers, 'and you may kill him if you have to, but git Dr. Barnes here before my little boy dies.' When the doctor came, he heard the story, and looked at the sick youngster, and then says he: 'If he'd kept his mink skin, and not hankered after a Wesley to his name, he'd a had a better time of it. Stop the treatment, and he'll be all right,' which she did, and he was."

Influence of Occupation on Physical Development.—The data obtained by the Anthropometric Committee of the British Association reveal some curious facts respecting the influence of occupation upon physical development. As a rule, the inhabitants of the country are taller and heavier than those of the large towns; but London is an exception, and seems to exert an attraction that draws in the more vigorous part of the country population. The metropolitan police, as a rule, are nearly as tall as the laborers of Galloway—the tallest of Britons—and twelve pounds heavier. The members of the Fire Brigade, who need not be so solid, but are expected to be active, are two and a half inches shorter and twenty-five pounds lighter than the policemen. Athletes average five feet eight and one-third inches in height, and only about 143 pounds in weight, from which it is inferred that the majority of the population carry from ten to twenty pounds of weight which they would not carry if they were in the highest physical condition. The Fellows of the Royal Society—a class of prominent intellectual gifts—are among the tallest of the race, averaging five feet nine inches and three-quarters. The criminal class are forty-five pounds lighter than the police, and four and a half inches shorter; and they are eighteen pounds lighter and two inches shorter than the average of the population. Lunatics are about as short as the criminals, but heavier. In men of the same occupation belonging to different races, the influence of race appears to be predominant over that of occupation.—*Popular Science Monthly.*

—Uncle Simon enjoyed being sick and having a fuss made over him, and he once sent some distance for a prominent physician, who, after he had examined him, said solemnly, "You are full of idiosyncrasies." "Full of what?" gasped Uncle Simon. "Idiosyncrasies. Medicine will not help you; so I need n't waste any of it upon you." "That's the end of it, Hannah," he said to his wife when the doctor was gone. "I knew my case was hopeless. You'll be a widder now in dead earnest," and he sent for his lawyer and made his will.

—In a high school in a neighboring city all the assistant teachers form a league with the teacher of physiology to prevent the use of tobacco by the boys. She is instructed to set before them continually the evils arising from the use of the weed in all forms. She says she makes the deepest impression by showing them how it stunts the growth, and as boys desire nothing so much as to be tall and manly in appearance, many have left off the bad habit for this reason.

—William King, a very rich London merchant, who loved life, adopted a curious scheme to lengthen the period of his declining days. He willed one thousand dollars to his physician, with the proviso that the sum be doubled every year that the testator should be kept alive. He lived ten years.

—We can be thankful to a friend for a few acres, or a little money; and yet for the freedom and command of the whole earth, and for the great benefits of our being, our life, health, and reason, we look upon ourselves as under no obligations.—*Seneca.*

—The only way for a rich man to be healthy is by exercise and abstinence,—to live as if he was poor, which are esteemed the worst parts of poverty.—*Sir W. Temple.*

—There has been a terrible outbreak o trichinosis in St. Andreasberg, a little town in the Hartz Mountains, the center of the canary bird business.

—Lucy Roberts, of Sugar Grove, Pa., took snuff for fun, and sneezed herself to death.

TEMPERANCE AND MISCELLANY.

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

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

SEVEN AGES OF MAN.

ALL the world's a stage,
And all the men and women merely players,
They have their exits and their entrances;
And one man in his time plays many parts,
His acts being seven ages. At first the infant,
Mewling and puking in the nurse's arms.
Then the whining school-boy, with his satchel
And shining morning face, creeping like snail
Unwillingly to school. And then the lover,
Sighing like furnace, with a woful ballad
Made to his mistress' eyebrow. Then a soldier
Full of strange oaths, and bearded like the pard,
Jealous in honor, sudden and quick in quarrel,
Seeking the bubble reputation
Even in the cannon's mouth. And then the justice,
In fair round belly with good capon lined,
With eyes severe, and beard of formal cut,
Full of wise saws and modern instances;
And so he plays his part. The sixth age shifts
Into the lean and slippered pantaloon,
With spectacles on nose, and pouch on side;
His youthful hose, well saved, a world too wide
For his shrunk shank; and his big, manly voice,
Turning again toward childish treble, pipes
And whistles in his sound. Last scene of all,
That ends this strange eventful history,
Is second childishness, and mere oblivion—
Sans teeth, sans eyes, sans taste, sans everything.

—*Shakespeare.*

"GOING SOUTH."

BY MRS. E. E. KELLOGG.

FROM MICHIGAN TO FLORIDA.

SNOW, deep snow covered all the landscape as we steamed away over the grand old Michigan Central R. R., *en route* for the "sunny south." The lakes and streams were locked in fetters of ice, and the little villages and towns along the way seemed almost asleep beneath the thick mantle of snow in which Old Winter had enwrapped them. We left Chicago by the evening train, and found ourselves the next morning in the southern most part of Illinois, at the city of Cairo, where the Ohio pours its waters into the turbid Mississippi. A steamboat transfer bore our train across the beautiful Ohio, and we rushed on across the western portions of Kentucky and Tennessee and through Central Mississippi, for the most part a populous and pleasing country, dotted here and there with small villages of the most primitive looking habitations, each with its great Dutch chimney upon one side, and occasionally a more flourishing city. In ratio with our progress southward, winter appeared to have loosed his icy hold of Nature; and when, on the second morning, we looked from our car window as we neared the city of New Orleans, we could almost fancy that we had spent the winter months in a sort of Rip Van Winkle sleep, and awakened to joyous spring-time, with verdant fields and woodlands, singing birds, and April showers.

At New Orleans we made the first stop on our journey. The Crescent city, the capital and chief city of the State of Louisiana, and the greatest cotton mart in all the world, dates its first settlement back to 1718. Its history records two great and memorable events: the last battle of the war with Great Britain, Jan. 8, 1815, when Gen. Andrew Jackson, with but a small force of valiant men, behind a hastily built breastwork of cotton-bales, fought and repulsed an army of twelve thousand British soldiers with a loss of but seven Americans; and the capture of the city by Admiral Farragut during the war of the Rebellion. Our first visit was to Jackson Square, a pretty little park, adorned with beautiful trees, shrubbery, and flowers, in the center of which is Mill's admirable equestrian statue of the city's hero, Gen. Jackson.

On the opposite side of the street stands the St. Louis Cathedral, the oldest and most famous church edifice in New Orleans. Its lofty ceiling is adorned with paintings by Canora and Rossi, among which we noted a copy of Raphael's "Transfiguration of Christ." Our next visit was to the Levee, a vast embankment of earth, fourteen feet high and fifteen wide, constructed for a considerable distance along the river. A forest of masts lines its wharves. Hundreds and even thousands of vessels from all parts of the world lie at anchor here, and the scene of bustle and activity where a throng of busy men are lading them with cotton from the huge mountains of bales that lie upon the Levee, is without parallel on this continent.

A drive through some of the principal streets, which are broad, many of them beautiful boulevards shaded by double rows of trees; a visit to the U. S. Branch Mint, which is located here; a glimpse of the Custom House, which, with the exception of the Capitol at Washington, is the largest building in the United States; and a moment at the far-famed French Market, one of the most picturesque sights in America,—and we wended our way toward the Exposition grounds, the one great attraction to all visitors to New Orleans at the present time.

On our way we stopped at one of the city cemeteries, which are note-worthy because of their peculiarity. The semi-fluid nature of the soil at the depth of two to three feet below the surface, necessitates burial in tombs above ground, instead of the usual mode of interment. Some of these tombs are expensive and elegant structures; but for the most part they consist of vaults, built one above another, to the height of seven or eight feet, each just large enough to receive a coffin, and which, when the funeral rites are over, is at once hermetically closed.

In most instances they are ornamented at the narrow end with a marble slab appropriately inscribed

The Exposition buildings, which number fifteen in all, are pleasantly located in the city park, a fine tract of land with miniature lakes and groves of live oak, four miles distant from the city. The buildings are magnificent structures, and the exposition, which originated in a design to celebrate the centennial of the first shipment of cotton from this country, has expanded into an exhibition of the resources and natural products of the whole world, of all that this age of rapid progress has wrought that is wonderful in engineering, mechanics, manufacture, science, art, and education.

In the large Main building are exhibits from every quarter of the globe. India, with corals and other tropical products; Palestine, with attar of roses and trinkets of olive wood and mother-of-pearl; Italy, with beautiful Roman mosaics, wonderful specimens of Venetian glass, lava jewelry and cameo shells that savor of Vesuvius and the blue Mediterranean; Bohemia, with exhibits of lovely tinted glass-ware; Mexico, with Aztec relics, mineral products, and specimens of manufactured goods; all nations with specimens of foods, articles of dress, and household utensils,—all these constitute a grand school of anthropology in which the habits and customs of nations can bestudied with unequaled facility.

In the Chinese section one may see in effigy the mandarin in his regalia, a bride in wedding garments, a priest in robes, a widow in full mourning, children at play, the silk weaver at his loom, and some representative of almost every phase of social and industrial life common among the native Celestials.

In the Horticultural hall, besides rare trees, curious plants, shrubbery, and flowers from all sections of the earth, there were on exhibition at the time of our visit some twenty-five hundred plates of luscious fruits, some of them peculiar as to variety, others wonderful in size. Apples and pears from England, Russia, France, and Mexico, as well as from the various States of this country; grapes, oranges, bananas, pomegranates, figs, persimmons, and other fruits from the various localities in which they are grown. Some of the more tropical fruits, as cocoanuts and pine-apples, are here growing and ripening upon the trees.

In the immense Government building, the various States and Territories have placed their exhibits, each seeming to have striven to outvie all the others in making its own display of the products of soil, mines, and manufactures the most unique and complete. Minnesota has brought hither not her own beautiful "Laughing waters," but a miniature cascade that falls with measured cadence over a pleasing imitation of the rocks and ledges of the genuine Minnehaha. An Indian canoe, fashioned from the stalks of wheat and other grains, hangs near, which we could fancy was designed to symbolize both the past, when the red man's bark alone floated upon the waters of her beautiful lakes and rivers, and the present, when the shores of these same lakes and streams are golden with the settler's waving grain. Indian wigwams, with dusky savages in effigy, and a log hut close by bring to the imagination vivid pictures of frontier life and perils.

Nebraska, under the inscription, "Corn is King," presents a fine profile portrait of a monarch made from white, red, and yellow corn; while close by, surmounting a high pedestal, is the statue of a king made from sheaves of golden grain

Dakota symbolizes the enterprize and progress of her people by many unique designs, among which we noted two complete and model railway trains constructed entirely of the straw and heads of grain. Towers and pagodas built of spool cotton, and calico pavilions are among the many fanciful ways in which some of the New England states represent their special industries. An interesting feature of the United States exhibits is the relics of the Greely Relief Expedition. The costumes worn by the explorers, their sleeping bags, specimens of their daily rations, their comfortless tents, their sledges, and various other articles of use, all combine to form a vivid picture of the hardships and perils of Lieut. Greely and his brave comrades.

The gallery of the building is devoted to the display of woman's work and the educational exhibits. Prominent among the latter class is an exhibition of the methods of the industrial school system of France, model school-houses, improved styles of school furniture, and almost every phase of progress in educational facilities is here shown and contrasted with those of earlier times. Here, too, is Chautauqua, the people's university, with a miniature "Hall in the Grove." In another portion of the gallery, ornamented with the motto, "Africa shall stretch forth her hands," is a very meritorious exhibition of specimens of the colored race. Prominent among the educational displays is that of Michigan, which presents among other exhibits large photographs of her leading educational institutions, a prominent place among which the commissioners have given to a photograph of the Sanitarium at Battle Creek, which is looked upon as a grand educational institution, as well as a hospital for the sick.

Farther on we find the display of woman's work, to which each State has contributed until the list of things useful and ornamental made by women is nearly infinite. Beautiful paintings, exquisite embroidery, rugs, laces, decorated china and brass, crocheted pictures, zephyr sculpture, shells, moss, and hair arranged in almost every conceivable form, and even a bouquet made from the trimmings of finger nails, are simply a beginning of the list of curious things. Among the more useful articles we noted an electric clock, and a new building material invented by a woman.

Prominent among the attractions of the Woman's Booth is the beautiful pavilion of the National W. C. T. U., with its comfortable seats and inviting fountain, where the weary and thirsty may find rest and a drink of pure water, the only place upon the grounds, we were told, where nature's beverage is obtainable, though beer gardens and ale stands are plentiful enough. [Since the above was written, the managers have insisted upon the removal of the fountain, and will not allow the ladies of the W. C. T. U. to supply water to visitors, even at their own expense, as the privilege of furnishing drinks has been sold for a liberal sum to beer and whisky venders, who are now in full possession, and virtually prohibit the use of any drink upon the grounds except such as they delight to dispense.]

The sides of the pavilion are ornamented with shields and banners emblematic of the work and purposes of this largest organization of American women; the shields representing the various State Unions which compose the one grand whole, the banners symbolizing the work accomplished and designed to be accomplished through the numerous departments of the National Union. All are unique in design, as well as meritorious works of art. The Department of Hygiene is represented by a beautiful banner of satin, on the lower portion of which is painted in oils a lovely

landscape, through which flows a stream of water, rippling into silvery cascades as it wanders on, emblematic of *pure air and water*. A modern villa at one side represents a *healthy home*, while *exercise* and *healthful clothing* are symbolized by a daintily dressed maiden, who, with hat in hand, has been gathering flowers in the field. Stalks of golden grains, vegetables, and lovely fruits form a group near the top, emblematic of *wholesome food*.

Mexico, our sister Republic, has erected, for her exhibits, a beautiful iron building, so scientifically constructed that it can be taken down in sections when the exposition is closed, and removed to the Mexican capital, where that Republic intends to hold a similar exposition next year. It is octagonal in shape, and the most ornamental building upon the grounds.

It would be impossible in this short sketch to even mention the many interesting and wonderful things to be seen in this vast collection of the useful, beautiful, and curious in art, science, life, and nature; and with but this hasty glimpse of the great World's Fair, and a hope that all our readers may be permitted to go and view it for themselves, we must hasten on toward the land of flowers, the Italy of America.

Our route lay along the Gulf coast, through a lowland region, much of it wooded with lofty pine trees, and dotted here and there with the forlornest of huts, negro cabins, and the homes of the poor white settlers, with an occasional small town or village. Pensacola we passed before daylight, so that we failed to see the beauties of the city sometimes styled the Naples of America. Midway between Pensacola and Tallehassee we stopped at Lake de Funiak, the assembly grounds of the Southern Chautauqua. The lake, which is just one mile in circumference, is a beautiful sheet of water, and very nearly a perfect circle in form. A large Tabernacle, one hundred feet square, built with an iron roof, furnishes seating capacity for the thousands who throng there for entertainment and profit, during the Assemblies to be held each year during February and March; while comfortable cottages and elegant hotels supply accommodations for those who come to live and enjoy the delights and comforts of a summer in mid-winter, together with mental and moral improvement.

The grounds, when laid out in the parks and drives contemplated, will be most beautiful, and with an entertaining program, such as has been arranged for the present session, together with such facilities for instruction as are presented in the schools of cookery, music, art, kindergarten, agricultural congress, and ministers' retreat, the "winter assembly in the land of summer" will prove quite as attractive as the great original Chautauqua.

A few hours' farther ride through Southern Georgia and Northern Florida, almost wholly devoid of interest save the crossing of the beautiful Swanee River, famed for its memories of the "Old Folks at Home," and we reach Jacksonville, the largest city of Florida, and the present terminus of our journey.

"A TROUBLER IN ISRAEL."

BY ELEANOR KIRK.

CONTINUED.

THE Westbrook mince-pies could always be relied upon. They were sure to be sweetened and spiced properly; and whether the brandy which was copiously added to the mixture when ready for the oven, kept it from killing the whole family, must be left to those who know more about the subject. At Thanksgiving time, great stone jars were filled with minced-meat, and stowed away in the cellar for use when wanted. It was not an unusual occurrence for Mr. Westbrook to eat half a good-sized pie before retiring; and when at dinner time, dessert was brought on, the Westbrook baby was allowed to have so many "tastes" that could the aggregate have been measured it would have been found to be no inconsiderable quantity. Just so with other indigestible compounds, such as lobster, chicken salads, etc., etc. The consequence was numerous colics and fevers, all of which were most mysterious to the parents.

Mr. Westbrook was subject to occasional glimpses of light in regard to the management of this little one; but he had no conception that the bits which found their way to her mouth could help to produce such serious results.

The mother's remedies at such times were tincture of rhubarb and castor oil, in generous allopathic doses. The nurse held the child's feet on these occasions, Bridget her arms, and Mrs. Westbrook the poor little nose. It was sometimes hours after these brutal performances before the sufferer could be brought to terms. She would scream, kick, and sob till her strength was entirely exhausted. This was most shocking to the mother's moral sense.

She had no doubt that her first-born was utterly depraved and unregenerate; and so after the child had acquired enough language to say "I will" and "I wont," which were about the first words that left her baby lips, Mrs. Westbrook inaugurated the switch *regime*, and this was on as broad and generous a basis as the drug treatment. The child's will must be broken at once, and so the instrument of torture was hung in a conspicuous place on the wall, and at the slightest hint of rebellion it was immediately appealed to.

Think of the deplorable ignorance that would make it possible to thrash a baby for a rasped nerve condition, brought about by an overloaded stomach, entirely the fault of cruel and chronically improper management.

One day, when an unusually violent demonstration had turned the house topsy-turvy for an hour or two, the odious Mrs. Miller happened to call. She was a narrow-minded, ill-dressed, close-fisted, and most eccentric person in Mrs. Westbrook's estimation; but just at this particular juncture anybody would have been welcome who spoke the English language, and had an available pair of hands. Miss Nellie had grown black in the face with shrieking and struggling, and at last had been seized with singular muscular twitchings and an ominous rolling of the eyes, which succeeded in seriously alarming her mother. Bridget stood one side, the nurse the other, while a bottle of castor oil and a spoon reposed on a chair close by. The combined strength of these three women had not availed to force the spoon between the child's teeth.

The visitor took in the situation at a glance, and hastily divesting herself of her hat and shawl,

took the poor little creature into her motherly arms, and carefully examined every slightest detail of the fine and beautifully made clothing. She loosened every pin and button, and by the gentle pressure of her soothing and well-trained hand, by degrees allayed the tendency to convulsions.

When the danger was over, and the little one was sinking into the sleep of exhaustion, Mrs Westbrook approached with the bottle and spoon.

"Now I guess we can make her take it," she remarked in a whisper.

"What is it?" the visitor inquired.

"Castor oil," was the answer. "This and rhubarb are about the only things that make it possible to live with the child."

"If you try to give her castor oil now," Mrs. Miller responded, "you will certainly throw her into convulsions."

"But her stomach is all out of order," the mother insisted. "I tell you, if she don't have it, it will be out of the question to do anything with her."

"Won't you please try my way this time?" the visitor asked sweetly, though she felt indignant enough to throw the castor oil bottle out of the window, and for a moment would scarcely have objected to seeing the mother follow it.

"What *is* your way?" Mrs. Westbrook inquired in a tone of superiority that at any other time would have made her companion smile, but just now added fuel to the fire of her righteous wrath.

"The child will probably have a long nap, now," the lady replied, "and *my* way would be not to disturb her."

Then with a few more quieting passes she carefully placed the child in the crib.

"You haven't fastened her clothes, Mrs. Miller," the mother observed. "She will get her death a cold."

"She will get her breath," was the still smiling response. "Her excitement has probably caused her to outgrow her bands."

The speaker had no thought that this mother had already commenced to "make a figure," as she called it, for her child. She had seen at once that the waistbands were much too tight, and had attributed it entirely to what had seemed to be a perfectly natural cause.

How much it was wise to say at this time, the anxious visitor did not know. Her heart was full of pity for this ill-used little creature. But would not the safest course be for her to take her departure without any further attempt to be of service? It was so hopeless to expect to do any good in such cases. How was it possible to make any impression on such cast-iron ignorance? But another glance at the pallid little one prevailed. She would scatter a little seed. If it fell on stony ground it would not be her fault.

"Don't you use castor oil, Mrs. Miller?" Mrs. Westbrook inquired. This question made the "scattering" comparatively easy.

"I have never had occasion to do so yet," she replied, diplomatically. She might have said that she never had used the stuff and never would. But she knew better.

"My chief reliance with my children," she added, "is upon food and rest and pure air. I give them plenty of good milk, and my youngest, about your little one's age, is fed principally upon the different cereals, with a certain variety of fruit. I take every possible means to ascertain what my children can the most easily digest and assimilate. I think you will admit that I must be successful when I tell you that I have never had an hour's illness in my family yet."

"Oh, that may be," said Mrs. Westbrook, with a long-drawn sigh; "but you are so strong, you see. You are never ill either, I suppose?"

"With the exception of occasional slight nervous headaches, which are a direct inheritance, I am never ill, and these are scarcely worth mentioning. My mother and my grandmother were at least half their lives most intense sufferers from this cause. But I made up my mind early in life to modify my inheritance by seeing to it that I never required my stomach to do any more work than was good for it. To that end I read and studied and experimented, fully determined in my own mind that I would not spend the largest half of my life in bed, as my mother did before me."

Mrs. Miller brought herself up by the round turn here. It would be a fatal mistake to say too much.

"But stomachs are so different," Mrs. Westbrook remarked. "I am sure I don't know how many times that child has had gastritis. The doctor says her stomach is inflamed all the time."

"And does he prescribe castor oil for that?" the visitor inquired.

"I do n't remember that he did," was the answer. "I think one soon learns to depend upon one's self in such matters. I use my mother's remedies, and it's my opinion that some mothers know quite as much as some doctors."

This remark was so general that Mrs. Miller felt quite safe in agreeing with it.

Mrs. Westbrook pressed her hands against her aching head, and seemed so ill and worn-out that her kind-hearted companion wondered what she could do to help her. A sudden thought flashed into her mind, and she spoke it right out.

"You are very tired, Mrs. Westbrook," she said, "and when your little girl wakes up, I wish you would let your nurse take her over to our house for a change. If you would only allow me to keep her a day or two, I should be so glad."

This was an alluring proposition to Mrs. Westbrook, though she did not allow the fact to be seen. She was not fond of children, and this particular child was an incessant pest. Notwithstanding this lady's contempt for her neighbor, she did not feel loth to trust the child with her. It was quite possible that "the mush and stuff" she believed in might not be bad for children, and Mrs. Miller's healthy, rosy-cheeked brood bore a silent and weighty

testimony in favor of the simple and unseasoned articles of food.

"You have no conception how troublesome that young one is," Mrs. Westbrook responded. "It would be a perfect imposition to allow you to take such a burden upon yourself, and then I'm afraid my husband might not like it."

"I am going close by Mr. Westbrook's counting-room, and I will step in and ask him," the lady replied. "And please, Mrs. Westbrook, don't give her the castor oil; I'll bring her around all right."

"Nothing is sure but the unforeseen," we are told, and it came to pass that two hours later little Nellie Westbrook was under the same roof with the Miller children, and to all appearance as happy as they were.

Mr. Westbrook called about five o'clock, and was taken to the dining-room, where the little ones were having their supper. Baby Nellie seemed in the highest possible spirits. Mrs. Miller sat close by, and encouraged her to taste of the unusual articles of food spread out before her. There was the best of unfermented bread, warm graham scones, cracked wheat, baked apples, cold and warm milk, and some plain cookies, cut into all sorts of odd and attractive shapes. Mr. Westbrook ate a saucer of wheat and cream, and enjoyed it very much. He was going home to roast beef and plum-pudding, and remarked laughingly that his wife would never forgive him if he spoiled his appetite.

"I believe I'll send home some of that wheat, and show Bridget how to cook it," he added.

"It would make an excellent last meal for you, Mr. Westbrook, every day," said his hostess; "and it would be of inestimable service to your wife. She really ought to eat the very simplest food possible to obtain."

"And she eats the very richest, and so do I," said the gentleman thoughtfully.

During this conversation Mrs. Miller was carefully feeding her neighbor's child. She ate the wheat and milk with a relish, occasionally taking a bite from an elaborately scalloped cake.

"Well I declare, if the little fuss-budget isn't eating a hearty meal," said Mr. Westbrook. "I wonder what her mother would say if she were to see her now."

"Mr. Westbrook," the lady remarked, "when I saw your little girl a few hours ago, I was very much alarmed about her. Her mother had been trying to administer some castor oil, and the result was incipient convulsions. I begged the child off for to-day, but I wish to ask you, because I know you will take it kindly, if you do not think it is wicked to allow a delicate little girl like this to eat food that would be hard for an adult to digest, and rely upon castor oil to remedy the difficulty? If your child is properly fed and properly clothed,"—Mrs. Miller was beginning to have her suspicions of the wearing of the tight waist-bands,—"there is no reason why she should not be as well and strong as any child of mine. Excuse me for saying it, Mr. Westbrook, but I do not believe Nellie would ever have any of her tantrums over here."

The gentleman went home with another "flea in his ear," and would have declined plum-pudding that evening if he had not feared that his wife would attribute it to Mrs. Miller's influence; but he cut it very short, indeed, and his companion did not notice.

Miss Nellie remained under her neighbor's hospitable roof for three days, and when she returned, her father insisted upon having the wheat and other cereals prepared for her.

Mrs. Miller dropped in frequently, and the little one invariably teased to go home with her, and it was in this lady's house that this badly born, badly reared little creature first formed her impressions of how things ought to be.

It was a hard matter for Mrs. Miller to bring herself to speak to Mrs. Westbrook about the tight bands, but it was her duty, and she did it.

"I noticed," she said, "that Nellie seemed to have outgrown her bands."

"Indeed, no," her companion replied promptly, "Nellie is going to be as plain as her father. Everybody says she is the image of him. I can't change her features, but I can see to it that she has my figure."

TO BE CONTINUED.

EARLY HISTORY OF STOCKINGS.

Two centuries ago, not one person in a thousand, probably, wore stockings; and now scarcely one person in a thousand is without them. The honor of inventing the first stocking machine belongs to Wm. Lee, an English clergyman, who made a pair of hose by the frame, in the presence of King James I. But such was the prejudice of those times that his invention was frowned upon, and he went to France. Here he met with no better success, and died in Paris, in great poverty, of a broken heart. His machine, however, won its way, and was in general use for two and a half centuries. It is now superseded by a beautiful piece of mechanism, called the circular hosiery machine. One girl attending upon its revolutions can produce material in a single day for two hundred and forty pairs of stockings.—*Sel.*

—We read the book of experience only backward, and find it punctuated as God wills.

—There is no readier way of bringing your own worth into question than to detract from the worth of other men.

—A liquor dealer in a Massachusetts town received a postal-card reading thus: "Please attend the funeral of a man you have been ten years in killing."

Popular Science.

—To whiten ivory knife handles that have become yellow with age, rub with sand-paper.

—According to report, a large hotel is soon to be constructed in which paper will take the place of stone and brick.

—The Washington Monument has for its apex the largest block of aluminium ever cast. It is pyramidal in form, and was produced from American ore.

—Capt. Kostowitz, a Russian aeronaut is having an immense air ship, in the shape of a huge cigar, constructed at St. Petersburg, which he calculates will go at the rate of 160 miles an hour. It is to be driven by a screw, and also provided with sails, and is to be furnished with 10,000 pounds ballast and a 50-horse power engine. It will be 200 feet in length, 80 feet high, and will require sixteen men to man it.

—Good corks may be made impervious by soaking them for several hours in a solution prepared by mixing one-half ounce of glue and three-fourths ounce of glycerine with a pint of water which has been heated to a temperature of about 50° C. After being thus prepared and thoroughly dried, they may be rendered nearly acid proof by dipping for ten or fifteen minutes into a melted mixture of four parts of paraffine and one of vaseline.

Origin of Fruit-Canning.—The following somewhat questionable story is told by the New York *Medical Times*:—

"When excavations were first begun in Pompeii, a party of Cincinnatians found there, in a pantry, many jars of preserved figs; the fruit was found good. Investigation showed that the figs had been put into the jars in a heated state, an aperture left for vapor to escape, and then sealed with wax. The next year fruit-canning was introduced into the United States."

Photographing Impure Food.—The chemists of the municipal laboratories of Paris now conduct their examinations of food under a strong light, which permits the use of a photographic microscope. In such articles as farina, pepper, sugar, and like dry substances, adulterations thus become very plainly perceptible. The photographs are taken into court, where they are inspected by the judges, who were formerly obliged to rely wholly on the testimony of experts.

Electric Hose.—An exchange describes a new application of electricity to firemen's hose. A wire runs along in the cotton or rubber part of the hose, continuing the connection as each section is attached; and over this passes electricity, generated by one of the engine's fly-wheels. Connected with the nozzle is a little contrivance by which the engineer can be told, although squares distant from the man who is playing water on a fire, to "turn her on," "cut her off," "stop," or "go ahead," or anything else that can be agreed upon, by a signal, which is struck on a gong on the engine.

To See the Wind.—Take a polished metallic surface of two feet or more with a straight edge; a large hand-saw will answer the purpose. Take a windy day—whether hot or cold, clear or cloudy—only let it not rain or the air be murky; in other words, let the air be dry or clear. Hold your metallic surface at right angles to the direction of the wind; *i. e.*, if the wind is north, hold your surface east and west; but instead of holding the surface vertical, incline it about forty-five degrees to the horizon, so that the wind, striking, glances and flows over the edge, keeping it straight, as water over a dam. Now sight carefully over the edge at some minute and sharply defined object, and you will see the air flow over as water flows over a dam. Make your observations carefully, and you will hardly fail to see the air, no matter how cold; the result is even better when the sun is obscured. —*Sel.*

Ocean Telegraphing without a Cable.—At the last meeting of the Am. Association for the Advancement of Science, Prof. Trowbridge mentioned, according to *Science*, an ingenious method which he had suggested some years ago for telegraphing across the ocean without a cable, the method having been suggested more for its interest than with any idea of its ever being put in practice. A conductor is supposed to be laid from Labrador to Patagonia, ending in the ocean at those points, and passing through New York, where a dynamo machine is supposed to be included in the circuit. In Europe a line is to extend from the North of Scotland to the South of Spain, making connections with the ocean at those points, and in this circuit is to be included a telephone. Then any change in the strength of the current in the American line would produce a corresponding change in the current in the European line; and thus signals could be transmitted. Mr. Preece, of the English postal telegraph, then gave an account of how such a system had actually been put into practice in telegraphing between the Isle of Wight and Southampton during a suspension in the action of the regular cable communication. The instruments used were a telephone in one circuit, and in the other about twenty-five Leclanche cells and an interrupter. The sound could then be heard distinctly; and so communication was kept up until the cable was again in working order. Of the two lines used in this case, one extended from the sea at the end of the island near Hurst Castle, through the length of the island, and entered the sea again at Rye; while the line on the main land ran from Hurst Castle, where it was connected with the sea, through Southampton to Portsmouth, where it again entered the sea. The distance between the two terminals at Hurst Castle was about one mile, while that between the terminals at Portsmouth and Rye amounted to six miles.

GOOD HEALTH.

BATTLE CREEK, MICH., MARCH, 1885.

J. H. KELLOGG, M. D., EDITOR. TERMS, $1.00 A YEAR.

CHOLERA COMING.

WISE sanitarians predict that the cholera is pretty likely to make us a visit next summer. In case their prediction proves true, people who neglect to observe sanitary rules, and disregard the laws of hygiene in reference to diet and cleanliness of person and premises, may expect to be punished for their negligence.

Cholera may be looked upon as a sort of sanitary whip with which Nature reminds careless and intelligent people of their obligation to observe her laws. Every physical law has a penalty attached to it, and disobedience is pretty certain to be speedily visited by certain retribution. Dysentery, cholera morbus, typhoid fever, etc., are small reminders of the consequences of sanitary neglects, for the continuance of which cholera may be regarded as capital punishment.

There are two theories held respecting the nature of this much dreaded disease. The majority of scientists hold that it is a specific disorder; that is, that it is produced solely by a certain specific cause, probably some sort of microscopic germ, which, finding access to the body in sufficient numbers through the medium of air, food, or water, chiefly and perhaps exclusively the latter, sets up the series of violent morbid actions by which the disease is characterized.

Another theory held by a respectable minority of scientific men and a good many observing lay persons, among others, Florence Nightingale, is that the disease is wholly due to insanitary conditions, that it is purely a child of filth, and may spring up spontaneously anywhere, if the requisite conditions are present, without the importation of any germs or other specific cause. Whichever theory may be true, all agree that filth favors the extension of the disease. If it does not of itself produce the disease, it furnishes favorable conditions for its development and extension. Wherever it has prevailed extensively, investigation has shown the presence of grossly insanitary conditions. The cities which have suffered most in Europe—Marseilles, Toulon, and Naples—are notoriously filthy cities. The last-named city we know from personal observation to be one of the most filthy in all Europe. Although favorably situated for drainage, little advantage has been taken of the natural facilites for disposing of filth; and parts of the city, when we visited it, were teeming with decomposing matter to such a degree that the stench was almost intolerable. When the cholera attacked the city, within seventeen days four thousand persons had been stricken down with the disease, nearly one-third of whom perished.

Some portions of our large sea-port towns are, from a sanitary standpoint, little better off than Naples; and if the disease should once take hold of these great centers, nothing short of a miracle would prevent its rapid dissemination over the entire country.

That the disease is not formidable to the wise and prudent, however, is evidenced by the fact that the members of various scientific expeditions sent out to Egypt and India to investigate the dis-

ease during the last year, suffered scarcely at all from the malady. Their exemption from the disorder while daily working among its victims, and constantly handling the most infectious material, must be attributed to the careful observance of hygienic rules, which were enforced by those in charge of the several expeditions. Some precautions at home would prove equally effective.

Pestiferous Pork.—It is reported that out of thirteen hundred persons living in a village of Saxony, nine hundred and sixty-one were attacked with trichinosis, as the result of eating the flesh of diseased hog. Fifty-seven died. The remainder survived with their muscles filled with living parasites. There are undoubtedly thousands of persons in this country at the present moment whose tissues are swarming with living worms. Dr. Edward C. E. Janeway, Demonstrator of Anatomy in Bellevue Hospital College, stated to the writer several years ago that he found living trichinæ, on an average, in five persons out of every hundred of the thousands of bodies dissected in the anatomical laboratory of the college.

If this estimate holds true for the whole population of the country, there are at present somewhere between two and three million persons whose muscles are teeming with living worms. Unconscious of the presence of these unwelcome tenants, they are constantly subjecting themselves to treatment for muscular rheumatism, neuralgia, wandering pains, and numerous obscure disorders which these intruders produce.

The Work-Cure for Sleeplessness.—John B. Gough says that work is the best cure for sleeplessness. He relates that the celebrated Lyman Beecher used to keep a wagon-load of sand in the cellar, and after his evening sermon he used to go down and shovel it from one side to the other. The vigorous exercise coaxed the blood away from his brain into his muscles, so he was prepared for healthful and refreshing sleep. Sometimes, when unusually wide-awake, the old gentleman would take down his violin, and work himself into a sleepy mood by amateur fiddling. The narrator does not mention the effect of the fiddling upon the other members of the household. "Amateur fiddling" does not usually exert the most somniferous influence imaginable. The exercise prescription we can indorse without qualification. The persuasive effects of fiddling upon the sleepy god, Morpheus, would probably depend upon circumstances.

Wine-Drinking among Women.—The fashion of drinking wine freely and in public is becoming more and more common among women of the wealthy classes in large cities.

A Cincinnati paper reports that a short time ago a young married lady of New York, who has been active in connection with "charity balls," flower parties, etc., made a wager with a young man stopping at the same hotel, that she could "drink him down," which she actually did, tapping her third bottle of champagne as her contestant was being carried out of the room.

A New Remedy.—A recent accession to the homœopathic pharmacy is potentized human hair. According to a medical exchange, "Professor Jæger, 'discoverer of the soul,' and of woolen-clothing notoriety, has made a discovery before which all his previous discoveries pale. It is the fact that a homœopathic attenuation of human hair is a remedy for all human ills. He has applied for a patent for it in Austria, under the name of 'Haarduftkügelchen,' which, when translated, is 'Hair-odor granules.' The female hair is said to be the most potent, promoting appetite, invigorating the system, etc. It must not be supposed that a solution of hair in soup, or an oleate of it, as sometimes found in butter, will do all these wonderful things. Such accidental atten-

uations are not high enough, and are, consequently, nauseating. You, in words of the author, 'add one hair to the waters of the Lake of Constance, and this is about the dilution attained in the granules.' The fool-killer has evidently not yet fulfilled his mission in Europe."

Clove Poisoning.—An Eastern lady who had for many years been in the habit of taking cloves, by degrees increased the habit until she kept one in her mouth continually, and in the course of a day contrived to eat a considerable quantity. One day she was seized with violent symptoms which indicated poisoning. The doctor was sent for, and found her in a critical condition, the cause of which he was at first unable to understand; but on inquiry he discovered that she had become so great a slave to the clove habit that she had taken on the day of her illness a quarter of a pound of cloves. By diligent efforts her life was saved, and it is to be hoped that she, and others who are addicted to the unwholesome practice of clove-eating, may take warning and reform.

A Diseased Imagination.—The influence of the imagination in causing and curing diseases is far greater than is generally supposed. The *Detroit Times* relates the following curious case illustrative of the way some people are misled by a morbid fancy:—

"Hallucination!" said Dr. Jenks. "I knew a man once who thought his legs were made of glass. Lived down East. An old, wealthy dyspeptic bachelor. I think the idea about his legs was the result of dyspepsia. Anyway he was so afraid of having his legs broken that he cried out whenever any one approached the bed. There was an old doctor in the vicinity, who was half mad himself, and this old fellow determined to cure him. One day he called and asked the old man to come out for a drive. Of course the old fellow was horrified, but the doctor insisted, and he at last consented to go. A bed was made up in the doctor's conveyance, and the dyspeptic carried out and tenderly laid on it. They drove off and about, until over the hill a little distance off they saw the stage coming.

"Then the doctor by a dexterous twist of the lines, overturned the buggy, and tumbled the old man out into the middle of the road. Of course he cried out that he was done for, but the doctor righted his buggy, and drove off, leaving him squirming in the middle of the road, and quite unable to move, owing to glass legs. Suddenly he was alarmed by a shout, and saw the stage come tearing down the slope, heading straight for him. He gesticulated, but the doctor had fixed things with the driver, and the stage came right along. Well, the old fellow stood it until the stage was only a few feet away. Then he jumped up and ran—ran clear back to town—and was never bothered with glass legs again."

Devourable Parasites.—A newspaper correspondent draws the following horrible picture of the sufferings of a woman sick with trichinosis, near Wilkesbarre, Pa., a few months ago:—

"A terrible case of trichinosis is attracting attention over in Hollisterville, Wayne County, a little village about eight miles from here and six miles off the railroad. The victim is the wife of Joseph Stephens, a laboring man. The disease is the result of eating raw ham. For years the woman has been in the habit of partaking of it in this way, but only recently did any of the effects show themselves. These came in the form of the terrible malady. She presents a most loathsome picture of human suffering. She is really one mass of worms, which keep the skin of her whole body in motion. Frequently they burst the cords of the flesh, and ooze out from the muscles of the limbs in large masses, some of the worms being as long as a needle, and as thick. To look upon her is sickening. While she is receiving the best of care, she constantly pleads with her friends to kill her, and thus put an end to

her horrible existence. A doctor from Hawley has endeavored to treat her, but without success. He says there is no hope for her. The house is overrun with visitors and strangers, who can only extend their sympathy. She is the mother of three children, who live with her."

The above account is unquestionably greatly overdrawn. A trichina is not as long as a needle, nor as thick as a needle, and does not gambol about in the sportive manner described. Trichinosis is bad enough in every way to make it undesirable, but not quite so bad a disease as the above picture portrays.

Blood Filter.—A medical crank proposes to cure all diseases by filtering the blood with an apparatus which he has invented for the purpose. One end of the machine is applied to an artery, the other to a vein. The inventor thinks he is going to emancipate the human race from disease. There are doubtless plenty of people whose blood needs filtering, and if this patented device is an improvement on the ingenious filters which nature has arranged in our bodies, we should expect wonderful results from it, and would recommend that the patent be purchased by Congress, and a Blood Filtering department organized for the purpose of preventing so many of our brilliant statesmen's dying off from Bright's disease of the kidneys, cirrhosis of the liver, and tobacco and cancer, in consequence of their unhealthful habits of life.

A Vegetarian Cat.—A correspondent of the Hartford *Times* recommends sweet-corn as a diet for cats, and says: "I can speak from sixteen years' experience with our pet cat, and can vouch his love for it. I think our pet can be called a vegetarian. His fondness for almost all cooked vegetables is very marked. String beans, peas, Lima beans, and squash disappear rapidly before him; he will eat beets and beet greens with a greater relish than meat; cabbage he cares but little for, but all kinds of greens, like dandelions, mustard, etc., he eats as though he loved them. Potatoes are not a special favorite with him, although he will eat them. I have noticed that cats of Maltese blood are very fond of potatoes; one that I owned years ago would even eat them raw."

A cat of sixteen years is as old as a man at one hundred and fifty, so it seems that vegetarianism favors longevity in the cat as well as other animals.

Tobacco and Divorce.—A Michigan female physician has found the cause of many divorces to be tobacco. She reasons that tobacco affects the sympathetic nerves which control the heart; that these nerves become paralyzed, and the husband is estranged from his wife. But when the wife becomes estranged from the husband, what paralyzes the sympathetic nerve then?—*Detroit Post.* [The tea-pot.—Ed.]

A Fatal Bill.—A certain Dr. Finley, of Havana, recently became suspicious regarding mosquitoes, which abound in Cuba as well as elsewhere, and has been closely watching their behavior, as the result of which he concludes that the little fellow with the long bill is a dangerous creature, and one to be avoided as sedulously as a hungry creditor by a man with an empty pocket-book.

Dr. Finley describes the stinging apparatus of the mosquito as composed of several pieces, all coming to a point, surrounding or inclosing the suction part of the instrument. The entire sting is thrust through the skin, when the outer parts are thrust aside, allowing free entrance from the suction part of a drop of acid, irritating material. This virus is injected for the purpose of rendering the blood more fluid, and consequently more capable of being sucked into the stomach of the mosquito. A part of this is, of course, rapidly diffused into the surrounding parts, and remains there as a gentle reminder of the visit. More of it remains if the in-

sect is disturbed at its meal than if it is permitted to get its fill.

Microscopical examination of the stinging apparatus shows that some of the blood dries on the outside, and another portion adheres to the inside, ready to be washed into the next puncture it makes, along with the acid venom or saliva it injects. It is easily seen how the inoculation of a healthy person with disease germs swarming in the blood of a fever patient might occur, especially if the healthy man should be stung soon after the mosquito had been interrupted in its meal of the blood of a fever patient.

The doctor captured some hungry mosquitoes, and took them to a yellow fever hospital, and allowed them to practice phlebotomy upon the patients. He afterward allowed them to repeat their favorite operation upon well persons who had never suffered with the disease, and in each case the patient suffered within nine or ten days with an attack of yellow fever. The attack was in no case nearly as severe as if the disease had been received in the usual way. The doctor believes that the disease is carried chiefly by mosquitoes. If his theory is true, it is evident that all mosquitoes should be quarantined when known to come from an infected district, or a way invented to have their bills thoroughly disinfected before being allowed to puncture the skins of unacclimated persons. Just now the original idea occurs to us that perhaps the mosquito might be successfully employed as a vaccinator for yellow fever. The man who will domesticate the mosquito, and successfully utilize him for this purpose, will, by future generations, be accounted as great a benefactor of his race as the renowned Jennings, who first introduced bovine vaccination.

A Great Smoker.—General Grant has been almost as famous for his tobacco-smoking as for his military successes. It has been reported that when in the field, he habitually smoked from five to ten dollars' worth of cigars daily. He has recently been obliged to cut down his tobacco rations to one-half a mild cigar daily, by the appearance on his tongue of a malignant disease, the result of long and continuous nicotine poisoning.

Which Cured Him?—According to the *Toledo Blade*, a physician of that city recently gave a patient some medicine, with instructions to "take a teaspoonful in water." The patient got into a bath-tub full of water, and took his medicine according to instructions, and in due time recovered. Which deserves the credit, the water or the drug?

—A writer in a school journal finds a cause for the frequent failure in health of lady teachers, in a poorly supplied lunch basket. We heartily concur with the following observations on the subject:—

"If many of our lady teachers are not unhealthy, it is due more to good luck than good management. They starve themselves. No wonder they lose their plumpness, and no wonder their blood is thin, eyes either droopy or stary. It is almost a miracle that they are not tortured with tic dolareux and neuralgia. Blotched faces, smoked complexions, and shriveled skin should not be complained of, because they came in obedience to their bidding. All these are the result of starvation.

"The interior of the average teacher's lunch basket is a curiosity. There are a few cookies, a piece of pie, a slice of cake, a taste of cheese, and an apple or orange. There may be half a dozen pea-nuts and a few caramels, but this is only on special occasions, such as the day after having been at the opera. Anything would grow sickly, thin, and pimpled on such a diet. There is scarcely any nourishment in it, particularly of the kind necessary to repair nerve waste. There being no food for the teeth, they become full of bone-colored spots, which sooner or later turn black."

—Dr. Alfred Carpenter, Chairman of the Council of the Sanitary Institute of Great Britain, suggests that the weekly Fast Day observed by all good members of the Catholic church, was originally established as a sanitary measure to prevent the excessive consumption of animal food, and a consequent injury to the body through a superabundance of nitrogenous material.

The theory may be a sound one, but it seems to us very doubtful whether the early popes were sufficiently well versed in the science of dietetics to appreciate the fine difference between any chemical constitution between flesh and fish. However, it is not to be doubted that the Friday Fast is of some sanitary value, and a custom, which, on the score of health, might be recommended to people of any or no religious faith, who are large consumers of flesh food.

—*The Current*, published by Edgar L. Wakeman, Chicago, Ill., a comparatively young journal, now in its third volume, reached our table a few days ago for the first time. Its pages present a varied feast of really good and original things, such as are to be found in few periodicals of the day.

Among the numerous articles in the number referred to is a production from the facile pen of our friend, F. N. Scott, entitled, "The Missing Pronoun," in which the writer makes an ingenious plea for the philological indorsement of the common usage of the pronoun *they* to indicate the third person singular when the gender is unknown or concealed, the English language being less amply supplied with pronouns than some other European tongues—the French particularly—which afford a special pronoun for its use.

The suggestion seems to us a very sensible one, and whether philologists legitimize this use of the word or not, it is evident that one or two of our generations will so incorporate it into the idiom of the language that its usage will become established, without the aid of the grammarians.

—Last fall hog cholera was reported as prevailing in numerous places in widely distant sections of the country. In some parts 50 per cent of all the hogs succumbed to the disease. It is to be hoped that the disorder will put in a lively appearance early in the spring, and finish up the pork-raising business as soon as possible. It has long been evident to a good many people that the principal business of the hog is to breed parasites. The real wealth of the country is certainly not increased by the pork-raising business. The hog consumes more corn than he is worth. At any rate, the corn which he eats would support more human beings than his diseased carcass, at least ten to one. It takes six or eight pounds of corn to make one of pork, and each pound of corn will support life as long as two or three pounds of pork; so if the hog should suddenly die off from cholera, or from any other beneficent disorder which nature might provide for taking him off, human beings would be both richer and healthier for the loss.

—According to a London doctor, English sparrows are subject to small-pox, and may be the means of spreading the disease. If this is true, it is evident that a law should be speedily passed providing for the vaccination of all sparrows, and prohibiting their passage through the country, or their entrance of public parks without such protection.

—One million two hundred thousand tons of beet sugar are made in Germany yearly, of which two-thirds are sent to England. The average German eats eighteen pounds of sugar a year; an average Englishman, sixty-eight pounds.

—A man who had lost his nose through disease recently had a new one made for him by a New York surgeon by utilizing the middle finger of his left hand, which was made to grow fast to his face, and then amputated to the second joint.

—A man in London, undoubtedly a Scotchman, announces that he has found the use of Scotch snuff a perfect preventive of summer catarrh and hay asthma. He makes free use of the snuff as the season approaches, and has had no visitation of the malady for six years. The narrator does not say that he ever had hay asthma; but if he did, he has only substituted a perpetual snuff-sneezing for a temporary catarrh sneezing, which does not seem to be a particular improvement.

—One of the most remarkable men in London is Sir Moses Montefiore, a wealthy Jew, who by a life of frugality and temperance has lived until he has recently begun his second century. He is still enjoying good health, and while somewhat feeble in body, retains his mental faculties as vigorously as ever. One of his croches is that he will on no account take any "doctor's stuff." Upon this point he is exceedingly obstinate.

—It was recently advertised in England that a guinea each would be given to destitute families throughout the kingdom who were *total abstainers*. In all England only six applied, who belonged to the total abstinence army. Doubtless, had those made destitute by the use of intoxicating drinks been included, the number would have swelled to thousands.

—"Doctor, do tell me what makes this awful pain at the back of my neck."

"Madam, your case is a very peculiar one. You have neurasthenia of the spinal cord, which has produced hyperæmia of the nerves, and hyperæsthesia of the vertebra prominens."

"Indeed, I am so glad that you have found out what is the matter of me. I have asked a dozen doctors about this pain, and never found one before who could tell me what the trouble was."

—Disease among cattle and hogs is everywhere on the increase.

—A missionary reports that a converted Chinaman has prepared, and is circulating in his country, a pledge against the use of opium, to which he has obtained many signers.

—As an evidence of the progress of temperance reform, it is asserted that of 146 churches in New Hampshire, where inquiry was made, 109 use unfermented wine at the communion table.

—A Yankee doctor made a patient sleep sweetly for years by the nightly administration of a sugar-coated dried huckleberry, which the patient supposed was an opium pill.

—Four million, two hundred and fifty thousand persons visited the Health Exhibition in London last year. It was the most successful of any popular exposition ever held.

—A temperance sermon comes from a pawnbroker's shop in Pittsburgh. The pawnbroker has found that ninety-nine per cent of the money he lends is spent for strong drink.

—Native Chinese physicians in this country are said to import large quantities of smoked lizards, which they use in the treatment of consumption.

—A daughter of the late Jesse Hoyt, of New York, the millionaire, was recently arrested for being "drunk and disorderly."

—A young lady in Illinois was taken violently sick the other day from eating stale sardines, and in consequence has become insane.

—A paper contains a list of articles which congressmen drink, but says nothing about water.

He is a hero stout and bold
Who fights an unseen foe,
And puts beneath his feet at last
His passions base and low.

DOMESTIC MEDICINE.

Temperature of the Body.—The natural temperature of the body, when taken under the tongue or in the arm-pit, is 98½°. Only very slight variations occur in health. When the temperature rises to 100° or more, the pulse will almost invariably be found to be increased in frequency. The frequency of respiration will also be increased, and other symptoms of fever will generally be found. It may happen, however, that the increased temperature, as detected by the thermometer, will be the only febrile symptom which can be readily detected at the very beginning of febrile disease, since this is by far the most delicate and reliable means for determining the degree of intensity of febrile action.

In using the fever thermometer, care is necessary to secure correct results. If the instrument be placed in the arm-pit, the arm should be drawn close to the body, with the fore-arm drawn across the chest, so as to cover the instrument as completely as possible. It should be retained in position eight or ten minutes. It is often more convenient to take the temperature in the mouth, the bulb of the thermometer being placed under the tongue, and the lips of the patient kept tightly closed for five or ten minutes. In young infants, the thermometer may be introduced into the rectum. In this location, the temperature is found to be about a degree higher than in the mouth or arm-pit. Before placing the thermometer in position, if it is a self registering instrument, and no other should be employed, care should be taken to shake the index down to 90° or 95°, reading from the upper end of the index, which consists of a short column of mercury detached from the main column.

A very accurate idea of the temperature of the body may generally be obtained by means of the hand, if proper precautions are taken to avoid error. In order to judge correctly of the temperature, the hand should be perfectly clean, smooth, and dry, and should be properly warmed before applying to the body; as if the hand happens to be cold, the body may feel unnaturally hot, although of normal temperature. First, one or two fingers, and then the whole flat surface of the hand should be laid upon the body.

The variations of temperature from that of health differ in various febrile diseases, in some running very high, while in others only a very moderate degree of elevation is noticed. As a general rule, the temperature does not rise above 103° to 105°. A temperature over 107° is very likely to prove fatal, although cases have been known to recover in which the temperature has risen two or three degrees higher. In depression, the condition opposite that of fever, the temperature is lower than normal, sinking even as low as 94° or 95°, or even lower. A very low temperature is as grave a symptom as a very high one, but occurs much less frequently.

The general supposition that a chill is the opposite of fever, is an error. The thermometer shows that the temperature is elevated during a chill as well as during a fever. The temperature may not rise as high, but is considerably above the normal standard. In most of these cases, the thermometer is of course the only reliable means of determining the temperature, as the skin is, not infrequently, cold and the patient shivering, while the internal temperature of the body is much higher than in health.

The Tobacco Habit.—This, habit when thoroughly fixed upon an individual, is scarcely less difficult of abandonment, in many cases, than the use of opium. Some persons are able to renounce their accustomed pipe or cigar at once, even after the habit has been indulged for many years, while others are only able to succeed after repeated attempts.

Treatment.—The secret of success in the treatment of the tobacco habit, is in relieving the system entirely from the influence of the drug as quickly as possible. This is best done after the patient has discontinued the habit, by the use of hot-air, vapor, Turkish, and Russian baths, or by the use of the wet-sheet pack. The last-named remedy is quite as effective as any of the others. The odor of nicotine can be distinguished in the perspiration of a patient long accustomed to the use of tobacco, for sev-

eral days after the habit has been discontinued. Electricity, preferably in the form of galvanization of the spine, fomentations to the spine, leg baths, with cold applications to the head, fomentations over the stomach and liver, and frequent dry-hand rubbing are very effective measures of allaying the nervousness from which many patients suffer, after dispensing with their usual quid or cigar. We have treated hundreds of patients for the tobacco habit, and have rarely failed to obtain complete success by the above measures, well backed up by the co-operation of the patient, within a week or ten days. Substitutes for tobacco are utterly worthless. As was remarked with reference to substitutes for alcoholic drinks, anything which would produce the same effect would be equally detrimental, and nothing else would be accepted by a tobacco-user as a substitute. The so-called substitutes which are now sold quite extensively, undoubtedly contain a considerable proportion of tobacco. At least, this has been the case with those we have examined.

Writer's Cramp.—*Symptoms:* At first, fatigue and sense of insecurity in arm and hand; patient grasps his pen too firmly; fingers seem clumsy; pen jerked up and down by twitching of the muscles of the hand and arm.

Under the head of writer's cramp may be included a number of allied diseases affecting other muscles than those of the hand; thus we have cobbler's cramp, milker's cramp, and blacksmith's cramp, as well as writer's cramp.

Cause.—The principal cause which has been assigned to this affection, is the long-continued use of a single set of muscles in a particular way, as in writing, milking, and other occupations. The most recent explanation of the nature of the disease is, that it is chiefly due to an increase of the power of automatic movement in the affected parts. It is well known that when certain movements are many times repeated, they may after a time, become automatic, that is, are performed without the direct action of the will. It has been suggested that writer's cramp is an exhibition of this faculty in an exaggerated degree, due to a long continued use of one set of muscles in the same way. It is said that copyists are much more likely to be affected with the disease than editors, authors, and others who compose as they write. This explanation does not seem to us very satisfactory, however, since walking, an act which becomes almost completely automatic, is not affected by any disturbance of this sort. The observation mentioned with reference to the class of persons affected, may be readily explained by the fact that with the copyist the motions of the hand are more uniform and continuous. Authors write as they think, sometimes fast, sometimes slowly, and often with frequent pauses, which affords opportunity for the muscles to rest. It has been noticed that this affection has arisen since the introduction of steel pens, and hence it is attributed in some degree to their use. It is also thought that the disease is encouraged by anything which restricts the motions of the muscles of the arm, as a tight coat-sleeve, an elastic, or any other means of constriction.

Treatment.—In many cases, absolute rest of the affected muscles is necessary. This frequently necessitates a change of occupation. Every possible attention should be given to improvement of the general health. The application of galvanism to the affected muscles is an effective remedy in many cases. Hot sponging, alternate hot and cold applications, and massage are also of use. Some patients obtain the needed relief of the affected part by learning to write with the other hand; but, unfortunately, in many cases this also becomes affected. Some relief from the disagreeable jerking may be obtained by the use of quill or stub pens. Fastening a sponge to the pen-holder at the point at which it is held, is sometimes beneficial. Some persons find relief to a considerable degree by grasping the pen between the first and second fingers, instead of between the thumb and forefinger.

Suppression of Urine.—This condition differs from retention of urine in that it is a diminished production of the urine by the kidneys, instead of being a retention by the bladder. This is a very serious symptom, indicating inactivity of the kidneys from congestion, acute or chronic disease, or conditions present in such diseases as typhoid fever, cholera, and other diseases characterized by great debility. The danger to be apprehended in this condition is the poisoning of the system from the retention of *urea*, the principal poisonous element eliminated from the blood by the kidneys.

Careful attention should be given to the amount of urine passed by patients or removed by means of the catheter. The amount usually passed in health is from a pint and a half to three pints. A much smaller quantity than twenty-four ounces or a pint and a half should be considered as a serious symptom.

Treatment.—If the attack is an acute one, relief may often be obtained by giving the patient a sweating bath of some sort, as a hot air or vapor bath or a warm blanket pack. Fomentations across the small of the back applied continuously for an hour or two, or until relief is obtained, is also a very excellent measure. If fomentations are not successful, alternate cold and hot applications may be employed. In case the disease is chronic, the patient should be kept in a state of active perspiration or several hours, so as to relieve the system of urea through the medium of the skin.

Varicose Veins.—This is a condition in which the veins are greatly dilated, and become tortuous in their course. It is occasioned by occupations which require long standing upon the feet, by constipation, and especially, in women, by pregnancy.

Treatment.—The disease is seldom cured; but its inconvenience may be greatly lessened by the use of the elastic silk stocking or the elastic bandage. The latter measure we very much prefer for the majority of cases. The bandage should be applied from the toes to above the affected part. It should be applied smoothly and with even pressure. Little pressure is required, as the natural swelling of the limb in standing will produce all the tension necessary, although a very slight pressure may be employed in the application of the bandage with the limb in a horizontal position. The patient should take care to keep the affected limb horizontal or slightly elevated as much as possible, so as to encourage the flow of the blood toward the heart. Sometimes the dilatation of the vein becomes so great that rupture occurs. In case of such an accident, the patient should at once elevate his limb as high as possible, and place a small roll of cloth, as a folded pocket handkerchief, over the point of the rupture, applying strong pressure over the compress.

Temporary Paralysis.—A slight temporary paralysis is sometimes produced by pressure upon a nerve trunk. Temporary paralysis of the arm is often produced by lying upon it during sleep, or falling asleep with it hanging over the back of a chair in such a way as to allow it to press upon the nerve. When the paralysis is slight, the arm is said to be "asleep." It may also be produced by a blow upon an exposed nerve, as by a sudden blow upon the elbow at the point popularly termed the "crazy bone," or "funny bone." "Crutch paralysis" results from the pressure of a crutch in its use in walking.

Treatment.—Rest, rubbing, hot and cold applications, and the use of electricity are all the measures usually required to effect a speedy cure.

Question Box.

Lame Shoulders.—Mrs. J. S. L., of Maine, wishes a prescription for a lameness of the shoulders, which her doctors call neuralgia and rheumatism combined.

Ans.—We cannot make an intelligent prescription without knowing more of the case, but would suggest the employment of hot fomentations morning and night, and a dry pack to be worn during the night, the dry pack being supplied by enveloping the affected parts with a thickness of dry flannel, covered with oiled muslin. Perspiration is produced, and the effect is practically that of a poultice.

The general health should receive attention. A saline sponge bath should be taken daily, followed with an oil rub. The patient should be in the open air every day, well protected, of course, by extra wraps, and special covering over the affected parts.

Obesity—Dandruff—Rubber Hair-Pins.—A correspondent inquires as follows:—

1. What kind of baths would you recommend for reducing weight?

2. Can you recommend anything for dandruff?

3. Do rubber hair-pins cause the falling off of hair?

Ans.—1. Frequent cold bathing will be found beneficial. A cold sponge or shower bath may be taken daily. It should be of short duration, and taken in a warm room, and great care should be exercised to secure thorough recreation. In addition, one to three vapor or hot air baths, and wet-sheet packs, may be taken each week with benefit.

Another excellent measure is daily sponging of the body with an astringent wash composed of one part vinegar to three parts of a decoction of sage, oak-bark, or some other mild astringent.

2. This troublesome affection is generally the result of some disorder of the digestion, or some other debilitating disease, and hence the general health should be restored by proper attention to the digestion and general hygiene. As a local application, a lotion composed of equal parts of castor-oil and alcohol will be found beneficial. Frequent shampooing will also be of service.

3. No.

Sick Headache.—A correspondent inquires for directions for treating sick headache.

Ans.—Relief may generally be obtained by hot fomentations to the head, followed by tepid

compresses, hot fomentations over the stomach and bowels, and hot drinks. When the bowels are constipated, as they generally are, the patient should take a large warm water enema. When possible to do so, warm sitz and full baths should be taken, as great relief is generally afforded by these means. When subject to bilious headache, the patient should avoid the use of tea, coffee, fats of all kinds, tobacco, and spirituous liquors, which are among the positive causes of the disease.

Winter Cough.—Several subscribers inquire respecting the cause and cure of winter cough.

Ans.—This is a mild form of chronic bronchitis which affects the patient only in winter. It is, in fact, the precursor of the more formidable disease. The patient takes a cold at the beginning of winter, and does not get entirely rid of it until the commencement of warm weather. He is then free from the cough until the following winter, when another cold is contracted, which hangs on a little longer than before, perhaps lasting a good part of the summer. The next fall a cold is contracted earlier than before, and the following summer the cough does not disappear entirely. Now the patient is really suffering with chronic bronchitis; and this is the way in which the majority of cases begin.

Treatment.—The treatment for winter cough is the same as is recommended for chronic bronchitis. For tightness in the chest, nothing will give so prompt relief as a hot fomentation at night, followed by inhalation of the vapor of hot water, and a moist compress to be worn upon the chest during the night.

Loss of Appetite.—A correspondent desires to know what to do for a person who has lost his appetite.

Ans.—Sun-baths, daily massage, inunction, and general tonic treatment are indicated. Give the patient simple food served attractively, and not more than three times a day. Let the patient drink a glassful of hot water half an hour before each meal. Create a demand for food, and the appetite will soon come if there is power to digest it. The use of bitters and various tonics is not necessary to relieve these cases. We have frequently remarked a great increase in appetite and recovery from an actual aversion to food by a change from highly seasoned food to that simply prepared, consisting chiefly of fruits and grains.

Mr. Ferdinand Schumacher, a veteran health-reformer, and one of our oldest patrons, contributes the following suggestions, in addition to our reply to A. B. C. in a recent number of GOOD HEALTH:—

"Allow me to say for his benefit, that up to a few years ago, I was similarly afflicted with cold feet, and made up my mind that they needed cleansing as much as any other part of the body. It has since been my practice every morning, after washing the face, head, and neck, to wash with soap, and bathe my feet in the same basin of cold water, no matter how cold it is. After this, I sponge off the entire body, thoroughly rubbing and drying with a coarse towel.

"The coarsest towel should be well starched for the purpose of rubbing the soles of the feet, and such other parts of the body as will bear it. The whole operation need not take more than ten minutes, and if it seems too severe, the sponging may be omitted, but the exercise is very beneficial; and immediately after the washing and rubbing, the feet and the entire body will feel warmer, and if repeated daily, will restore sufficient circulation to keep the feet warm."

MRS. E. J. K., of Kansas, asks our opinion of "Horsford's Acid Phosphate" preparation, as a remedial agent in dyspepsia.

Ans.—We know of no remedy for dyspeptics in general. The remedy referred to is a palliative in some forms of dyspepsia, but is not to be relied upon as a means of removing the cause of the disorder.

Salivation—Potatoes—Cold Feet.—H. E. R. inquires as follows:—

1. Will you please tell us the cause and cure of the mouth's continually filling with saliva. I have been troubled in this way for about a year. It seems to be aggravated when the stomach is out of order, when I am obliged to spit every few minutes.
2. Are potatoes ever the cause of skin disease?
3. Are cold feet ever the cause of indigestion?

Ans.—1. The symptom referred to is evidence of disorder of the digestion, and the difficulty generally disappears when proper remedies are employed for the relief of the dyspepsia.

2. No.

3. Yes.

Chilblains.—A correspondent who suffers from this annoying difficulty wishes to know if there is a remedy.

Ans.—The most efficient measure, and one generally affording relief, is the employment of a hot and cold foot-bath every night before retiring. An ointment composed of ten drops of carbolic acid to the ounce of vaseline is also an excellent remedy.

Pain in Chest and Throat.—F. B. inquires for the cause of constant aching in the throat and chest.

Ans.—This symptom is frequently the result of a catarrhal condition of these parts. Sponging the surface over the spots with very hot water two or three times a day, and the employment of means to relieve the bronchial irritation, are the best means of cure.

SCIENCE IN THE HOUSEHOLD.

CONDUCTED BY MRS. E. E. KELLOGG.

TEMPERANCE IN THE KITCHEN.

BY JULIA COLMAN.

THE kitchen is very often a stronghold of the drink habit in this country, from the fact that a great many of our inherited and imported recipes give flavorings of wine or brandy, to say nothing of gin, rum, and whisky. These are often carelessly copied, even by our religious papers, and as carelessly practiced by religious people. If they have their attention called to the matter, they may say that the heat drives away the alcohol, and nothing but the *taste* remains, never seeming to think of the absurdity of supposing we could taste the stuff if it were not there.

But this taste itself is the very thing to be feared, whether it creates in children a familiarity with the liquors used, and thus makes them in after years an easy prey to the drink habit, or whether it re-awakens in the reformed man the appetite which has done him so much mischief, and which has been with so much difficulty subdued. A pleasing instance where this was happily avoided was lately related by Mrs. Dr. Stephen Smith at a meeting in the Broadway Tabernacle, New York, as follows:—

"A guest, in whose welfare we were deeply interested, one day expressed to me a lively satisfaction because the mince-pie served at dinner had contained no trace of alcohol. He had feared the ordeal, for if it had tasted of brandy he would not have been able to control the awakened appetite. I had no suspicion that he had ever been addicted to drink, but he informed me that only a few years previous he had been its bond slave, and that he was obliged to watch continually against anything containing the poison. I was so thankful that my temperance principles had saved me from putting a 'stone of stumbling' in a brother's way that I determined to be more earnest than ever in calling attention to this matter; and I should be glad to get recipes recommended by any really good cook for the preparation, on a temperance basis, of various dishes which usually contain some kind of alcoholics."

To this there were a variety of responses, and as we know this to be a common want, we publish herewith some of the hints, as well as several such recipes, in full.

Mince-Pies.—Almost every good housekeeper has her own recipes for these, so we merely mention here some of the excellent substitutes for the usual item of brandy or alcoholic cider: The juice and pulp of lemons, fruit jellies from currants, apples, and plums. Experiments might be made with the juice or jelly of other sour fruits, such as barberries, cranberries, quinces, and especially Dawson plums. Very small quantities should be flavored and tested by the cook, and not put upon the dining table until the best result is obtained, when the entire batch may be seasoned.

Cider jelly from sour apples is very effective, and as it is now made and for sale in the market, it is entirely unobjectionable. Clean, sound apples are used, and the juice is evaporated at once, before it has a chance to ferment. The unfermented juice of apples is as harmless as the juice of any other fruit used in cookery. But we may do harm by patronizing the cider-maker, who is often a drink-seller, a drunkard-maker, and the ensnarer of our children, and all such men are to be avoided, whether in the grocery, saloon, or cider-mill.

Whatever fruit juices are prepared by any method, we should guard against their spoiling and fermenting, for it is by the fermentation or decay of the sugar in fruit juices and other such liquids that alcohol is formed. Even the juices of sour fruits have some sugar, and if we add sugar before fermentation, we increase the amount of alcohol formed. In this way women often manufacture alcoholic wines in their own cellars, and make drunkards of their own husbands and children.

In making mince-pies, much is gained by using good, spicy, sour apples, such as spitz, spy, and Newton pippin, and by previously cooking the raisins and adding their juice with them.

[The writer's suggestions, if followed, will certainly decidedly impair the dyspepsia-making qualities of the traditional mince-pie; but we would venture the opinion that the world would be morally and physically better if mince-pies, even in their most improved form, were stricken from the list of comestibles.—ED.]

Wine and Brandy Sauces are even more common than the mince-pie snare. It is well known that fruit juices can be used before fermentation with finer effect and more delicious flavor than after they acquire the alcoholic taints. The good cook of the future will probably provide for these sauces when she is putting up her supplies of fruit for the winter.

Canned Concord grapes are especially desirable for many purposes. For the present, we will suppose that we have the fresh fruits.

Strawberry Pudding Sauce.—Wash and hull one pint of good tart strawberries, put them into a porcelain-lined pan with half a pint of water, cover and stew gently ten minutes. Then drain through a cloth or hair-sieve, and thicken the juice with one level spoonful of corn starch wet with water. Boil up once, and sweeten to the taste. A little currant juice will add piquancy, and a little raspberry or pine-apple juice will give exquisite variety of flavor; while huckleberry juice will darken the color. When the milk dairies first became popular in New York City, this "red sauce," as the boys named it, was greatly in demand at a certain down-town restaurant.

Strawberry Lily.—A very showy dish is made by spreading a spoonful of well-cooked rice on a dessert saucer, arranging a handful of strawberries on it, and then pouring in at one side some of the above sauce made without the thickening. Serve cold.

Orange Sauce.—Squeeze out half a pint of juice from well-flavored but rather tart oranges. Boil one pint of water, and thicken with gluten or rice flour, and pour it boiling hot into the orange juice. Salt slightly, and sweeten to taste. Orange lily can be made on dessert plates of rice with this sauce, trimmed with small pieces of orange and sprinkled with sugar. Serve cold.

Grape Sauce.—Pick and wash rich, dark grapes, say Concord or Isabella, fill nearly full of water and cook to pieces, requiring perhaps twenty or thirty minutes. Rub through a colander, return the juice to the fire, thicken to the fancy with gluten, rice flour, or corn starch. Sweeten to the taste, and serve warm on puddings, apple-dumplings, boiled rice, etc.

Grape Jelly Pie.—Fill your crust with the above jelly, made perhaps a little thicker than for pudding sauce. Let it be about one-third of an inch deep. Bake without an upper-crust, or with some pretty pastry ornaments. Serve cold.

Grape Trifle.—Soak pieces of biscuit or cake in pure sweetened grape juice (prepared as above, only not thickened) until they are quite saturated. Then pile them up in a tazza, sprinkling in desiccated cocoanut throughout, and pour a plain custard over the whole. Place some walnut meats on the top, and finish by laying on a whip made with cream, sugar, and the whites of eggs, and dot this with currant jelly. Several more simple dishes can be prepared by stopping at different points in the above process.

There are several "trifles" becoming fashionable of late, every one of which contains a pretty large dose of alcoholic liquor (and I suspect the word "trifle" is an apology for that feature). One of these, indeed, is known as "tipsy cake," of which it would not require a very large helping to produce a tipsy effect.

Of course these dishes, as well as much of the mince-pie that is made, taste quite evidently of the brandy, and any person of discernment will readily notice its absence where the quantity is so large. We do not profess that the recipes that we are giving will produce dishes that "taste the same" as if made with brandy or wine. But where the quantity to which the user is accustomed is small, he may not miss it. What we would emphasize is that if his taste is not very much perverted, he will be very likely to relish these new dishes as well as he did the old ones; and in case of the mince-pie, for example, he very likely will think nothing about it if he is not told that something has been omitted.

Women are not always so wise nor so harmless as they might be in that respect. There is no necessity of submitting the list of ingredients of any dish, nor of mentioning anything omitted, to the master of the house, nor to his juniors. These matters are the special province of the mistress, and it lies in her hands to make them attractive *and wholesome*. Moreover, we maintain that she has no moral right to put any kind of poison into the food of those who depend on her for their daily portion, and she will find eventually that she has a higher Master to whom she must answer for any abuse of this trust. Many, too many, alas, have been obliged to drink the bitter results of such doings, even in this life.

If any one has pursued such pernicious practices until those who sit at her table demand their continuance, and especially if her children like "the tickle," she may well be alarmed for their future. If they cannot get what they like at home, they will probably, in the present abundance of restaurants, get it elsewhere, and with worse accompaniments, and the next step will be to the saloon. In such cases, as in many others, it is best to use entirely new dishes with which they have not been accustomed to associate the brandy taste, like the grape-jelly pie, and the orange and strawberry lily, and some of the following puddings:—

Sago Cocoanut Pudding.—Pour three and one-half cups of boiling water over one cup of pearl sago. Add three cups chopped tart apple, one cup desiccated cocoanut, one cup sugar, one cup blanched raisins, and the juice and pulp of two medium sized lemons. Bake in a nappy for forty minutes, and serve nearly cold, with or without dressing of sweetened cream.

Apple Rice Pudding.—To four parts good tart chopped apple add one part uncooked rice, mix well, place in an earthen jar or pipkin, fill in with water until it becomes visible at the sides of the mixture. Place in a moderate oven, and let it cook three hours. Serve cool with sweetened cream.

Green Corn Pudding.—To two cups grated green corn (well-filled kernels and uncooked), add two cups rich peaches, mashed or squeezed through the fingers, two cups of water, and one-half cup granulated sugar. Mix well, pour into a nappy, dispose on its surface some slices from

peeled red-cheeked peaches. Bake thirty minutes, and serve cold without dressing.

These recipes give but a meager idea of the resources we have in fruits and fruit-juices and natural flavors. What we women need is to realize our responsibility until we use our ingenuity in making dishes that are at once wholesome and attractive. We find the appetite and the health better, and the entire subject more easily handled if strong condiments of all kinds are avoided. Much also remains for mothers to do in teaching children that their desires should rise to a much higher level than the gratification of their appetites.

Stale Vegetables.—The use of stale vegetables is often a cause of serious disturbance of the bowels, especially early in the season, when many kinds of vegetables are taken to market in an unripe and immature state. Vegetables and fruit keep fresh much longer than animal foods; but when kept in the vicinity of strong and offensive odors, they absorb bad gases, and may thus become unwholesome. Fruits and vegetables which have begun to decay are unfit for food. Potatoes and other vegetables which have begun to sprout much are not fit to be eaten. Potato sprouts contain a poison which may produce serious results, as it is of about the same nature as belladonna and other poisons of that class.

Vegetables can be best kept in a wholesome condition by storing in a cool, dry place. The damp, dark vegetable cellars, usually located under a house or barn, are anything but wholesome. The vegetables rapidly deteriorate in quality, and the poisonous gases generated by decay ascend into the house to poison and sicken its inmates.

Canned Fruits and Vegetables.—Canned fruits and vegetables are often adulterated with coloring and flavoring substances of an unwholesome character. The most common are red coloring matters in tomatoes (not very common in this country), fuchsine and aniline in fruits, and salts of copper in peas and other green vegetables. It occasionally happens, also, that the solder with which the cans are closed, being carelessly used, causes contamination of fruits with lead, it being dissolved by the acid of the fruits.

Within the last few years a recipe for preserving fruits has been widely sold, which consisted in exposing the fruit to the fumes of burning sulphur, or immersing it in water which had become impregnated with sulphurous acid by such exposure. The deleterious influence of such a preservative is well shown by the fact that it destroys the color of fruit exposed to its action, and deprives it of its finest aromatic flavors. It should never be employed. The plan is not a new one, though presented as such. It has been well known for many years, perhaps centuries. Salicylic acid has been suggested as a preservative; but the quantities in which it would need to be used would render articles preserved with it unwholesome as food.

When the coloring matter is of an earthy character, some portions may be found in the bottom of the can as sediment. When fuchsine or aniline is present, it may be detected by placing in the juice of the fruit, as found in the can, a few threads of white woolen yarn or worsted. After half an hour remove the threads, and if the coloring matters mentioned are present they will be colored red, as will not be the case if only the fruit juices are present.

Adulteration with copper may be strongly suspected if such vegetables as peas have a bright green appearance. The presence of copper will be proven if a bright strip of iron or a sewing needle, placed in the can over night, after adding a few drops of sulphuric acid, is found to be coated with a coppery-colored film in the morning. A very small portion of copper may be detected in this way.

Saves Time, but Wastes Boys.—The *Vanguard* very sensibly remarks:—

"Salt fish and meats, fried potatoes, grease, and hodge-podge hashed up for breakfast may save time; but it sends men and boys to saloons for something to whip up the stomach to its hard task. Choice preparations of grains, and the finest selection of fruits are more convenient and tempting than pastries, condiments, cakes, and greases, and costs less than meats. Try it."

Literary Notices.

THE first issue of the second volume of the DORCAS MAGAZINE of WOMAN'S HANDIWORK has come to our table. It is a bright and readable monthly, devoted mostly to knitting and crochet work, though there is scarcely a branch of fancy work for which one does not find some instructions within its pages. It treats of these subjects in such a plain and practical manner that the uninitiated can easily understand and follow the instructions given. Those who have leisure for this kind of work, or who use it as a means of gaining a livelihood, will find much of value in this little magazine.

Subscription price $1.00 per annum. Howard Bro.'s & Co. Publishers; New York City.

THE ANTI-TOBACCO GEM, published quarterly by C. H. Shepherd, Melvin Village, N. H., is a bright little sheet full of pithy sayings, anecdotes and wise thoughts respecting the terribly prevalent habit of tobacco-using. It is a valuable little paper, and well worth double its subscription price, 15 cents a year.

THE HOME OF THE SAVED; OR THE INHERITANCE OF THE SAINTS IN THE EARTH MADE NEW: By J. N. Loughborough. Review and Herald, Battle Creek, Mich. In pamphlet form, 82 pages. Price 10 cents, post-paid.

Publisher's Page.

☞ The publishers have been gratified that notwithstanding the hard times which prevail more or less in all parts of the country, the renewals of subscriptions to this journal have been so prompt that it has been necessary to strike off from the mailing lists the names of but very few of the old subscribers, and the lists are constantly being re-enforced by liberal additions from agents, who are at work in all parts of the country. The circulation of GOOD HEALTH at the present time is greater than for some years previous.

☞ The Health and Temperance Club organized among the students in Battle Creek College, now numbers over one hundred active members. The meetings of the club, which are held once a month, are made interesting and instructive by lectures and various literary exercises, all of which have a direct relation to the objects of the society. A missionary fund is being raised for the purpose of circulating health and temperance literature. It is to be hoped that many similar clubs will be organized in different parts of the country.

☞ The demand for specimen copies of GOOD HEALTH has been greater this year than at any previous time. We take pleasure in supplying sample copies free to those who desire them.

☞ We take pleasure in calling attention to the advertisement of THE IDEAL FOUNTAIN PEN, which appears in the present number. We have had one of these in daily use, and are pleased with its performance. The pen is kept for sale at this office at manufacturers' prices.

☞ Would also call attention to "THE HOME EXERCISER." We have received from the manufacturers one of these ingenious devices for exercising, and find it to be vastly superior to any of the much-advertised health-lifts with which the country has been flooded so many years.

Encouragement.—The following are a few samples of commendatory letters which we receive monthly from old and new subscribers:—

Mrs. L. F., of Indiana, says:—

"Having taken up a GOOD HEALTH printed in 1881, and finding so much good in it, I thought I would write you and see if it is still published. We took it one year, and liked it very much. Often, friends who came to see us would ask for the GOOD HEALTH, and every one that read it liked it. I hope it is still published, and heralding forth its precious truths."

Mrs. J. C., of Colorado, writes:—

"I have just received the February number of your journal, with which I am *very much pleased indeed*."

J. M. B., of California, says:—

"Please continue sending my journal. I do not want to miss a single number."

S. B., of Illinois, says:—

"Inclosed find one dollar to renew my wife's subscription to GOOD HEALTH. We feel so much pleased with the journal, we scarcely know how to do without it."

S. T. A., of Kansas, writes:—

"I had thought that I would try to do without GOOD HEALTH this year, but I find it indispensable; so inclosed you will find one dollar and four cents, for which please send me GOOD HEALTH and the Calendar."

C. L. W., of Mass., has received the GOOD HEALTH, and is greatly pleased with it.

E. S., of New York, has renewed her subscription for the third year, and would not do without it.

T. H. R., of New York, sends one dollar for renewing his subscription to GOOD HEALTH, and remarks:—

"Your journal is an old friend, and perhaps the best way to express my appreciation of it is to say that I have taken it every year but one since it began to be published."

A. G. T., of Minn., renews her subscription, and says:—

"I would not think of doing without it, for I have been greatly benefited by reading it, and have tried to obtain other subscribers. It ought to be in every family."

C. A. R., of Minn., says:—

"Please continue sending your journal to me. I have taken it ten or twelve years, and esteem it very highly."

Mrs. M. P. M., of Mass., has received her first two numbers of GOOD HEALTH, and says:—

"They are so excellent I wish all my friends could subscribe."

Mrs. P. O., of Mich., writes:—

"I have been one of your subscribers for about eighteen years, and rely a great deal upon the valuable information received from your journal, and have come to feel that I could not do without it; so I gladly renew my subscription for another year, and wish you continued success."

J. W. P., of California, in renewing his subscription, says:—

"We wish to express to you a word of thanks and gratitude in our heart for the good counsel we have received through the pages of your journal."

E. S. W., of Illinois, writes:—

"I have just received a copy of GOOD HEALTH, which I have read with much interest and profit, and herein inclose one dollar for continuing it to my family for a year."

R. A. U., of Ohio, says:—

"I could not afford to be without GOOD HEALTH in my family."

H. H. S., of Canada, N. W. T., says:—

"Being a firm believer in the principles of hygiene, I begin to look forward to the visits of your instructing journal."

S. G. K., of Canada, says:—

"I was highly pleased with the last number of GOOD HEALTH, and think it well worth its price. I am always glad to see it each month."

A. J. C., of Wis., who discontinued taking the journal some five or six years ago, has obtained a copy of the January number, and says: "I think the number this month is splendid. You may depend on me every year. I will see if I cannot get you some subscribers."

Mrs. A. W. C., of Iowa, writes to notify us that although she is not prepared to send the money to renew the subscription to our journal, she will do so very soon, and expects to send several other subscriptions with her own. She says respecting the journal: "It is a feast to us."