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NUMBER 5.

BATTLE CREEK, MICHIGAN.

MAY, 1896.

ZOOLOGICAL HEALTH-STUDIES.

BY F. L. OSWALD, M. D.,

Author of "Physical Education," "The Bible of Nature," etc.

5. Natural Education.

(Continued.)

THE educational methods of our instinct-guided fellow creatures might often help an observer to anticipate the doctrines of a reform that has only begun to free our schools and nurseries from the curse of unnaturalism.

One of the most impressive lessons that could be suggested by studies of that sort, is a practical protest against the leading-strings fallacy. "From the moment a child is born," says a modern educator, "he is treated on the principle that all his instincts are essentially wrong; that nature must be thwarted and counteracted in every possible way. He is strapped up in a contrivance that he would be glad to exchange for a straight-jacket, and kept for hours in positions that prevent him from moving any limb of his body. His first attempts at locomotion are checked; he is put in leading-strings; he is carefully guarded from the outdoor world, from the air that would invigorate his lungs, from the sports that would develop his muscles. Hence the peevishness, awkwardness, and sickness of our young aristocrats."

Nature-taught animals are too wise to repress their youngsters' penchant for locomotion. With or without a realizing sense of its practical importance, they encourage it in every possible manner. Foxes lug crippled specimens of their victims to the entrance of their burrow, and there release them, to give their whelps a chance for a prize-scramble. Mrs. Reynard needs no dinner-horn; her boys have been on the alert, and chase the limping rabbit through stumps and stones, while their mother lies low,

watching the fun with switching tail and forbearing interference, preferring to take the risk of her young ones' losing a meal, rather than a chance for exercise. Wild turkeys, in guiding their brood through a meadow, often content themselves with stirring a grasshopper from its perch and leaving their chicks to do the rest, and thus improve their alertness, as well as the efficiency of their locomotive organs, for the ensuing race is not always to the swift; the two leaders occasionally upset each other in the ardor of competition and a *tertius interveniens* carries off the prize. The female deer exercises her fawn in running, first on level ground, and by and by up hill and through tangled bushes. The she wolf (like many species of dogs) may often be seen teasing her puppies into foot-races, by crouching in ambush to leap out with startling suddenness, or permitting the little yelpers to chase her about for a couple of minutes before she consents to drop their share of the family breakfast. And as soon as they are strong enough to shift for themselves, she allows them to enlarge their dividends by individual efforts, merely guiding them to some safe hunting-ground, and permitting them to make the best of what luck there may bring them.

It will not do to say that wild animals have no leisure to attend to the details of education; they really devote a larger portion of their time to family duties than nine out of ten human mothers. The higher animals guard their young almost constantly for the first quarter of a year; mother monkeys carry their bantlings about day and night, or permit

the prehensile arms of the little imps to clutch them in a tight embrace while they follow the troop in a headlong flight through the tree-tops.

But when that flight has carried them to a place of safety, Mrs. Jacko permits her cadets to indulge their growing passion for gymnastics, and neither Barnum nor Professor Renz ever treated their patrons to such exhibitions of high and lofty tumbling as the monkey-protecting Hindus have a chance to witness in the shade-trees sheltering their humble cabins. The young bipeds catch the infection, and join in the sport; and it would perhaps be difficult to enforce discipline if our academical groves were haunted by pets of that kind.

Carnivorous animals are forced by business exigencies to abandon their cubs now and then, but besides leaving them in the safest nursery the neighborhood affords, they can trust them to enjoy the joint stock of animal warmth, the blind pups or kittens huddling close together while their mother hunts with an energy stimulated by the co-operation of two master passions, hunger and love. "*Si quieres ver loba parida, casa tu hija*," says a Spanish proverb,—"If you would like to see a foraging she wolf, let your daughter marry."

In warm countries wolves content themselves with a shallow dugout under a bush, and squirrels with a mere carpet nest; no animal's anxiety to keep its young warm, does, indeed, ever take the form of an attempt to exclude currents of fresh air, which our child-nurses dread as harbingers of death. Young foxes, after their eyes open, pass half the day and many moonlight hours at the gate of their den, diving back only at the approach of danger; coons not much bigger than a lady's muff are caught by midnight hunters, and in the morning twilight they often venture from their nests to clamber about the stump of their hollow tree, which, besides, has generally more than one ventilation-hole. The kittens of the South American lemurs, or night-monkeys, are reared in similar nests, a tree-cave padded with lichens, but with its windows wide open. At the sound of an ax or a hunter's shout, curious heads, like baby-faces with big, round eyes, may be seen peeping from these apertures, and vanishing suddenly on meeting the stare of the stranger. But the dread of draft evidently does not scare them a bit, and in the night-time they come forth, like our flying squirrels, to join in the moonlight romps of their parents.

In such countries there is, by the way, a much less pronounced contrast between the gayety of the young and the surliness of veteran specimens of wild animals, old jaguars in jungles only rarely echo-

ing the ax-strokes of the logwood-cutter, and old eagles, in their inaccessible eyries, being almost as playful as their young. Indeed, this is true of all beasts and birds till they are turned meditative by the perils of a planet whose appointed all-protector, man, has taken up the trade of an all-destroyer. There was a time when that destroyer himself seems to have enjoyed the lifelong good humor of his Darwinian relatives, and the philosopher Grotius justly remarks—though less justly complains—that "the men of ancient Greece acted mostly like overgrown boys."

Some of the non-migratory birds of our Northern latitude—hawks, for instance—hatch their eggs as early as March, but their young breathe the keen air with perfect impunity. Even while the living feather quilt of the mother bird helps to keep them warm, their little heads peep out, like those of young monkeys, from under the fur of their nurse. It is a suggestive fact that not a single species of the man-like apes builds a lying-in tabernacle; the so-called nests of the Koolo-Kamba being mere weather-sheds, used only during rainstorms, and now and then for the purpose of a parasol. The idea of providing artificial covers for her young never occurs to the mother ape, though it would not take her deft hands long to scrape together the material for a comfortable moss nest.

One great objection to our present system of education is its preference for abstract methods of instruction,—theoretical precepts that are forgotten or misapplied in the emergencies of actual life, as in the satirist Haller's "swimming-school," where a select "faculty of professors continues to lecture on natatorial science, and to distribute medals and diplomas of graduation, though experience proves that their prize pupils generally drown if they enter a boat and fall overboard." Goethe, in his poetical aphorisms, uses the same simile:—

"Dass sie die Kinder erziehen könnten,
Müssten die Mütter sein wie die Enten;
Sie schwämmen mit ihrer Brut in Ruh;
Es gehört als freilich Wasser dazu."

"How to educate your daughter?
Watch the ducks, you anxious mother,
Swim away, without much bother,
Though 't is true, that needs some water."

Plenty of "water;" viz., abundant opportunities for illustrating the precepts of wisdom by practical lessons, enables our dumb fellow creatures to educate their young in a manner answering all the needs of future self-help. The little fawn, trudging after her dam, remembers that they descended into shady glens in quest of water, and climbed the cliffs for rec-

onnoitering purposes; the young monkey, clinging to his mother's breast, notes that she visits certain trees in search of food, and feels her heart throb when she espies the telltale movement of a twig bending under the weight of a stealthy murderer. He learns to diagnose the symptoms of danger and the promise of creature comforts, and has his brain stored with clear conceptions, instead of misty abstractions, before he takes advantage of his mother's entanglement in the arms of the next baby to start out on an adventuring trip of his own.

On this plan the Hydriotes educated their boys into the best sailors of the Mediterranean; and the young islanders who had heard the lullaby of the sea waves in their cradle, and clambered about the rigging of their father's fishing-smack before they could walk, could afterward steer a life-boat through the whirlpool of the Charybdis, or lead the forlorn hope that tackled a fire-junk to the flag-ship of the Turkish admiral. Hence also the preternatural business acumen of young Hebrews who have toddled about the paternal pawn-shop while their souls were plastic enough for all the object-lessons of the science which Professor Stanley Jevons discusses in his treatise on "Money and the Mechanism of Exchange." "Ike, you should never snub a fellow that cannot buy a watch," says Master Moses, "he might have a coat to sell," though in their teens, few descendants of Father Abraham need a hint of that kind.

Weaned kids need no transition-beverage between milk and water, and are trusted to the guidance of

their instinct to avoid injurious herbs. "Instinct," in such cases, I suspect, is simply the evidence of taste, and to a normal child, too, healthy food would be attractive, while injurious substances would betray themselves by their repulsiveness. "Here, try that," said a medical philosopher of my acquaintance, offering his little boy a slice of Limburger; "don't your senses tell you that it isn't fit to eat? Now try these red raspberries; isn't it certain they must be healthful?"

Those very questions Nature addresses to every fawn browsing the miscellaneous herbage of a mountain pasture, to every young four-hander exploring the tangle of a tropical forest. Under the temptation of a keen appetite the little experimenters might forget the preliminary tests, but they would nearly always realize their mistake before it was too late. It may be doubted if children brought up on that plan would shed many tears at the disappointment of their alleged passion for "Castoria," but it is almost certain that they would not betray a hankering after alcoholic liquors or tobacco.

A few poisons, it is true, are almost tasteless, and thus might happen to victimize the inexperienced. These are, however, mostly out-of-the-way substances, not apt to obtrude themselves upon the attention of the young; but exceptional cases of that sort seem, nevertheless, apt to develop what we might call supplementary instincts,—if we may believe Frank Buckland, that he once saw an old rat drive away her youngsters from a dish of arsenic-poisoned gruel.

(To be continued.)

IMPOSING UPON THE SICK.

BY A. N. LOPER, M. D.

I HAVE sometimes been impressed with the idea when calling upon a patient, that the wise injunction of the apostle to visit the sick is greatly perverted in its meaning by a certain class of people who seemingly consider themselves benefactors. I will mention first those who visit the sick for the sake of cultivating their conversational powers, or for gratifying their own morbid curiosity, not thinking what the consequences may be. I cannot think that such "visiting" is referred to by our Saviour when he says, "I was sick, and ye visited me." There is a pressing demand for visiting the sick in the manner in which our Saviour and the apostle both implied—that of ministering to their needs, and showing

sympathy in their distress; but all other motives are to be condemned.

It is astonishing to what lengths curiosity will sometimes lead one. I recall the case of a patient who had been ill for months, having but a faint spark of life remaining; but the longer it lingered, the more curious people became. Callers had long been denied the privilege of entering the sick-room, much to the disappointment of numerous friends. Finally, one, after pleading for admittance and being refused, asked if she might "peep through a crack of the door, just to see how he looks." Had such "visiting" been allowed, as is often the case, the result would probably have proved disastrous;

but in this instance (which we are sorry to say is not always true) the advice of physicians was complied with, and all such requests were promptly denied.

The welfare of the patient should be considered first, and it is the duty of those in attendance to provide for this, remembering that "nothing is more dangerous than a friend without discretion." It is not a time for callers to have wounded feelings, nor to treasure up unpleasant memories; but it is, instead, a fitting time to learn an important lesson, if it has not been learned before—to visit the sick in a way that will do them only good. Conversation that might be wearisome or exciting to the patient should be avoided, the words of the visitor being few and well chosen.

There are other people, who, desiring to carry their idea of philanthropy a step further, or embracing the opportunity afforded by the sick-room for displaying their skill in the line of pastry and knick-knacks, bring to the sick such things as it would be hazardous for a well stomach to attempt to digest. I knew a lady who was subject to severe attacks of sick-headache, and upon one occasion a hospitable neighbor expressed her sympathy by sending her a donation of doughnuts and mince pie. Another case, a consumptive, with only a few more hours to live, was offered a bountiful repast of pork and beans. And still another patient, who was suffering from severe nervous trouble, was frequently treated

to piece-meals of fruit-cake, lemon pastry, cookies, doughnuts, Bologna sausage, etc.!

I will mention but one more of the numerous cases that might be referred to,—that of a college student suffering from a critical attack of pneumonia. Life hung as it were by a thread, and it was very uncertain what the result would be. The patient's appetite was extremely capricious, and several friends took delight in slyly pampering the perverted taste. After a severe run of the fever, when the patient showed signs of convalescence, the physician learned that a number of friends had assumed the direful responsibility of furnishing the patient with a plentiful supply of chocolate creams and other similar confectionery compounds. Had the patient died, the real cause of death might never have been known. How many a patient whose will-power is weakened by disease, and whose appetite is not a safe guide, might fittingly apply the sentiment, "A friend should bear his friend's infirmities, but Brutus makes mine greater than they are."

Surely such treatment as would be hazardous to a well person ought not to be imposed upon one whose powers of resistance are weakened under the influence of disease. And when one falls a victim to such treatment, and is laid to rest in an untimely grave, the monument, instead of bearing an inscription concerning the mysteries of Providence, would more fittingly bear an epitaph reading, "A victim of mistaken kindness."

THE RELATION OF DRINKING-WATER TO INTEMPERANCE.

BY WM. A. GEORGE, M. D.

NEXT to air, water is the most important of all the substances taken into the system. When we consider that four fifths of the entire body is composed of water, and that upon this more than anything else, depends the healthy action of many, if not all, the organs, especially those engaged in the circulation of the blood, the secretion of fluids, and the excretion of waste material, it is only natural to conclude that the system will have water from some source. Especially does one engaged in hard physical labor require a large amount of fluid to carry off the broken-down material which is continually being thrown into the blood by every movement of the muscles. But if the water is not good, few will take as much into the system as nature requires; and as a result the wheels of the living machine are clogged, and their inharmonious action is mis-

understood as a call for stimulants and tonics. Many a drunkard has received his first taste of strong drink in a dose of some simple tonic, which was followed by a life of misery not only for himself but for those around him—and all because of poor water.

With all the efforts put forth by temperance people to curtail the use of alcoholic liquors, and notwithstanding the many good results which have come from these efforts, one thing seems often to be overlooked, and that is, the difficulty with which a drink of good cool water is obtained upon the streets of most of our cities and villages.

O, why such a famine for water to drink?
And why must the youth who now stands on the brink
Of manhood and honor and fortune and fame
Be led down to ruin and mis'ry and shame?

O, simply because the good people forgot
That when it is dusty and sultry and hot,
A man or a boy who has worked hard all day
Needs water, pure water, his thirst to allay.

But there is one man who has not forgotten the needs of the weary toilers as they drag their feet along the street in the evening of a summer day. Like the beast of prey which lies in ambush by the spring where the trembling deer and antelope come to drink, so the rumseller stands in the shadow of his den and watches for the inexperienced and thirsty youth. He greets him kindly as a friend, and—well, we all know the rest.

Many a poor, tired boy would never enter a saloon for the first time if he could get a drink of good cool water at any corner on the business streets. True, many of our cities furnish an abundance of water, such as it is, at certain places on the streets; but who wishes to drink it? As the man—

"Who is convinced against his will
Is of the same opinion still,"
So he who drinks against his will
Is not refreshed, but thirsty still.

Many in our large cities have never known what it is to have a drink of the sparkling, bubbling waters of a hillside spring, nor of the cool, fresh, pure

water from a deep well in the country. It is no wonder, then, that "pure cold water" does not have the meaning to them that it does to the author of the temperance song. Neither is it strange that many prefer tea, coffee, or wine to the impure water of the city, and that we so often hear it said, "I never drink water."

The man who is doing hard manual labor must have something to drink; and if he cannot get good water, he is likely to drink beer. The young man who works beside him is perhaps from the country and is used to drinking from the "old oaken bucket." He would not think of taking beer, but this lukewarm, germ-tainted city water does not quench his thirst; he longs for a cool draft from his father's well at home; the cool, foaming goblet tempts him; he is ruined. So in every city we see those who are led into intemperance because of bad drinking-water; and this among the rich as well as the poor.

Let all who wish to help in saving their fellow men from ruin, unite in an effort to improve the water supply, both in the homes and the public places of our cities and villages. Much good may thus be accomplished, and many a youth snatched from a life of shame and a hopeless death.

HYGIENIC HINTS FOR HOUSEKEEPERS.

THIS subject is the keynote to either a harmonious or a discordant routine of household cares. The thoughtful, watchful wife or servant here has a medium for bestowing a great amount of earthly bliss, or the careless sloven an opportunity of heaping loads of misery on the members of the family circle and her neighbors,—the one proving herself a noble missionary in that great national nursery, the home, the other pleasing the eye and ear perhaps, but poisoning all the other senses by her neglect of the sanitary conditions surrounding her home.

The excuse so often given when the physician invites attention to this matter, on being called to attend a member of the family sick with some disease arising from unsanitary conditions, is, "O, I don't have time to do thus and so," or, "I did not think such a little thing would cause so much trouble;" but this does not remedy the evil.

To enumerate all the unsanitary causes of disease in the household would require more time and space than is here possible, but the writer will try to give a general idea of how the average housekeeper can perform her duty in these matters.

As we go through the house, let us first stop in the kitchen. O, here lurks a foe!—dust and dirt on the cooking utensils and the floor, or it may be putrid grease on the stove, pans, and kettles, or perhaps in the sink or on the floor. What is more unsightly than a pan or kettle containing food, and at the same time lined or covered with either dust or grease? And here is the filthy sink-pipe, which may be the means of poisoning the system slowly yet surely. Here hangs a broom which has seen duty in the drain cover or in the gutters, and has not been properly cleansed.

In the rural districts, where chickens are kept, there may often be found in the kitchen filthy baskets or boxes containing young chickens during the cold weather of March and April,—receptacles which are not cleaned during the entire tenancy of a brood.

Next we will examine the range or stove. Is the pipe tightly jointed? or are the oven spaces so filled with soot that gas escapes into the sleeping-rooms? Generally it is so. Next in order comes the cellar, where food is often left uncovered on a damp floor, readily absorbing any miasmatic vapors which may

be there, and damp walls requiring a coat of white-wash, even though the floor and walls may be cemented. All through the year, vegetables are allowed to lie on a shelf, on the floor, or in a box or basket, until decayed, thereby supplying miasmata to be absorbed by the milk or cream and food kept there. Has that pile of kindling-wood lain in a heap until the bottom is a mass of wet, rotten wood? We must examine the heater as we did the range, and see that its air circulation is good. For ventilation, a south or west window in the cellar should be opened frequently in the winter-time, and all windows should be open during the summer, to admit nature's disinfectants, sunshine and air. Generally the drain-pipes pass along the cellar walls or under the floor, as they leave the sink on their way to the sewer. A break or even a slight leak here can cause a great deal of trouble. The cellar floor has not been swept well and often. Our cellars should be a comfort instead of a menace to our health.

We now pass upstairs to the bath-room. The wash-stand and closet-bowl are not always in a condition pleasant to our senses of sight and smell. The bath-tub, perhaps, has not been cleaned after each bath, and the pipe is partly or entirely obstructed. Disinfectants have not been placed in the closet-bowl. Now, from the bath-room we may well pass to the bedrooms and storage-rooms, also perhaps, to the clothes-chests, where lie old soiled

clothes, containing the sweat and dust of months, perhaps years, of use.

On reaching the first floor again, we may find in the dining-room, library, and even the parlor, that great irritant, dust, left after a hurried sweeping, only to require a more frequent repetition of this duty.

Passing out into the yard, we must not overlook the drains and conductors. They may be bringing the water from the sink and roof all right, but yet, through a faulty connection somewhere, be distributing waste water through the soil about the walls, thereby poisoning the air which we open our windows and doors to receive.

Where are the garbage and slops just removed from the kitchen?—Not always placed in closed vessels to be removed by the garbage-man, or covered with earth in a hole dug for their reception in the garden, where they may enrich the soil, or still better, burned in a tight vessel over the kitchen fire, when no food is about, or on an open fireplace in the yard.

Surely there is no better missionary work than removing these life-sapping surroundings from our homes. Every housekeeper should realize that the cheerful mind of a healthy body guides one through his daily duties with more ease and despatch and less worry than the mind clouded by the sluggish action of a body filled with poisoned blood.—*R. Kemp Welch, in the Chautauquan.*

FLORENCE NIGHTINGALE'S FIRST PATIENT.

THERE is a beautiful incident related of Florence Nightingale when she was a child. It shows that God had already planted within her the germ which was to develop so beautifully in after-days.

Her first wounded patient was a Scotch shepherd's dog. Some boys had hurt, and apparently broken, its leg by throwing stones at it, and it had been decided to kill it to put it out of its misery.

The little girl went fearlessly up to where it lay, saying in a soft, caressing tone, "Poor Cap, poor Cap." The dog looked up with his speaking brown eyes, now bloodshot and full of pain, into her face, and did not resent it when, kneeling down beside him, she stroked with her little ungloved hand the large, intelligent head.

To the vicar he was rather less amiable, but by dint of coaxing, at last allowed him to touch and examine the wounded leg, Florence persuasively telling him that it was "all right." Indeed, she was on the floor beside him, with his head on her lap, keeping

up a continuous murmur, much as a mother does over a sick child. "Well," said the vicar, rising from his examination, "as far as I can tell, there are no bones broken; but the leg is badly bruised. It ought to be fomented to take the inflammation and swelling down."

"How do you foment?" asked Florence.

"With hot cloths dipped in boiling water," answered the vicar.

"Then that's quite easy. I'll stay and do it. Now, Jimmy, get sticks and make the kettle boil."

There was no hesitation in the child's manner; she was told what ought to be done, and she set about doing it as a simple matter of course.

"But they will be expecting you at home," said the vicar.

"Not if you tell them I'm here," answered Florence; "and my sister and one of the maids can come and take me home in time for tea, and," she hesitated, "they had better bring some old flannel

and cloths; there does not seem to be much here. But you will wait and show me how to foment, won't you?"

"Well, yes," said the vicar, carried away by the quick energy of the little girl. And soon the fire was lighted, and the water boiling. An old smock-frock of the shepherd's had been discovered in a corner, which Florence had deliberately torn in pieces, and to the vicar's remark, "What will Roger say?" she answered, "We'll get him another." And so Florence Nightingale made her first compress, and spent all that bright spring day in nursing her first patient — the shepherd's dog.

In the evening, when Roger came, not expecting to find visitors in his humble cottage, Florence went up to him. "Roger," she said; "your dog won't die. Look at him!" And Cap rose and crawled toward his master, whining with pleasure.

"Deary me, deary me! What have you done to him? He could not move this morning when I left."

Then Florence explained the mode of treatment.

"You have only to keep on with it to-night, and to-morrow he will be almost well, the vicar says." And smiling brightly, she continued: "Mrs. Norton has promised to see to Cap to-morrow while you are out, so now you need not kill him; he will soon be able to do his work again."

"Thank you kindly, missy, I do indeed," said the old man huskily. "It went hard with me to do away with him, but what can a poor man do?" And putting out his hand, he stroked the dog. "I'll see to him, missy, now as I know what's to be done," and he stood his crook in the corner, and hung his cap on the peg.

Then Florence took her leave, stroking and petting the dog to the last, and those who, standing in the cottage door, watched her disappear, little thought they were gazing upon one whose mission would be to tend the sick and wounded on many a battlefield, and how, in years to come, men dying far from home would rise on their pillows to "kiss her shadow as it passed them." — *Every Where*.

MEDICINE AS PRACTISED BY THE LOWER ANIMALS.

It would seem as if man were surrounded by dangers, seen and unseen, throughout his entire life. From the cradle to the grave it is a struggle. The same effort for existence is seen in the vegetable kingdom also. Every flower has its destroying insect; for every shrub there is a worm, and for the ripening watermelon the small boy lies in wait. But if disease threatens man on every hand, equally close at hand is the remedy with healing power, and not only do the so-called inferior human races appear to recognize this, but even dumb animals, and it would seem as if the latter, in an empirical way of course, practised medicine.

Animals instinctively choose such food as is best suited to them. . . .

A large number of animals, such as elephants, stags, birds, and ants, bathe themselves. Launay lays down as a general rule that there is not a species of animals which voluntarily runs the risk of inhaling emanations arising from their own excrement. If we turn to the question of reproduction, we find that all mammals suckle their young, keep them clean, wean them at the proper time, and educate them — maternal instincts which are frequently wanting or rudimentary in women even of civilized nations. In fact, man may often take a lesson in

hygiene from the lower animals. Animals get rid of their parasites by using dust, mud, clay, etc. Those suffering from fever restrict their diet, keep quiet, seek darkness and airy places, drink water and sometimes even plunge into it. When a dog has lost its appetite, it eats that species of grass known as dog-grass (*chien-dent*), which acts as an emetic and purgative. Cats also eat grass. Sheep and cows, when ill, seek out certain herbs. When dogs are constipated, they eat fatty substances, such as oil and butter, with avidity. The same instinct is observed among horses. An animal suffering from chronic rheumatism always keeps as far as possible in the sun. The warrior ants have regularly organized ambulances. Latreille cut the antenna of an ant, and other ants came and covered the wounded part with a transparent fluid secreted from their mouths. If a chimpanzee be wounded, it stops the bleeding by placing its hand on the wound or dressing it with leaves and grass. When an animal has a wounded leg or arm hanging on, it completes the amputation by means of its teeth. A dog, on being stung in the muzzle by a viper, was observed to plunge its head repeatedly for several days into running water. The animal eventually recovered. A sporting dog was run over by a carriage. During

three weeks in winter it remained lying in a brook, where its food was taken to it; the animal recovered. A terrier dog hurt its right eye; it remained lying under a counter, avoiding light and heat, although habitually it kept close to the fire. It adopted a general treatment, rest and low diet. The local

treatment consisted in licking the upper surface of the paw, which it applied to the wounded eye, again licking the paw when it became dry. Cats also, when hurt, treat themselves by this simple method of applying continuous irrigation.—*Dr. R. E. Anderson, in Scientific American.*

"ANYTHING TO GET WELL."

How often we hear persons who are partially ill exclaim, in tones as if they felt themselves abused, "I would do anything to get well." Yet, when we come to probe their mode of living, we find that self-gratification in some form, and usually that of the appetite, lies at the root of their ailments. The sufferer seeks change of scene and climate, flees to Nice, Los Angeles, or wherever the fountain of health is supposed to be situated, ignoring the fact that the fundamental change must begin with himself, and not with external conditions.

Perhaps the system cannot receive coffee without detriment. Yet let the physician prohibit its use, and at once the patient cries out: "O doctor, don't ask me to give up my coffee. Why, I could n't make a meal without that!"

Or perhaps an excess of sweets is undermining the constitution. I know a woman who buries her morning cereal with sugar, finishes her breakfast with doughnuts or cakes, uses three times as much sweetening in her beverages as she ought, and as a consequence is troubled with nervousness, constipation, irritability, and sleeplessness. Friends remonstrate in vain. She resents interference, and insists that her diet has no connection whatever with her condition. She will take medicine when it is prescribed by a physician, but she will not deny herself the pleasure of eating sweets.

A certain business man in Boston is what is called "a high liver." He uses neither wine nor tobacco in any form, but his table is loaded with a variety of the choicest food. He claims that his active life demands a generous diet, and that so long as the viands are properly cooked, no harm can result from what—to speak plainly—is refined gluttony. But every few months he has an acute attack of intestinal disorder, accompanied by excruciating suffering.

The wise old specialist who is called to attend him, and who charges an enormous fee for his services, prescribes but a modicum of medicine, and limits his patient to a strict diet of dry toast and water for several days. Nature thus has a chance to throw off the superfluity which has deranged the system.

A teacher of the sciences in a private school in New York was demonstrating to her pupils the indigestibility of a certain toothsome dish, when one of the young ladies said deprecatingly, "O, but it tastes so good. You could n't ask us to give up eating that."

Such cases could be multiplied indefinitely, but these are sufficient to show that people are willing to do "anything to get well"—or to keep well—except to surrender their pet tastes in food and drink. If they do not break down altogether in health, they are only half well, and are forever making some outward application or taking some internal remedy to improve their condition.

The price of health is obedience to natural laws, and that often means the sacrifice of desires which are in danger of enslaving the life with fetters like iron. But law will not compromise. It says: Eat and drink indiscreetly if you will, give the rein to passion, cheat your lungs out of their quota of fresh air, dress unhygienically; but know that for all these things, sooner or later, you will be brought into judgment.

With the greater intelligence which prevails to-day in respect to dietetics, there is need also of developing more power of self-control over the appetite. Lack of this is like the little crevice in the dyke—it lets in a devastating flood of physical ills.—*Francis J. Dyer, in American Kitchen Magazine.*

A PECULIAR, and in some cases fatal, skin disease in England has been traced to the poisonous effects of canned meats.

MICHIGAN has passed a law fixing a heavy penalty upon railroad companies for the employment of persons addicted to the use of intoxicants.

ALCOHOLIC LIQUORS CONSUMED ON SHIPBOARD.—The London *Star* is authority for the statement that the passengers of the Cunard steamers alone annually consume 344,000 bottles of spirits, about 16,000 bottles of claret, 9200 bottles of other wines, and 489,344 bottles of ale and porter, as well as over 30,000 pounds of tobacco, 63,340 cigars, and 56,873 cigarettes. The Cunard is but one of the several popular lines carrying a large number of ocean passengers. If there is the same proportion of drinking and smoking upon the other lines as upon the Cunard, the aggregate of liquors consumed on shipboard must indeed be very large. There is great peril involved to the traveling public on land by the use of intoxicants, but their use on shipboard is exceptionally hazardous. Many of the disasters at sea, on naval vessels as well as in the passenger service, have been due primarily to the use of alcoholic liquors. There should be a vigorous and earnest crusade against the use of intoxicants by any who go down to the sea in ships, whether passengers, officers, or sailors.—*National Temperance Advocate*.

ENGLISH SERVANTS AND THE TEAPOT.—Tea-drinking is rapidly becoming a vice among working-women in England, and it has just been shown that the miserable condition of the workers in the slate quarries at Merioneth is very largely due to the inordinate consumption of tea by the men as well as the women. The teapot is in use all day long, and appears at every meal; and although cookery classes are held in this mining district, it has been found impossible to wean the poor from incessant tea-drinking, or to persuade them to use nutritious foods. There can be no doubt that the indigestion and anemia from which working-girls and servants invariably suffer are largely due to inordinate tea consumption. In most workrooms and kitchens the teapot is in constant requisition, and its effects, if less revolting than those of the beer-can, are hardly less dire upon the health.—*The Princess (Eng.)*.

ADVICE TO LITERARY WORKERS.—An English medical journal, which ought to have some knowledge of the matter, undertaking to tell "literary workers" how they should parcel out their days, tells them to "rise early, take a cup of coffee with toast at 6:30, write for a while, take breakfast at 8, write till noon, take a lunch at 1 o'clock, smoke a pipe after it, take a cup of black coffee at 2, write a couple of hours, take a cup of tea at 4, write till 6:30, take dinner at 7, winding it up with a cup of

black coffee; take things easy till 10:45, then take a small cup of cocoa, and be ready for bed at 11."

The publication of such a fiendish plan of work and diet makes it pertinent to warn literary workers not to adopt it, unless they desire to sacrifice themselves to the interest of the craft at large by cutting off in their own persons a portion of the overstock of writers. Any man who mixes up nine hours of writing each day as a steady occupation with three cups of black coffee—and possibly some more at breakfast—a certain amount of tea, cocoa, and tobacco, and only six or seven hours of sleep, with no allowance for the wakeful hours caused by the nerve stimulation of the day, will speedily reach a pass where he will save the publishers all further trouble. It may be possible that the stolid English nerves can stand spurring, first with excessive work and next with excessive coffee; but the American writer who tries it will soon be fit for nothing but a rest-cure or lunatic asylum. There can be no hard-and-fast rule laid down as to how writers shall work and eat, any more than as how bookkeepers or bank clerks shall do the same things. But for all mental workers it is safe to lay down the rule of moderate labor, plain but nutritious food, and strict abstinence from tinkering with nerves and robbing nature's sweet restorer, all of which crimes are embodied in the advice of the alleged medical authority quoted above.—*Pittsburg Dispatch*.

THIS is how diminutive dogs are produced in Paris: Snatched from their mother's breast when but a few hours old, they are put on an alcoholic diet instead of a lacteal diet. When they reach a certain age, alcohol under different forms constitutes almost the sole diet of the animal. The young dogs do not die, but what is far more important, they do not develop, and appear to be wasting away continually. They soon cease to grow entirely. The Lilliputian animal is thus obtained after two or three generations. What a terrible lesson for drunkards and absinth consumers!—*New York World*.

THE PEANUT AS FOOD.—In a German medical journal Dr. P. Furbinger treats of the peanut as an article of food rich in albumin, of which it contains forty-seven per cent., together with nineteen per cent. of fat and non-nitrogenous extractive matters. He recommends the use of roasted peanuts in the form of soup or mush. On account of their cheapness, peanuts are recommended as a popular article of food, especially in poorhouses and the like.



RUNNING AS AN EXERCISE.

RUNNING, as I shall proceed to show, constitutes one of the most perfect exercises which a man may take without apparatus or assistance from others.

The first great merit of running is that it applies exercise mainly to those parts and organs least used, — the toes, feet, legs, lungs, and heart. It exercises least the arms and back, which are most used in ordinary work. Therefore it serves the first great purpose of any remedy ; it balances the circulation, and equalizes the functional energy.

To keep the head cool and the feet warm is the great desideratum, because the head is so near the heart, and the large blood-vessels reach it so directly. The tendency of our civilization is so to overwork the brain that the least deficiency in the circulation of the extremities is sure to be avenged by a congested head, leading by repetition to headache and insomnia. Running secures a cool head and warm feet.

Walking is dull work. There is scant pleasure in the exercise for its own sake. You must always be going somewhere ; and if you cannot continually go to some new spot, you are bored. The pleasantest walking is a quiet, contemplative stroll. But that is of little value for exercise, and rapid walking is almost always forced. But there is a spirit and *verve* about even the shortest little dog-trot which the most vigorous walking altogether lacks. Start to run, and the breath quickens, the pulse leaps, and the brain brightens, as the freshly oxygenized, purified blood begins to bound through it ; the eye sparkles, and the charm of your boyhood has returned once more.

How much of the exhilaration of our childhood was owing to the fact that we then were ever run-

ning ? And if adults ran more, would they mourn so much for the lost illusions of early years ?

The blows which the sole of the foot receives in running are of real value in improving the circulation in the feet. Those who have studied the merits of muscle-beating do not need to be told this. These sharp, vigorous strokes running up through the great sciatic nerve to the spinal cord and brain are stimulative and tonic in a high degree, and the quickening goes all through the body. Every nerve fibrilla feels it ; the liver is shaken and jarred into action ; the stomach grinds merrily away at its welcome grist ; the bowels start their weird serpentine, peristaltic action ; the capillaries flush blood ; the pores open ; and all is vigor and motion. Not a terminal fiber, not a corpuscle of blood, that does not share in the jubilee and revival. Running is "the universal alterative."

"Do not run ; it is too violent an exercise for your health !" How often is this advice given ; wisely enough, perhaps, to those with heart disease, but foolishly enough to the majority, who need precisely this exercise to strengthen their hearts against sloth and luxurious living. For the heart is a muscle, and suitable exercise is the one thing which every muscle must have or it atrophies. Very rapid and vigorous walking is good for the healthy heart, but it takes vastly more will-power to walk hard than to run easily, and the running will do the heart more good. Of course those with weak hearts should take this exercise with caution ; a few yards only should be the extent of the run at first, and when this grows easy and pleasant, a few more, and so on, working very gradually until a quarter of a mile becomes a bagatelle. When a quarter of a

mile causes no distress, *that* heart may cease to be solicitous about its safety. If adults ran as freely and as frequently as children,— I do not hesitate to say it,— heart disease would be rare. But when I praise running for the heart, competitive racing is always excluded. That has ruined many a heart. Health and pleasure are the only prizes for which to run.

I lately conversed with an athlete, an ex-champion in the Caledonian games, and he told me of the physical condition of some famous runners he had once examined. "The muscles on their abdomens were so hard that when I tapped them with my finger it was like tapping a board," he said. Observe the flabby sac which retains the bowels of the average sedentary man, and think what this difference must mean in the absence of abdominal obesity, constipation, prolapsed bowels, piles and hernia, to say nothing of a host of other pelvic weaknesses. Fine, vigorous abdominal muscles mean healthy viscera and pelvic contents in a normal position. What would this be worth to women? A woman who had avoided corsets and heavy skirts, and who had taken a quarter-of-a-mile vigorous run daily since childhood, would be wagered upon by an enlightened physician as perfectly free from "female weakness" or malpositions.

Again and again it has been shown that nothing is so healing to sick lungs as pure air taken freely; and in no other way can it be taken so freely and so purely as when running in the open air. As a breathing exercise alone, running is priceless; as a preventive of consumption nothing can excel it; and he is a dull hygienist indeed who cannot see how very valuable an agent it might become, when wisely employed, in checking lung disease. Were I to start a "consumption cure," running would be my sheet-anchor. Indeed, running would be my chief resource in treating those chronic diseases in which the patient has the use of the lower extremities.

We hear much of the medical use of oxygen nowadays, but there is no better oxygen than that which nature provides in the open fields; and if we fill ourselves with this, feasting on it as we run, every drop of our blood will thank us for the treat. Running furnishes oxygen more rapidly and abundantly than any other spontaneous exercise.

When you run, you perspire. Thousands upon thousands of little pores begin to drain off impurities, and thus relieve the other excretory organs of overwork. No Turkish bath can excel a run, no sudorific will produce a more thorough sweat. In the

corporation of man, running means clean streets, good drainage, perfect waterworks, and public sanitation.

Running is pleasant and inspiring. It enlivens the mind and dispels melancholy. It exercises every muscle in the body, and chiefly those not commonly much used. It cools the head, and draws blood to the lower extremities. It cures rheumatism, corns, cold feet, headaches, insomnia; prevents stiffness, varicose veins, apoplexy, consumption, hernia. It stimulates and tones up the nervous system. It shakes and arouses to action all torpid viscera. It insures appetite, digestion, assimilation, excretion. It will certainly cure obesity, for nobody ever yet saw a hard runner who was fat. It requires no apparatus. Taken all in all, it is the most perfect single exercise known for health, pleasure, and all-round development.

If you feel the need of running, have the courage to do it, and you can soon persuade others to join you, if you must have company. Children at least will be always glad to accompany you. The dress should be appropriate. The cap should be very light and close, so as not to blow off easily. Much of the time when you run fast, you will carry it in your hand. Let all the clothing be woolen, so that the perspiration will quickly pass off, and chills be avoided. Have no flapping skirts, coat-tails, nor other loose ends. Wear woolen stockings and low running-shoes or, better still, wear no stockings and no shoes, whenever the weather will permit. There is wonderful comfort in bare feet, as everybody knows. Contact with the earth is healthful. And in summer, after a rain, or in the dewy morning, how refreshing a running foot-bath through wet grass. Even in winter a short run, barefooted, through the loose snow, may be made perfectly safe for those who have taken the right training, producing a warmth and glow in the feet which will last for hours afterward.

Never race for prizes, or run against time, or compete for anything. Avoid overstrain. Don't make work of your sport. Leap and bound down hill, and you will find it jars you much less than straight running. Run up hill zigzag. Stop whenever you feel any discomfort, get your wind, and then run again. By constant practise a man could run as long as he could walk. In some places in the Orient, outrunners and footmen accompany carriages, and keep up with the horses. In the bardic chronicles of Ireland we read of the horse-boys running all day by the side of the traveler, ready to be at the bridle whenever the master halted. And

travelers of to-day tell us wonderful tales of runners in Mexico, Japan, Africa. But such running, if wonderful, is not perhaps desirable, and is hardly to be attained without too much expense to other faculties. The runs I recommend are through the dewy meadows of morning, over the hills of after-

noon, or through the aisles of forest temples,—runs with an easy breath, a light foot, and a gay heart.

You may not, like Selkirk, become able to run down wild goats, but you can at least run down your avoirdupois, run up your spirits, and run out, if not outrun, your doctor.— *William J. Lloyd, M. D.*

BICYCLING AND VEGETARIANISM.

LAST fall, a Mr. Kragness, physical director in the Y. M. C. A. gymnasium at Minneapolis, demonstrated the staying qualities of the vegetarian diet during a very hard journey on a bicycle from St. Paul to San Francisco. He lived entirely upon vegetable food, fruits, grains, and nuts,—subsisting chiefly upon granola, granose, and other health foods manufactured by the Battle Creek Sanitarium Health Food Company. He was accompanied by a vigorous companion, who subsisted upon the ordinary diet, but Mr. Kragness more than once showed his superiority in endurance by carrying heavier loads than his companion, and reached his destination in fine condition, having actually gained in weight, notwithstanding the many hardships he had met among the mountains. Mr. Kragness was by this experience so thoroughly convinced of the value of a non flesh diet that he has now become a confirmed vegetarian.

Another vegetarian bicyclist has recently appeared in the person of Mr. F. G. Barnett, a young bicyclist who, at El Paso, Tex., last year broke the world's record in a five-mile standing straight run, making the distance in the remarkably short time of twelve minutes and eighteen seconds, or at the rate of twenty-four and one-half miles an hour. A recent

newspaper speaks as follows of Mr. Barnett's vegetarian ideas:—

"F. G. Barnett, the 'Nebraska cyclone,' has become an avowed vegetarian, and has started a crusade to get all the speedy riders in Chicago to adopt his diet. Barnett has foresworn meat, and will eat nothing but starchy foods, fruits, and nuts while riding and training on the national circuit.

"To-morrow morning the farmer boy who made such a sensation in wheeling circles a little over a year ago by tying Walter Sanger's mile unpaced record, after being but a week off the farm, goes to Battle Creek (Mich.) Sanitarium. There he will ride on the track and road for two weeks, covering in the neighborhood of twenty-five miles every day. When he has gotten down to riding-weight, he will go to Louisville, and cultivate esprit on the Fountain Ferry track.

"Barnett thinks a vegetable diet well adapted to the wheelman. Since he has adopted it, he has added fifteen pounds to his weight."

Mr. Barnett is now stopping at the Battle Creek Sanitarium, getting new ideas in relation to healthful living, and putting himself in condition for his summer's work.

CORRECT BREATHING.

It has been discovered that the double chin can be banished by correct breathing. The woman with a short neck must hold her head high, even stretching her neck until conscious of the tension of the cords. She should practise dropping her head, and letting it roll listlessly about. This will give a graceful poise to the head, and the exercise of muscles will help to consume the extra amount of fat. Lung exercises in breathing are the best exercises for excessive stoutness. The best time for this is before dressing in the morning, and after undressing at night. Five or ten minutes' exercise every day will

reduce the flesh in a wonderfully short time. Stand erect, with the head and chin well up, and rise upon the toes at each inspiration, holding the breath a moment, then expelling it forcibly, coming down upon the heels at the same time.

Another good breathing exercise is to draw in a full, deep breath. Retain the breath while counting fifteen, and then slowly expel it. Sometimes stout women move the arms gracefully, but the body has an utter lack of liberty and free motion or suppleness. Drawing her corsets tighter never did make a stout woman less stout in appearance. The first

care is to discard the corset; the second is to banish all idea of being stout from your mind, and let the muscles have as free play as possible. All women can learn to use their bodies gracefully, even if there is a predisposition to stoutness. Stout women are often the lightest dancers, and there is no reason why they should not be graceful in pose

and motion. If a woman draws her breath freely from the bottom of her lungs, she diminishes the effect of her size immediately by doing away with that ready-to-burst look that is generally associated with stoutness. That is the look that must be avoided, even if the waist measures an inch or so more, and the bust and shoulders gain a little.—*Sel.*

HORSEBACK RIDING.—The great antiquity of equitation for the alleviation and cure of some chronic affections is attested by Hippocrates himself, who flourished four centuries before the birth of Christ, and who recommended and prescribed horseback riding, even at full gallop in the open fields.

Oribasius, who relied so much upon other gymnastic exercises as remedial measures in the treatment of some diseases, passes the highest encomium upon equitation. After declaring that riding slowly is tiresome, he goes on to say that when a horse is put on the stretch, though he violently shakes the whole body, this concussion is beneficial; for it strengthens the entire system, especially the stomach, and it purges and quickens the organs of sense beyond all other exercises. Some of the most valuable effects of equitation, as described by Oribasius, cannot, for obvious reasons, be obtained or experienced from bicycle riding.

The Latin writers, as well as the Greek, also allude to horseback riding as a therapeutic measure in the treatment of disease. The Romans, however, although they exceeded the Greeks in their admiration for and prosecution of gymnastic exercises, generally fell greatly behind them in their attention to and recommendation of horseback riding as a remedial measure. The celebrated Roman physician, Baglivi, however, was one of its greatest admirers, and speaks of having cured two hypochondriacal patients who were desperately ill, by causing them to ride in the country on asses.—*New York Medical Journal.*

To expand the lungs, go into the air, stand erect, throw back the shoulders and head, and draw in the air through the nostrils as much as possible. After the lungs are filled, with your hands at your side, raise them, and still continue to take in air. When you have forced the arms backward, and taken in all the air possible, let out the air slowly till the lungs are emptied. Go through this process several times each day. It will enlarge the chest, and do very much to ward off consumption.—*Sel.*

AVERAGE BICYCLE RIDES.—An average afternoon ride for a business man who does not train regularly is twenty miles, without much of a stop anywhere from the first to the twentieth mile. An average ride for a woman who probably never has taken much exercise is ten miles, with several dismounts, and walking up most hills, thus getting the variation of the muscles furnished by a little walk.

An average ride for a young man in school or college who has been in pretty good condition for some time, if not absolutely in training, is from forty to forty-five miles in an afternoon, without much stop. An average ride for a girl of healthy outdoor life and training—for there is always a certain amount of physical training in outdoor life—is twenty miles in a day, with several stops.

Here are four grades, so to speak, which merely give us a basis to work on. Now as to the time occupied. In the first, the man's twenty-mile ride, it would be safe to say two hours should be occupied in doing the ride. In the second, or woman's ten-mile ride, about an hour and a half altogether would be required. That is to say, she will wheel at the rate of seven or eight miles an hour, and occupy a good fifteen minutes in walking. The third case, that of the young man in training doing fifty miles, ought to occupy under four hours, or at any rate, not much more than four hours.—*Harper's Round Table.*

PROFESSOR HEIN, of Zurich, Switzerland, writes with reference to the Swiss archery competitions as follows: "The Swiss have been distinguished in archery for centuries. I had occasion, a short time ago, to speak with one of these far-famed huntsmen. This clever marksman assures me that all who attain skill in shooting are strictly temperate men or abstainers. Even temperate men have to become abstainers about a week before entering into a *schutzenfest* (competition)." The best marksmen not only refrain from alcohol, but live exclusively on simple and easily digested foods.



Home - Culture===

CONDUCTED BY
MRS. E. E. KELLOGG, A. M.

SELF-CONTROL.*

CHARACTER may be defined as the sum total of all a person's habits. It is a mosaic so complex in its make-up that it is somewhat difficult to separate any one trait entirely from the others and study it, since all are more or less connected with and dependent upon one another. It is likewise difficult to estimate which traits of character are the most important. However, in individual cases we know that those traits essential to a well-rounded character which are least prominent in the individual, need the most cultivation, since character, like a chain, is only as strong as its weakest link.

Self-control has been called the primary essence of character, and it is certainly one of the most necessary elements of a well-balanced character, since without self-control man degenerates into a mere animal. It is essentially a fundamental element of character, since many other elements are largely dependent upon it; for example, under the influence of uncontrolled passion or fear, even the most truthful, most obedient child is liable to deviate from the truth or to disobey.

Self-control may be defined as educated will. It consists in the ability to suppress or hold in check tendencies, inclinations, and impulses which may arise either from external influences or from the promptings of one's minor nature. By self-control we mean not only that one should restrain his temper and his appetite, but that he should possess an intelligent, conscientious mastery over all his bad traits and tendencies.

Self-control is not an innate instinct, but, like obedience and truthfulness, is a quality that must be cultivated by judicious training; hence it becomes a matter largely in the hands of parents and teachers. And here again with this thought we face the magnitude of parental responsibility, and we may well stop and inquire, "Who is sufficient for

these things?" Surely not she who imagines that the mere fact of parenthood implies the bestowal of all the necessary grace and knowledge requisite for the care of children; who supposes that mother-love intuitively brings with it mother-wisdom and an understanding of the needs of childhood, so that she is already well equipped for the bringing up of her child, and needs no special preparation or training herself to fit her for her God-given mission.

It would seem that every mother, when she receives those precious gifts, her children, from God, must realize that he has made of her a coworker with him to develop and educate characters not alone for time, but for eternity; and that only by living in the closest relationship with God, and studying with the greatest care the needs and nature of her children, can she be fitted for the duty and trust imposed upon her. We need to have it impressed upon our minds that we must study, that we must be constant learners, that there is something for us to do. We have no right to remain in ignorance of the best ways, the right ways, if God has endowed us with intellect, time, and strength.

Since self-control is not an inborn tendency, the question will arise as to how early in life it can be acquired, and how it can best be cultivated. Earliest infancy is none too soon to begin the training in this direction; whether it be sooner or later acquired will depend upon the individual peculiarities of the child, and upon the training given to it. "It is difficult to turn the course of a great river, but that of the small stream at its source may be easily changed." Even a babe of but a few months is capable of exhibiting a considerable degree of self-control.

The atmosphere in which the little one dwells will have its influence for or against self-control even in earliest babyhood. From the beginning, the infant can perceive whether the home atmosphere is one of peace or discord, and will be apt to be peaceful or stormy tempered accordingly. If its mother is fret-

*Abridged from lecture before Sanitarium Mothers' Class.

ting and scolding continually, its brothers and sisters quarreling and disputing; if loud and angry tones are what most frequently fall upon its ear, and scowls and frowns what its eyes are most accustomed to dwell upon, how shall the babe learn to possess its soul in patience amid such discordant surroundings? Even with persons of considerable age, the mood of one individual is often reflected in that of another, as faces in a looking-glass. How much more likely is the susceptible babe to be impressed by its surroundings. We are apt to acknowledge the influence of environment for the child of older growth, but for the tiny babe, what its eyes behold, what its ears hear, is too often accounted a matter of very little importance. But this is not so; before the child is a half year old, the things that are happening around him, the sounds that come to his ears, the behavior of those about him, the tones in which they speak, even though he cannot understand the meaning of their words,—all are making a lasting impression upon him, all helping to give a bent to his character. The atmosphere of peace and serenity in a well-regulated home, and the example of self-control at all times on the part of those who have charge of the child are two most powerful influences toward the establishment of self-control in early life.

There is not one of the great lessons which we desire our children to learn which we must not ourselves learn. In the cultivation of self-control, as with many other traits of character, example is far more effectual than precept. When parents give way to impulse, and lose their own self-control in the presence of their children, perhaps, as so often happens, just at the very time when they have undertaken to reprove and correct the child for some misdemeanor, the value of the good they intended to do the child through correction is wholly neutralized by the evil influence of the spirit in which the correction is made. It were far better that no attempt at correction be made, than that it be undertaken in a state of uncontrol.

Having lost self-control, one is apt to speak in loud, irritated tones; but if the voice can be resolutely kept in a low key, the outward semblance of control and calmness thus exhibited to the child will go a good ways toward helping him to master himself at such times.

I have read of one mother who said that, for herself, the only safe course to pursue was to reprove her children in a whisper, so much reason had she to distrust her naturally violent temper. The example of our daily intercourse with others,—with servants, with friends, and the world around,—of which

the children are witnesses, will lend an influence for or against their own exercise of self-control. I remember reading an incident related by a lady of her own childhood. "One day," she said, "I stood watching my mother make strawberry preserves. Beside the stove stood a large milkpan containing squash for pies, with the milk and eggs already added. 'Now, Bridget,' said my mother at last, in a satisfied tone, 'it is done, take the kettle off.' This was accomplished, and then, with almost incredible stupidity, the girl actually emptied the strawberries into the squash. My mother turned her head just too late; she was quick and impulsive, but there escaped her lips only a despairing, 'O Bridget!' Then, as she saw the girl's instantly regretful face, she uttered no angry reproaches, no useless lamentations. No doubt when my tired mother, who was not strong, went up-stairs to rest, she felt disheartened, and thought that her time, labor, and material had all been wasted; but probably she never did for me a more valuable morning's work than when she gave me that unconscious lesson in sweet self-control."

Of how many similar happenings is life full, and how often comes the discouraging thought that our labor has been all in vain. Yet who can know that it may not bring forth fruit after many days? Happy indeed is the mother who has her own strong will in subjection; her self-control will be contagious, it will inspire her child, and the remembrance of her own struggles will help her to be patient with her children, and to sympathize with them in their struggles to overcome self.

With the outside influences of example and environment conducive to the establishment of a habit of self-control, there is yet work to be done in educating the will within the child, for, as Emerson says, "There is no wall or safeguard which love can build around its object strong enough and high enough to keep away temptation. The wall must be within, or else, sooner or later, the citadel yields to the enemy." Discipline, first by the parent, and later self-discipline, is the means whereby the will is educated. Obedience well learned is the path that leads to self-control. To submit his will to that of his parents necessitates the exercise of some measure of self-control on the part of the child, and the more perfectly the habit of obedience is fixed, the more easy it becomes for the child to govern himself. "Power to choose the right comes only from having chosen to do right many times."

It is not so difficult a task, when intelligently un-

dertaken, to teach the young child the control of self. Says one authority, "Nature points out that the true method is to control the infant's will by the other faculties which the child possesses. When the child wills what is right and innocent, let the will work freely. When it wills what is wrong and hurtful, appeal to other faculties, and let this one sleep; excite the child's attention, engage its memory or its affections. If he is bent on having something that he ought not to have, amuse him with something else. Avoid both indulgence and opposition, and a habit of docility will be formed by the time the child becomes capable of deliberate self-control. . . . The mere habit of doing right counts a good deal with small children. . . ."

"A parent who duly appreciates the great work that every human being has to do in attaining self-government will assist the process from the very first by the two great means in his power, by the aid of

power and a government of love. It is really due to the feebleness of a child to give it the aid and support of habit in what it has to do and avoid. By regularity in the acts of its little life, in its sleeping and feeding, in its walking, in its times of play, a world of conflict and wilfulness is avoided, and the will is quietly trained day by day to submission to circumstances. Life thus goes on with the least wear and tear, and a continually strengthening power is obtained over all its faculties. It is true the mechanical discipline of habit can never be more than an auxiliary. It can never stand in the place of deep internal principle, but we are now considering the education of the infant man; our chief concern is with what is auxiliary to the great aim of perfection which lies far in the future."

"Start the babe right, and the child will follow. Treading fast in the steps of the child comes the man."

E. E. K.

(To be continued.)

THE BATTLE CREEK SANITARIUM DRESS SYSTEM.—XVI.

THE garment to which we would call special attention this month is the Marie gown, whose attractiveness is at once apparent to the most casual observer. Its practical utility will be readily perceived as the full-length figures of our illustrations are studied. Its wide range of usefulness is hardly equaled by any garment hitherto furnished by our designer. The Marie is that most useful of all gowns,—a princess,—and by simply a variation of the form and style of decoration it may be made a house gown, a street gown, or an elaborate gown for evening wear. The man milliners of Europe so well understand the possibilities in a princess gown that all the most finished costumes which emanate from the studios of the celebrated artists of Paris and London are built upon the princess model.

The Marie gown will undoubtedly be popular for summer wear, as it may be made of any wash goods and without lining, and thus will be one of the coolest of gowns. It is suited alike to all figures, as the decoration may be disposed in such a manner as to give the effect of plumpness to the thinnest or most angular form, or it may be arranged in vertical or serpentine lines so as to relieve the embonpoint of

the stout woman. It is to this latter class—the stout women—that we are confident the Marie gown with its graceful curves and unbroken lines will particularly appeal. Horizontal lines will accentuate the roundness of the form, and should be avoided by one who possesses a stout figure. It is for this reason that the stout woman will never be at her best when making the mistake of wearing large plaids or a dress consisting of a basque and skirt, while the same individual in a tastefully decorated princess gown would be a revelation to even her nearest friends.

The Marie Gown.—This pattern is in twelve pieces,—half of front, half of front gore of skirt, half of side gore, half of back, half of blouse front, strap across front, trimming fold, two collar portions, and three sleeve portions. Silk, satin, chiffon, lace, or ribbon may be very effectively used in decorating this gown. In the present instance machine stitching and buttons alone were used. The quantity of material needed is eight yards of 36-inch goods. Patterns can be furnished in the even sizes from 30 to 48 inches, bust measure. Price of pattern, 35 cents.

CHICAGO has successfully established a lunching-place for working-women, known as the "Noonday Rest." They pay thirty-five cents a month for membership; may bring their lunch with them, or buy it

at the rate of eleven cents for what ordinarily costs fifty cents, and have the advantages of library, lavatory, reception rooms, and pleasant association besides. There are already three hundred members.



MARIE GOWN — FRONT.



MARIE GOWN — BACK.



MARIE PRINCESS GOWN.



MARIE GOWN WITHOUT TRIMMING — FRONT.



MARIE GOWN WITHOUT TRIMMING — BACK.



HOW TO SECURE A CHILD'S OBEDIENCE.

IN no better way can the difference between this and a former generation be emphasized than by the changed position of children in a family. In our country, at least, strict, repressive, hidebound parental discipline has largely given way to a sympathetic, careful development of all that by nature is good in a child. And we no longer give much thought to the doctrines of total depravity and original sin in our infants. We rather regard them as dear guests, whose welfare and happiness it is our great desire to secure. Children's motives should always be understood.

"Will," said Will's grandfather, sternly, "did you pull up one of my little pear-trees by the roots?"

"Yes, sir," said the boy with anything but a culprit's face.

"Well, what did you do it for?" pursued the grandfather.

"Why, grandpa, do you want the cow to eat green apples off your trees, and get sick, and poison the milk?"

"No, certainly not."

"Well, I pulled up the pear-tree because it was just the right size for a cow-whip, and I drove off the cow from your apple-trees with it," said Will with offended dignity.

The child's motive was praiseworthy, and he was simply shown how a whip for the cow might another time be obtained without injury to the young orchard.

One great secret of good discipline is not to require too much. Govern by principles, not laws. Where possible, keep your hands off. Better too great freedom than too little. Give a little loop-hole for disobedience. When the daughter goes to spend the afternoon with a friend, don't mention the pre-

cise minute for her to return. The constant fear lest she may be five minutes late will mar the visit. Say, rather, "Be at home in time to meet papa with hands and face washed and hair brushed." Or, "Remember your music lesson at five." Then, should the little girl be a few minutes late, it is not disobedience, and punishment need not darken a sunny afternoon. "Better not" will secure obedience without punishment, when "must not" and "shall not," attached to a threat, will often fail. Unless self-government is taught, parental discipline is imperfect.

One thing more. Let the children feel that they are necessary to mama and papa as helpers, companions, and confidants. See how quickly the little one will fly to help, if only mama *needs* that help. The greatest inducement to be orderly and put things in their places is that it saves mama's steps. If the mother's head aches, let her rest against her little girl's shoulder, and see how quickly responsive is the love and sympathy of that wee heart. How, after that, she will tip-toe around and whisper in her play, lest she should make the pain worse. If you have a growing boy, take his arm when you walk with him, and make much of his strength. Unselfish love cannot be widely severed from obedience. And finally, you must be interested in all that interests your children. Never allow yourself to be too busy to listen to tales of happenings at school. Try to be radiant over the good times coming. Half of a child's happiness consists in anticipation. A promised treat next week will keep up a pleasurable excitement that will color with rosy hues the ordinary humdrum life of every day.—*Caroline A. Creevey, in Harper's Bazar.*

 NELLIE'S DEBTS.

NELLIE BLYNN is a bright, sunny-hearted girl in her early twenties, who earns her own money, and is learning how to spend it. Learning, I say, for that is one of the things it seems as if it would take a lifetime to understand.

Her family are in "easy" circumstances. She is an only daughter, with three brothers, who are very fond of her. They are all careful economists, from the father down. And one of the boys has been heard to boast that no merchant in town had one

of their names on the debtor side of his account books on New Year's.

Of late, Nellie's intimate friend, Nora Payne, has felt mystified whenever she has suggested that Nellie indulge in some bit of luxury—a charming old rose tea-gown, like Nora's own, a trip to the city for the Patti concert, a lovely Canadian outing to be arranged for the coming summer, as to each proposal Nellie has answered: "I cannot do it; at least not now." Nora grows inquisitive at last. "Nellie,

you are growing stingy. Your bank account is getting the better of you."

"O no, it isn't," Nellie answered, "but I am paying debts."

"Debts? You told me your father didn't allow you to owe for anything."

"He doesn't, but I have some debts that he does not know about. You look so shocked that I shall have to explain. It occurred to me in this way: You know Aunt Jane Rollins?—old, crabbed, deaf, disagreeable, but my own great aunt. Mother was getting ready to sit up with her one night, and was putting up some little dainties, which she had worked hard to prepare.

"'Aunt Jane will never thank you,' I said, 'nor appreciate it at all. And as long as she isn't destitute, but has a good home and all that she needs, what is the use of your doing it? It seems like throwing time and strength away.'

"Mother looked at me a minute. 'I call it paying an honest debt,' she said. 'I owe something to Aunt Jane,—we all do. She has watched with you children many nights, and has taken care of you days when you were sick, that I might rest. And, notwithstanding she is so forbidding, at heart she is as good as gold. I like to pay my debts, even if they are outlawed.'

"It was a new idea to me, and I thought it over until I was ashamed to find how many people besides the home folk I was indebted to, and some of them need the payment now, sorely.

"I remember when I was sixteen I went to Portsmouth, to see mama's old friend, Mrs. Reeves. How very kind she was, and what a lovely time I

had there, for they were wealthy then, and a delightful family. Well, she is older now, and poorer. Last week she had a birthday; I happened to know the date, and sent her something. Yes, it took just what the tea-gown would have cost.

"Uncle Jack was always doing things for me when I was little and growing up,—taking me to places, making me presents, and helping mama with my school expenses and my painting lessons. Now he has children, and a daughter growing up, and not very much money; and there are many pleasant things they must do without unless some one helps a little. So I have found a way to pay some instalments on that debt.

"And when I sprained my ankle once, mama was ill, papa away, and the boys so thoughtless! But Miss Frye lived opposite us, and she was such a comfort! She must have taken infinite pains to look after me and keep me in good spirits. She is an invalid now herself, and often lonesome and sad. I know she is comfortable and independent, but her lot might be much brighter if some one thought or cared to do little cheering things for her. So I can't help sending back the crumbs she cast on the waters so long ago.

"They're honest debts, all of them. I cannot repudiate one, and I am ashamed to have been so long getting to them.

"And another thing I am beginning to think about," added Nellie, "is that I would like to make a few investments of that sort myself. It might be very convenient to have some dividends coming in by and by."—*The Household*.

NUTRITIVE VALUE OF CORN-MEAL.—Professor Atwater, who has for many years been engaged in exhaustive investigation relating to foods for the United States Department of Agriculture, has been led to the conclusion that, considered from an economical standpoint, corn-meal has the highest nutritive value of all foods. Ten pounds of corn-meal contain more than eight pounds of actual nutriment, while the same quantity of potatoes contains but three and three-fourths pounds of nutrient material.

TAKE your needle, my child, and work at your pattern; it will come out a rose by and by. Life is like that—one stitch at a time, taken patiently, and the pattern will come out all right, like the embroidery.—*Oliver Wendell Holmes*.

WHEN lamps are not in use for a week or more, the oil should be poured out, or the stale oil will cause an unpleasant smell when next it is lighted.

KEEP CHILDREN BUSY.—Children should be furnished with employment, which is sometimes difficult to provide. What we call a natural love of mischief is often nothing more than activity. Children are restless for employment. They must have something to do; and if they are not so furnished, they will do mischief. Do not blame them; it is in their nature, and should be encouraged rather than checked. In furnishing little employments you can form the habits and cultivate the tastes. What is begun should be finished. Care should be taken with whatever is done, and neatness should be encouraged.—*Sel.*

HER FIRST FORKS.—In 1574 Henry III of France, at a magnificent reception given in his honor in Venice, saw forks used for the first time. On his return, he introduced them into his court, and the following is the astonished account of a lady of that time who saw them there :—

“They never touched the meat with their fingers, but with forks which they carried to their mouths, bending their necks and bodies over their plates.

“There were several salads. These they ate with forks, for it is not considered proper to touch the food with the fingers. However difficult it may be to manage it, it is thought better to put the little forked instruments in the mouth than the fingers.

“Then the artichokes, asparagus, peas, and beans were brought. It was a pleasure to watch them try to eat these with their forks, for some who were less adroit than others, dropped as many on their plates and on the way to their mouths as they were able to get to their mouths.

“Afterward a great silver basin and a pitcher of water were brought, and the guests washed their hands, though it seems as if there would not be much scent of meat and grease on them, for they had touched their food only with those forked instruments.”—*Sel.*

“I DON'T FEEL LIKE IT.”—“Oh, I don't feel like it!” How frequently one hears this expression from the lips of a boy or girl when asked to render some simple service. The weak parent accepts the excuse, and thus educates the child to become a slave to his own whims and caprices. “Harry, you must escort your sister to prayer-meeting to-night,” remarked a mother belonging to this class. “I don't feel like it,” whined the boy, and he was allowed to have his own way in the matter. No wonder that as a man he is utterly lacking in moral backbone, and succeeds in nothing which he undertakes. One good way to overcome this tendency, which all children have to a greater or less degree, is to assign them definite tasks, and insist upon their being performed, regardless of “feelings.” Years ago, a little girl was required by her mother to carry the *Boston Recorder* every Sunday afternoon to a poor neighbor. Through rain and shine, in summer's heat and winter's cold, whether in the mood for it or not, this service was never omitted, and it proved to be one of the strong formative influences of the girl's childhood. She became a woman of remarkable executive ability, and attributed it largely to her mother, who always obliged her to do the things she ought, even if she did not “feel like it.”—*Sel.*

GRAVIES AND SAUCES FOR VEGETABLES.

WITH those who entirely discard the use of meat in their dietary and those who use it only occasionally, it is often quite a question to know what to use as a substitute for the meat sauces and gravies so commonly considered an essential accompaniment to that every-day vegetable, the potato. We offer below, recipes for several excellent dressings which we have culled from those prepared in the experimental kitchen of the Sanitarium Cooking-School.

Lentil Dressing.—Cook some good lentils with a few slices of onion to give them flavor. When tender, rub through a colander, and add one half as much stewed and strained tomato as there is of the lentils; add salt to season and a tablespoonful of nut butter to each quart of dressing. Nut meal or cream may be used, if preferred.

Gluten Gravy.—To one pint of good milk add one tablespoonful of gluten meal. Leave it surrounded by boiling water fifteen or twenty minutes. Salt to taste, and thicken with flour to the desired consistency.

Brown Sauce.—Heat a pint of thin cream, and when boiling, add half a teaspoonful of salt and a tablespoonful of flour browned in the oven, and

rubbed to a smooth paste with a little cold milk. Allow it to boil rapidly, stirring constantly until thickened; then cook more slowly in a double boiler for five or ten minutes.

Nut Sauce.—Heat a quart of water in which a tablespoonful of nut butter has been dissolved, to boiling. Thicken with three tablespoonfuls of browned flour, add salt to season; cook thoroughly for five or ten minutes, then add one-third cup of hot stewed strained tomato. Beat thoroughly, when it is ready to serve.

Celery Sauce.—Cut half a dozen stalks of celery into finger lengths, and simmer in milk for ten or fifteen minutes. Skim out the celery, add a little cream to the milk, salt to taste, and thicken with flour, one tablespoonful to a pint of milk.

Tomato Cream Gravy.—Heat a pint of rich milk to boiling, and stir into it a slightly heaping tablespoonful of flour previously rubbed smooth in a little cold milk. Season with salt, and cook in a double boiler five or ten minutes. When done, add just before serving, for each quart of the sauce, one cup of hot stewed and strained tomato. Beat thoroughly into the sauce, and serve hot.

E. E. K.



NURSING IN TYPHOID FEVER.

THE onset of typhoid fever is marked by three stages. The first is the stage of incubation, and lasts from the time the germs invade the glands of the intestines until the poisons they generate in the process of growth have so injured and inflamed the tissues as to produce marked constitutional symptoms. During this stage, which usually lasts from nine days to a week, there may be no very marked symptoms. Often the patient feels a tired, aching feeling all over, and has to compel himself to do his ordinary work. In other cases there is an unusual restless and impatient feeling, the patient being unable to sleep, and often walking about and keeping at work until the disease is far advanced. These are the so-called cases of walking typhoid, and show the greatest mortality in hospital reports. There is often a loss of appetite, although the patient may eat his meals as usual, and sometimes even more in quantity, to try to get something that will relish. The tongue is coated, and the bowels may be either loose or constipated. The temperature may be slightly above normal in the evening, and the pulse increase in frequency. A patient can often describe his own symptoms only by saying that he has a bad feeling all over.

It is a very important matter to every householder and every parent to be able to detect and understand the gravity of the early symptoms of this insidious malady. It is at this time that treatment can be given to abort the disease. As the intestinal tract has been invaded by an enemy, the first thing to do is to give every possible chance to successfully overcome this foe by taking all extra work off the digestive organs. As they are not in a condition to form healthy digestive fluids, they should have a rest from the labor of digesting food. If this is not given them, they soon cease to work, and as a result the food spoils, and fresh poisons are formed to infect the blood and tissues. A fast of at least forty-eight

hours will always be safe in these cases. This will give the organs time to expel the unhealthy mucus and the disordered secretions and fecal matter in the alimentary canal. Free water-drinking should be encouraged, and the patient be required to stop all work, both mental and physical, and to rest quietly in bed. At the same time the bowels and skin should be still further aided in the work of elimination by hot packs and full baths to increase the action of the skin, and by enemata and mild laxatives to clear the digestive organs of all undigested food and germs, and thus prevent, as far as possible, the passage of foul matter into the blood by way of the absorbents. Indeed, this is a safe and easy precaution whenever a person feels ill or seems threatened with any disease. Some fear starvation from a two or three days' fast, but it may be the means of preventing starvation at the end of the fever. At that time, when all the tissues of the body are wasted away, death may take place as the result of starvation, the stomach being too weak to either retain or digest food.

The program of the first day's treatment should be something after this order: If feeling bad in the morning, remain in bed and take two or three glasses of hot water in place of breakfast. Some saline laxative, as seltzer aperient, two or three teaspoonfuls to a glass of water, may also be taken, followed, after a few hours, by a full, tepid enema, and later by a full bath or pack, so as to insure free perspiration. After a cool sponge the patient may be left to sleep, the hot water-drinking, however, being kept up, a glass every two or three hours. In the evening a fomentation to the stomach and liver and another sponge bath may be given. The treatment for the second day may be the same as that for the first day. On the morning of the third day the patient may take a light breakfast of gruel and milk or fruit juice. Often by this time he may be feeling much

better, but would do well to still continue resting and dieting for a few days, lest there be a relapse. This treatment may not always be successful in completely aborting the disease, but it will at least make the after stages lighter.

The second stage is that of invasion. The disease germs have now increased to such an extent that they have produced a great deal of inflammation and swelling of the glands of the bowels. There is high fever, the temperature being 104° to 105° F. at night, and a degree or two less in the morning. During the second week the patient begins to be delirious, and to lie in an indifferent stupor most of the time. The bowels are often bloated. Toward the end of the second week and during the third and fourth weeks there is danger from hemorrhage and perforation of the bowels. In severe cases, sordes will form on the teeth, and the lips will become very sore and cracked unless the greatest care is taken to keep them well cleaned and oiled. At this stage of the fever there is danger of heart failure, and also of starvation from tissue waste and want of nourishment, the digestive organs being too weak to digest and assimilate food.

The nurse should take the utmost care to see that everything is done to keep the fever under control, and also to keep up the patient's strength. The cold bath is the best means of reducing the temperature. It may be given in some form under almost any circumstances. A cool sponge bath of the entire body every time the surface becomes hot and dry, is very soothing; and if prolonged, and accompanied by friction, this measure will do considerable to lessen the temperature and refresh the patient. It is not, however, as useful in overcoming high temperature as either the full graduated bath or the graduated douche bath. As a full bath can rarely be given in private practise, for the want of a suitable tub, the douche bath may most often be successfully employed. To prepare for this bath, a common canvas cot is required, which can be made by any one who can handle a saw or drive a nail; or it may be bought from almost any furniture store for a small sum. Besides the cot, five yards of some kind of waterproof cloth will be required. Any kind will do, although black carriage oilcloth is the best material. Cut off two yards of this oilcloth, double it lengthwise, and fasten it above the canvas on the cot. Stitch an inch-wide hem on each end of the remaining three yards. Into these hems run a strong cord, and then draw up the ends so as to form a sort of sack. Put it over the oilcloth, and let the end toward the foot hang over into a wash-

tub. Under the other end place a pillow. A narrow strip of sheeting or blanket may be laid in the middle of the bath to keep the body from being shocked by the cold oilcloth when the patient is laid on it. Raise the head of the cot by putting three-inch blocks under the legs at the head. Prepare three pails of water at 80° , 85° , and 90° F. Then lay the patient on the cot, and pour the pail of highest temperature slowly over him, beginning at the head, and working slowly down over the body. The water may be used a second or third time by setting a pail in the tub and catching it, and using it over as before. The next pail can then be used in the same way, so also the third. While one person is pouring the water, another should be rubbing the patient briskly. This is a very important part of the treatment for reducing the temperature, as the friction brings to the surface fresh volumes of blood to be cooled. After the bath the patient may be lifted on to the bed and dried off, and allowed to rest. Often, as the result of this bath, the fever will be reduced three or four degrees, the stupor will be relieved, and the eliminative action of the skin and kidneys increased. If there is a tendency to coldness of the extremities, a hot bag or bottle may be put to the feet, and the patient given a drink of hot water.

A sheet wrung from hot water wrapped around the patient will often lower the temperature a degree or two, the evaporation from the surface carrying off the heat. The patient should be covered with nothing but the sheet, and the cooling effects may be increased by friction. After all these cool baths, free water-drinking should be encouraged.

The full bath is given in the bath-tub, and may be used where the dwelling is provided with a bathroom. The patient should take a foot-bath if the feet are cold, and a drink of water, either hot or cold, as he prefers, before going into the bath. The temperature may begin at 90° F., and be gradually reduced until it reaches 65° or 70° . The length of time the patient should be kept in a full bath, pack, or under the douche bath, must be regulated by his strength, and the rapidity with which the temperature is reduced, and according to how much the pulse and respiration are disturbed. When the surface begins to look blue, and the patient to shiver with cold, and the action of the heart to become feeble, it is time to take him out and restore the surface circulation by a brisk rub in warm blankets. Also give him some warm drink. If there is a good reaction after the bath, it is a favorable time to administer food, as the organs of the body are all more active and able to work after the stimulation of the

bath than at any other time, and thus the food will be more likely to be digested and absorbed.

The inflammation of the glands of the bowels may be lessened by keeping them covered with cool compresses or with bags of ice. These cold applications should be alternated with hot fomentations every two hours. The change from cold to heat, and the reverse, has a tendency to improve the circulation, and to cause the absorbents to become more active, thus aiding much in limiting the extent of the inflammation, and also contributing to the rapid healing of the ulcerated glands. The cool baths may be repeated from one to six or more times during the twenty-four hours. As soon as the temperature is above 103° F., and shows a tendency to remain there, the cool spray, sponge, or full bath should be resorted to at once, the form of cool treatment given being regulated by the skill of the nurse, the strength of the patient, and the conveniences at hand. As the bowels are the original starting-point of the inflammation, great care should be exercised to keep them as free as possible from all foul and infectious matter, which is likely to be absorbed from them into the blood, and thus infect all the organs and tissues of the body. Free drinking of pure boiled or distilled water, either cold or hot, as the patient may prefer, is good to wash out the stomach and bowels, and to increase the action of the skin and kidneys. When the patient is unconscious, and does not call for a drink, it is often forgotten that he is thirsty, and water is not given him. Sick or well, the body cannot exist without a daily fresh supply of water, and a fever patient needs more water than one in health. Ignorance or neglect of this requirement has been the cause of the fatal termination of many a case of fever that might otherwise have made a good recovery.

The lower bowel should be kept clean and free from fecal matter by the use of frequent enemas. These may be given either hot, tepid, or cold, and should be repeated several times a day. To secure the eliminative action of the injection, the water should be from 85° to 100° F. It should be administered slowly, and in considerable quantity, the patient lying on the left side, with the legs drawn up and the hips slightly elevated. When there is much gas in the bowels, the addition of twenty or thirty drops of oil of turpentine to a pint of water may aid in expelling it. The turpentine will mix with the water better if it be first mixed with a couple of teaspoonfuls of starch water or a few tablespoonfuls of soap-suds. The turpentine acts both as a stimulant to the bowels and a disinfectant to the colon. These

enemas may be repeated twice a day or oftener, as the symptoms of distention or the distress due to the accumulation of foul matter in the colon may require. The medicated enema, after being retained for twenty minutes or half an hour, may be followed by a simple water injection.

Tepid, cool, or cold enemas are also a good measure for reducing the temperature. The water may be anywhere from 60° to 90° F., or it may be at the freezing point, being kept at a low temperature by the addition of ice. The cool enema not only reduces the temperature, but at the same time furnishes a method of introducing water into the body for absorption.

When the stomach is foul, and there is evidence of undigested food, bile, or other poisons in that cavity, the lavage will often be of great service. The writer has seen the temperature reduced three degrees in an hour by thoroughly washing out the stomach. This method may also be used as a means of cooling the body, by having the water for the lavage cool or cold; or the warm and cold lavage may be alternated, one funnelful being warm, and allowed to flow out by the tube before introducing the next; the other cold, and allowed to escape in the same way.

There are various drugs that are useful as disinfectants of the bowels, but their use should be prescribed and regulated by the attending physician. When there is flagging of the heart, it may often be stimulated to increased action by a hot bag or fomentation placed over it. A hot and cold spray to the spine is also an active and efficient treatment for stimulating all the flagging organs of the body, and also for preventing bed-sores. Hot and cold sponging to the spine is also very good for stimulating the circulation, and keeping the blood flowing through depending organs that are subject to pressure on account of the inability of the patient to change his position. Not only are bed-sores the result of this continued pressure, but the internal organs may suffer to such an extent from the blood stagnation as to completely cease their action at the depending portions, death thus beginning in the tissues, and speedily terminating in the complete dissolution of the body. When a patient is not able to turn himself over, he should be turned at short intervals by the nurse. Forgetting to do this for a half day may sign the death-warrant of some weak, unconscious patient who otherwise might have recovered.

Never make continuous applications of hot treatment in cases of this kind. It has been demon-

strated by actual experiment that the continued immersion of meat or any albuminous substance, like the white of egg, in water of 115° F. will cause it to coagulate and harden. The tissues, when the blood ceases to flow through them, are verily dead flesh, and the keeping of a hot bag at 125° or more in contact with them will cook them as surely as that degree of heat would eggs or beefsteak, though this would not be thought a very high temperature to apply to a part where the heated blood was constantly flowing away, and the tissues continually cooled by a stream of colder blood coming to take its place. So the temperature of the hot bag or fomentation and the damage it will do, cannot be measured by either the feelings of the nurse or even the thermometer, but must be measured by the strength of the heart, and the amount and rapidity of the blood current passing through a part.

It is best in serious cases never to use either the hot bag or any other continuous application of heat to the body, but to depend upon the spray and hot and cold rubbing, whichever seems most soothing to the patient. The spray may be given on the oil-cloth cot. Have prepared beforehand two douchecans full of water, one at 115° F., or over, and the other at 65° or 70° . Let the warm water flow down the back for a minute, and follow it by cold water for half a minute. These alternate hot and cold applications may be kept up for half an hour or more. It is not a fatiguing treatment if the patient is placed in a comfortable position on the cot, and will often save a person who is sinking into unconsciousness from the dying tissues of the spine causing intense blood poisoning, and overpowering all the vital organs. In some cases the hot spray may be used for ten or fifteen minutes without being replaced by the cold. The stimulating effects of the heat are reinforced by the friction from the many small streams of water, and thus there is not the danger of cooking the tissues from this mode of using heat that there is from the continuous pressure of the hot bag or fomentation.

This treatment is also useful in rousing a patient from the stupor which so often occurs in protracted cases of fever, where the bodily energies are so worn out that it is difficult for them to rally again.

Care should be taken to see that the head is kept cool and the feet warm. It is better to give the feet an occasional rubbing and an alternating hot and cold foot-bath than to keep a hot bag or the like in contact with them all the time. The mouth, teeth, and lips should be carefully attended to, and

kept free from all sores by frequent washings, brushings of the teeth, oiling of the lips, and the use of the mouth washes mentioned in a previous article. Great care should be observed when moving the patient, not to allow him to be strained or twisted in any way. From the first, it is best to use the bed-pan, and keep the patient in a recumbent position until all danger of hemorrhage is past. This will be for about three or four weeks, or even a longer time in some severe cases.

Sometimes nosebleed occurs at the beginning of the fever. At this time it is not usually a very grave complication, but after the second week, in severe cases, it is often very dangerous, and difficult to arrest. Heat to the feet and the back of the neck, and cold over the forehead and nose will sometimes check it. The head should be elevated and the patient forbidden to blow his nose, or do anything to remove the clots by which nature is endeavoring to stop up the torn ends of the blood-vessels. The nurse should always make sure that the blood is not being swallowed when the external hemorrhage is stopped. As a last resort, the nostrils may be tamponed. This, to be effectual, must be done through the mouth. A ligature is introduced through the nostrils by being threaded in the eye of a catheter, and passed in until it can be drawn out at the mouth. To this, tampons may be attached, and drawn into the back part of the nasal cavity, thus shutting off the flow of blood. They may be worn for twelve hours, when they should be removed by being drawn back through the mouth by the ligature, about six inches of which should be left out for this purpose.

This operation is not as difficult as it seems; yet to a person unaccustomed to dealing with the nasal cavity it might prove somewhat troublesome. Hence it is well to bear in mind that in bleeding from the nasal cavity the point from which the hemorrhage comes is usually located on the nasal septum, not far from the opening of the nostril, so that the bleeding may often be stopped by simply continuous pressure of half an hour, or longer if necessary, upon the nostril. When the pressure is removed, the air should not be taken in through that nostril, as it will remove the clot, and thus encourage the bleeding again. Bleeding is often produced by picking the nose to remove a scab. During typhoid fever, ulcers sometimes form in the nose through the accumulation of germs, just as sordes do upon the lips. Holding the arms in a perpendicular position will often stop the bleeding.

(To be continued.)

GOOD HEALTH

J. H. KELLOGG, M. D. EDITOR.
BATTLE CREEK, MICHIGAN.

MALAQUA.

DR. BACHMANN, according to the *Journal of the American Medical Association*, insists that the term *malaria* is incorrect, and he has coined a new word, *malaqua*, to take the place of this ancient misnomer. Dr. Bachmann argues that "unless we come in actual contact with the evidence produced in the use of pure water as against that heretofore used, the physician will, in all probability, be very slow to allow himself to be convinced that the word *malaria* (*mal*, bad; *aria*, air) is a misnomer, and that *malaqua* (*mal*, bad; *aqua*, water) is the word that should be used to cover the pernicious effects known under the name of malarial fever.

"The germ, which is of soil origin, is strictly a protozoön, and reaches its highest development in low, moist ground, with a favorable temperature. Surrounded by the proper soil conditions, this protozoön passes from one stage of life into another with considerable rapidity; so that in the present state of our experimental knowledge, it is impossible to identify it; nor is it probable that by culture we shall be able to produce the accepted Laveran germ outside of the human system.

"As a rule, the potable water from the malarial districts is derived from driven wells not over twenty-two feet deep, in soil with clay or some other impervious sub-strata, which water is generally cool

and palatable, often sparklingly clear, but more frequently a little turbid. This water is filled with an incalculable number of these germs in all stages of development; and if used as a potable water, they naturally find their way into the system through the alimentary channel. This protozoön passes through so many forms or stages of life that in some stages it is light enough to float and be transported by the moist air of low grounds, but in this state it is comparatively harmless except under most extraordinary conditions; it is not until the surface water is used that the real mischief begins, when, by reason of higher development, it has become much more virulent than that floating in the air. A very short period of incubation is sufficient to develop a severe case of malarial fever in the newcomer who uses the surface water.

"From personal observation I know that the exclusive use of pure, deep-seated water affords entire immunity against malaria in sections of country where no white man dares live, using the surface water. Nor must it be understood that the exclusive use of pure water simply fortifies and strengthens the system against the attack of the germ. The water is the primary cause of infection, which acts as the direct carrier of the germ into the system through the intestinal tract."—*Modern Medicine*.

MEDICAL TESTIMONY AGAINST THE USE OF TOBACCO.—Dr. Mulhall, of St. Louis, Mo., recently read before a medical society a paper on cigarette-smoking, a practise which he heartily condemned, especially in young persons. Dr. Ingalls, of Chicago, was outspoken in his condemnation of tobacco in all forms, especially in the form of cigars and cigarettes. He declared that he had seen many persons whose nervous system was seriously affected

by indulgence in tobacco, and had also seen chronic inflammation of the throat produced by smoking. Dr. Langmade had so long been accustomed to recognize the ill effects of tobacco-smoking upon the throat, that he was able to tell by examination of the throat alone whether or not an individual was a smoker, and also whether he had abstained for a few days. He called attention to the interesting fact that the best singers abstain from smoking be-

fore a public appearance, and that, in some cases, singers have been obliged to abstain from smoking for several weeks before some special effort. He also complained of cigarette-smoking because of the narcotic effect produced by it, to which the smoker becomes readily addicted.

As an evidence of the poisonous effects of tobacco, he referred to a case in which he had applied a solution of nicotine to the throat of a patient for the relief of a condition which was supposed to be benefited by smoking, but with the most disastrous results, the patient fainting at once, and being revived only with much difficulty.

Dr. Mulhall, who was somewhat of an apologist for tobacco, admitted that "tobacco leads, in a certain degree, to the use of stimulants, . . . owing to the temporary depression produced by smoking, which could be relieved by alcohol." But he held that the combined effect of alcohol and tobacco was very bad in the end. It is thus that the use of one poison leads to that of another. Smoking is only a stepping-stone to alcoholic intemperance.

A WISE JUDGE.—Judge Ferris, of Cincinnati, has announced that he will not issue a marriage license in cases in which either of the parties proposing marriage is an epileptic. Judge Ferris deserves the highest praise for the far-seeing wisdom which has led him to take this noble stand against one of the most efficient causes of the extension of an often incurable, degenerative disease. There ought to be introduced into every State legislature a law rendering illegal the marriage of epileptics, paranoiacs, habitual inebriates, and the defective of all classes.

IMMUNITY FROM CATARRH.—Mr. A. P. Emery, of Mendon, Mich., who has been for many years engaged in the manufacture of essential oils, gives us the following information concerning the influence of the vapors of essential oils upon catarrh, from which it appears that persons engaged in the business of manufacturing these oils are entirely free from the disease, and if suffering from it when they engage in the work, are soon relieved.

"If it be a fact that 'colds' are due to 'germs,' and that volatile oils are germ destroyers, then I have discovered the secret that has long puzzled me; viz., that those engaged in the distillation of essential oil in this section of country, such as oil peppermint, spearmint, etc., in the fall of the year, though in open sheds day and night, do not contract colds, and

that those who have colds are relieved in a few hours by working over the steaming tubs.

"More or less of the oil vaporized during distillation escapes, and is inhaled by those engaged in and around a mint still. Your vaporizer works on the same principle. I discovered this principle, and the 'great secret' was at once explained to me by reading a description of your vaporizer."

FINGERS AND TOES OF CRIMINALS.—Dr. P. Penta has studied the fingers and toes of four thousand five hundred criminals, and finds a deficiency in the size or number of toes quite frequent among them, although very rare among ordinary men. He has also observed that prehensile toes, marked by a wide space between the great toe and the second toe, is a condition quite common among criminals; also a webbed condition of the toes, an approximation to the toeless feet of some savages. He found the little toe rudimentary in many cases, showing a tendency toward the four-toed animal foot. The most common of all the abnormalities was the webbed condition of the toes. These observations agree with those made by various investigators, who have found other deformities existing among the criminal classes, particularly misshapen heads, one-sided faces, mismated ears and eyes, etc. The criminal is a degenerate type.

BACTERIOLOGY OF BUTTER.—The farmers of Denmark have taken advantage of the developments of modern bacteriology in the manufacture of butter. The Danish bacteriologists having determined the particular microbes by which the various flavors are developed in butter, the farmer is now able, by sterilizing his milk, and then planting that particular species of microbe by which the desired flavor is produced, to furnish a uniform quality of butter of any desired flavor. The dairymen of Denmark have by this means succeeded in obtaining almost complete control of the English market.

Now that we have the means of knowing the exact varieties of germs which butter contains, we may be able to study with some degree of accuracy the influence of this article of food upon digestion.

THE PREVALENCE OF TUBERCULOSIS.—Examinations which have been made at the morgues in France have shown that fifty per cent. of all persons dying in that country have been more or less infected with tuberculosis.



FOOD POISONING.—Poisoning by food is unquestionably a much more common cause of illness than is generally supposed. Bowel and intestinal disturbances are usually attributed to the weather, to taking cold, to some epidemic influence, to almost any cause but the right one. Cheese, milk, flesh food, oysters, mince pie, pickles, and similar foods are very likely to produce stomach and intestinal disturbance, and it is a marvel that any one can at any time eat such unwholesome foods without suffering seriously in consequence. It is only because the healthy stomach is possessed of remarkable disinfecting powers, that such abuse of the digestive organs is possible. If the stomach is overtaxed, however, its disinfecting power is lessened, and the germs taken in with the food rapidly grow, developing poisons, nausea, griping, diarrhea, and various other symptoms as the natural result.

Milk is probably a more frequent cause of stomach and bowel disturbance than any other food. Of specimens of milk recently examined, a small tablespoonful of one contained more than one and a fourth million germs. Another specimen of milk examined on the same day contained but very few germs. The difference was due simply to the difference in the care taken in obtaining the milk from the cow, and in conveying it to the creamery. The milk in the one case contained a thousand times as many germs as in the other, an indication that one of the milkmen must have been guilty of the grossest carelessness. Some of these germs were those capable of producing poisons of a highly dangerous character. Poisons developed from foods sometimes give rise to symptoms which closely resemble various diseases, such as typhoid fever, scarlet fever, pneumonia, cholera, and even metallic poisoning. Too great pains cannot be taken in the care and preparation of food.

COLD MORNING SPONGE BATH.—Every mother ought to know that one of the best means of fortifying children against diseases of all sorts, especially against catarrhs, coughs, sore throats, and the general weakness and good-for-nothingness which is a growing malady among children, is the cool or cold morning sponge bath. It takes a little time and trouble to administer this excellent prescription, but the results will well repay the trouble. This is the way to do it: Have the bath-room warmed up to a temperature of 75° F. A gas or even a kerosene stove will answer the purpose, if care is taken to ventilate the room, and to avoid occupying it more than a few minutes. It must be remembered that such a stove rapidly consumes oxygen, and contaminates the air. Expose only one half the body at a time. In case of a feeble or very sensitive child, expose only a small part of the body, as an arm or a leg, at one time, keeping the rest of the body covered with a warm woolen blanket. Begin by rubbing the part of the body bathed with a soft crash towel until it is well warmed. Then rub quickly with a sponge dipped in cold water and squeezed so that it is only moist, and afterward for a moment with the hand. Dry with vigorous rubbing, and proceed to another part. Children who are constantly taking cold may in this manner be kept free from colds during the entire winter, and thus escape the chronic catarrh which is coming to be so common among them, resulting in injury to the voice, and frequently loss of hearing and other unpleasant consequences.

BEAN CHEESE.—A variety of cheese known as *tofu* is much used by the Japanese. It is made from the soja bean, which, after soaking for twelve hours in water, is ground to a uniform pulpy mass, then boiled for an hour in three times its quantity of water,

and afterward filtered through a cloth. The milky liquid thus obtained is allowed to stand two or three days, when lactic acid develops, by which the vegetable casein is separated as in sour milk. Ten per cent. of concentrated brine is added by constant stirring, which causes a flocculent precipitate. This is separated by a cloth filter, and is formed into tablets by a slow pressure. *Tofu* is eaten in the form of soup and in many other ways. The solid nutriment which it contains amounts to only about ten per cent. Sometimes the greater part of the water is separated by freezing, and the block of frozen *tofu* afterward allowed to thaw in the sun. When prepared in this way, the proportion of solid nutriment, chiefly fat and vegetable casein, is nearly eighty per cent.

EATING WHEN FATIGUED.—Every one should know that to eat when tired is to place upon the digestive organs a burden which they are wholly unable to carry. When the body is in a state of fatigue, the digestive organs are unable to perform their natural functions; the glands of the stomach will not form gastric juice; the saliva is deficient in quantity; and the whole digestive apparatus is incapable of doing efficient work. When exhausted, one should rest before eating. If a faint or "all-gone" sensation is experienced, relief may be obtained by drinking a glass of hot water or diluted fruit juice of some sort.

VEGETARIAN BOOTS.—The question is frequently asked, "If we should cease to kill animals, how would we obtain material for boots and shoes, in the making of which such great quantities of leather are now consumed?" M. Hompes tells, in the *Vegetarian Messenger*, of the discovery of a great collection of ancient Egyptian boots at Panopolis, among which were found many made from palm-leaves, papyrus, vegetable fiber, and other natural substances, which were prepared in such a manner as to furnish a durable and convenient covering for the feet. Hemp, silk, and wool were also used.

HORSE BEEF.—Within the last few years a new use has been found for worn-out street-car and cab horses. In former days these wretched animals were conveyed to the bone-yard or to a rendering establishment, where their hides were preserved for conversion into leather, their hoofs for glue and calves'-foot jelly, and their bones for fertilizers. The great surplus of horses, with their low prices, has recently given rise to a new method of disposing

of these worn-out animals; and they are now served up, as in Paris, in the form of sausage, steaks, and roasts. There are two large establishments in the United States which are wholly devoted to slaughtering and packing horses. One of these is located in Portland, Ore.; and the other is near Chicago. The horses cost about \$1.75 each. Horse beef is largely used by the men employed on the great drainage canal now under construction from Chicago, it being sold at about three cents a pound. Large quantities of this commodity are shipped to Antwerp, where it brings four cents a pound. It is also stated that horse flesh is freely used for saloon free lunches.

CAUSE OF STORMS.—The Weather Bureau at Washington, D. C., has recently presented a new theory of storms, attributing these disturbances to changes in the sun, which is regarded as a great magnetic body sending out waves of magnetism to this earth, and producing storm disturbances varying in character according to the strength of the magnetic wave. There is found to be a periodicity in storms of 26.68 days, and also a longer period, corresponding to the periodicity of the sun's spots.

ANTITOXIC SERUM IN SMALLPOX.—M. and A. Bécléré recently communicated to the Academy of Medicine, Paris, the result of observations made by them, which indicate the probability that they have discovered a means of treating smallpox by an antitoxic serum with the same degree of success that has attended the treatment of diphtheria. The serum is obtained from the blood of vaccinated animals, and is used in the same manner as the antitoxic serum which is employed in the treatment of diphtheria.

NEW METHOD OF PURIFYING WATER.—Dr. Bordas, a pupil of Dr. Brouardel, of Paris, has recently discovered a method of purifying water by means of permanganate of lime and binoxid of manganese, by means of which water containing three million germs per ounce can be quickly and perfectly purified. The method has not yet been adapted to public use.

CURE FOR CHILBLAINS.—Apply oil eucalyptus, painting it on with a camel's-hair brush. It relieves the pain, and effects a cure in a very short time.

CONSUMPTION kills more persons annually than any other disease. In this country, diphtheria comes next in fatality.

ANSWERS TO CORRESPONDENTS.

CONSTIPATION—DYSPEPSIA—BURNING SENSATION UNDER SHOULDER-BLADES, ETC.—Mrs. E. A. H., Wis., asks the following questions: "1. What is a remedy for constipation? 2. There seems to be a lump like a small sponge (or perhaps it is gas) which rolls up and down from my throat to the stomach. What is the cause of this? 3. What ought I to do for it? 4. What occasions a burning sensation under the shoulder-blades? 5. My little girl, seven years old, has large blotches upon her face and hands which resemble flea-bites run together. She is otherwise well and hearty. What treatment would you advise? 6. What is good for chapped hands? 7. What is the probable cause of a rough, scurfy sore breaking out on the face and neck of a man otherwise healthy? 8. Do you think it is barber's itch? 9. What ought to be done for it? 10. Please outline treatment for kidney trouble of long standing, with lame back. 11. Which is the better food in case of constipation or dyspepsia, granose or gluten? 12. Are wild black cherries healthful to eat when ripe? 13. Is cottolene healthful when used in cooking? 14. Is sour milk healthful taken in a raw state or made into cottage cheese? 15. Are vegetables healthful when eaten raw? 16. What will prevent the eyelashes from falling out? 17. When the eyelids have been left nearly bare, will anything cause the eyelashes to grow out again? 18. What would you advise for killing the nerve in teeth before having them filled?"

Ans.—1. Take a glass of cold water before breakfast, walk three or four miles daily, and eat granose.

2. There is an excessive irritability of the nerves of the stomach.

3. Eat unirritating food, apply a fomentation over the stomach just before retiring, and wear a wet girdle during the night. A course of treatment at the Battle Creek Sanitarium would be of service to you.

4. An excessive amount of acid in the stomach. You probably have hyperpepsia.

5. The case is one of nettle-rash, probably due to indigestion.

6. Keep the hands perfectly clean. Wash them in a solution of borax several times daily, and dry them carefully after washing. Hands which are kept thoroughly clean seldom chap.

7. Indigestion, and germs attacking the skin. The cause is probably eczema.

8. It may be barber's itch.

9. Bathe the parts with a hot solution of bichlorid of mercury, one part to two hundred of water, as hot as can be borne; use with a sponge twice daily for fifteen minutes each time. Be careful to get none of the solution into the eyes or mouth, as it is a deadly poison.

10. Fomentation to the back, warm bath two or three times a week; drink two or three quarts of water daily, use granose, gricola, caramel-cereal, and other Battle Creek Sanitarium Health Foods.

11. Granose.

12. We know of no case of injury from eating black cherries. Care should be taken to exclude the pits.

13. We have had no experience in the use of cottolene.

14. For most people it is more healthful than fresh milk. In making cottage cheese, the milk should be boiled and sterilized.

15. No.

16. Cure the disease of the lids which doubtless exists. It sometimes requires the services of a specialist. Bathing the eyes with hot water three times a day will doubtless prove helpful.

17. Probably not.

18. Dentists usually use arsenic for the purpose. In the writer's case the nerve was pulled out. The operation was painful, but effectual.

BLADDER IRRITATION.—J. A., N. Y., writes thus: "1. For about a year I have been troubled with a burning sensation at the neck of the bladder. Several different physicians have made examinations, and declare that the difficulty is an irritation caused by a highly acid state of the urine. I have followed directions as to diet, etc., as laid down in 'Man, the Masterpiece,' but there the subject is but lightly touched upon. Kindly give advice as to needed treatment. 2. What would be the probable result were this irritable state of the bladder allowed to continue?"

Ans.—1. Drink two quarts of water daily, and regulate the diet carefully. Engage in vigorous out-of-door exercise for one or two hours daily. A sitz-bath two or three times a week will perhaps be an advantage. Granose, used freely, will doubtless relieve constipation, if present. Avoid the use of meat.

2. Chronic catarrh of the bladder, enlargement of the prostate, and perhaps disease of the kidney.

ELECTRICITY—THE MOIST ABDOMINAL BANDAGE—BROMOSE.—A subscriber inquires: "1. Would it be well to use electricity in a case where the pulse is always too rapid? 2. Please explain the remedial effects of the moist abdominal bandage. 3. When using no other food, how much bromose ought one to take, and how often? 4. What diet would you advise for a patient unable to digest albumin, gluten or casein? 5. Why do milk and cream disagree in dilatation of the stomach? 6. Do long strings and fringes of mucus in stools indicate congestion? 7. Is the non-digestion of albuminoids more productive of ptomaines than starchy foods? 8. Please give directions for taking a test breakfast and for procuring the stomach fluid."

Ans.—1. Electricity, properly applied, is a most valuable means for reducing a rapid pulse.

2. The moist abdominal bandage relieves congestion, and stimulates the natural vital activities of the parts to which it is applied.

3. Two or three ounces three or four times a day.

4. Bromose.

5. Curds are formed, which remain in the stomach and undergo decomposition.

6. The indication is the existence of catarrh, which is always accompanied by congestion.

7. Yes; ptomaines are derived exclusively from albuminoids.

8. The test breakfast consists of one and one-half ounces of granose taken with eight ounces of water. The granose should be chewed dry, and the water taken afterward. At the end of one hour from the time the test meal was begun, the stomach fluid is withdrawn by means of a stomach-tube carefully introduced. Care should be taken to empty the stomach as completely as possible.

VEGETARIANS—HOW TO SUSTAIN VITALITY.—Mrs. L. A. T., Ill., writes thus: "1. The statement has been made by a recent writer that vegetarians, though in good flesh and muscle, are more subject to heart failure through a low vitality than persons who eat beef once a day. What reply would you make to such an assertion? 2. How should the vitality of a child be sustained through a sickness, the patient having been accustomed to hygienic living, and being hygienically treated, but with a naturally low vitality?"

Ans.—1. The fact that both the first and second prizes in the great foot race from Berlin to Vienna, in which numerous athletes joined, were won by vegetarians, is a sufficient answer to this statement. Also, the horse is a vegetarian; and hunters know very well that their dogs endure running better when fed no meat.

2. Avoid the use of prostrating drugs; secure perfect rest, having as little excitement as possible, and give such simple food as the child can digest, and in proper quantity. Bromose, boiled rice, granose, well-boiled gruels, fruit juices, milk and cream in moderation, constitute the most suitable diet.

FRUIT-EATING.—C. W. M., Canada, asks the following questions: "1. Which is the better time to partake of fruit, at the beginning or the end of a meal? 2. Should fruit and vegetables be eaten at the same meal? 3. Would it be objectionable to partake of fruit both raw and cooked at the same meal? 4. On examining dried raw figs with a microscope, multitudes of tiny worms can be seen. Is such fruit healthful? 5. Are dried raisins eaten raw considered a healthful article of diet? 6. Would their seeds be hurtful if swallowed without being broken?"

Ans.—1. Fruit should be eaten with the meal, either at the beginning or during the meal.

2. Some persons cannot eat fruit and vegetables at the same meal without indigestion. They do not make a very good combination.

3. No.

4. Such figs are not wholesome. Fresh figs do not contain either worms or parasites.

5. Yes, if well chewed. The skin should be avoided.

6. Probably not in most cases, but when dilatation of the stomach is present, both seeds and skins must be carefully avoided.

SANITARIUM HEALTH FOODS—ACID DYSPEPSIA—LAVAGE.—F. M. K., Ill., writes thus: "I am using the Sanitarium health foods,—granola, granose, bromose, gluten, etc.,—with occasionally fruit or eggs, and find that I am conquering a very bad case of acid stomach. I have also procured a lavage-tube, which I am using successfully, but with

some doubt as to the quantity of water to be poured into the stomach, and the number of times the quantity should be repeated. The position I should assume when receiving and when extracting the water, and the time of day, morning or night, at which lavage can best be taken, are also questions in relation to which I should be glad of information and advice."

Ans.—We are not surprised that you are conquering your dyspepsia. Such wholesome food as you are eating ought to help you. Lavage should be taken in the sitting position. The best time to wash out the stomach is at night, just before retiring. One or two pints of water should be introduced at a time, successive quantities being used until the stomach is thoroughly emptied. Do not employ the stomach-tube too often,—not more than two or three times a week,—and lessen the frequency of its use as rapidly as possible, dispensing with its use entirely as soon as you can.

THINNESS—NERVOUSNESS—BAD BREATH—SOUR STOMACH, ETC.—O. F. S., Pa., writes as follows: "1. I am very thin in flesh, and nervous; my food does not do me the good it ought. I use the foods from the Sanitarium Health Food Co., eat very little fats, and meat only about once in two weeks. My breath is bad, sometimes offensive, and I am often troubled with sour stomach and belching. I have received a sample of carbon wafers which seem to be helping the last two conditions. Will they effect a cure? 2. Is bromose the right food for me? 3. My hair is thin, and falling out. Can that be stopped? 4. My employment keeps me housed most of the time. Please give me advice."

Ans.—1. You probably need lavage once or twice a week. The carbon wafers are good, but antiseptic charcoal tablets are more effectual.

2. Bromose ought to prove an excellent food for you.

3. If there is disease of the scalp, with dandruff, it should be removed by proper treatment.

4. Take an hour's vigorous exercise out of doors every day.

EGGS AS FOOD.—Mrs. L. W. R., N. Y., writes in relation to an eight-year-old child who for the last four years has used no animal food except sterilized milk, and that only with cereals, not as a drink. She wishes to know whether it would be well for him to eat an egg occasionally, and asks: "Ought children to eat eggs?"

Ans.—Fruits, grains, and nuts contain all the nitrogenous food required by either children or adults, and in a state most favorable for digestion. We would recommend granose and bromose for the child.

CHRONIC NASAL CATARRH.—A. R., Pa., inquires: "What kind of treatment shall I give an inflamed nasal cavity, the result of chronic catarrh?"

Ans.—Employ the Perfection Vaporizer, as advertised elsewhere in this number. It may be necessary to employ in addition, some unction, such as vaseline.

RELIEF DEPARTMENT.

[This department has been organized in the interest of two classes:—

1. Young orphan children, and
2. The worthy sick poor.

The purposes of this department, as regards these two classes, are as follows:—

1. To obtain intelligence respecting young and friendless orphan children, and to find suitable homes for them.

2. To obtain information respecting persons in indigent or very limited circumstances who are suffering from serious, though curable, maladies, but are unable to obtain the skilled medical attention which their cases may require, and to secure for them an opportunity to obtain relief by visiting the Sanitarium Hospital. The generous policy of the managers of the Medical and Surgical Sanitarium has provided in the Hospital connected with this institution a number of beds, in which suitable cases are treated without charge for the medical services rendered. Hundreds have already enjoyed the advantages of this beneficent work, and it is hoped that many thousands more may participate in these advantages. Cases belonging to either class may be reported in writing to the editor of this journal.

It should be plainly stated and clearly understood that neither orphan children nor sick persons should be sent to the Sanitarium or to Battle Creek with the expectation of being received by us, unless previous arrangement has been made by correspondence or otherwise, as it is not infrequently the case that our accommodations are filled to their utmost capacity, and hence additional cases cannot be received until special provision has been made.

Persons desiring further information concerning cases mentioned in this department, or wishing to present cases for notice in these columns, should address their communications to the editor, Dr. J. H. Kellogg, Battle Creek, Mich.

He wishes especially to state that those who apply for children will be expected to accompany their applications by satisfactory letters of introduction or recommendation.]

No. 342 is a young girl sixteen years of age, who is in need of a home. She has blue eyes and light hair, has had good care and training, and has always lived in the country. Her mother has tried to keep the family together, but on account of failing health is not longer able to do so. Good homes have been found for the other children in the family. Is there not a home near one of our schools that will open its doors to this girl, where she can have the opportunity to get an education, and thus prepare herself for future usefulness?

Nos. 344-347.—Here is a group of four children living in Illinois who are greatly in need of a home. Their father died last fall, leaving the mother with seven children to provide for, which she is not able to do. The eldest, a girl twelve years of age, is in good health, is strong, and has had good care and training. She has dark brown hair and eyes. The boys, aged seven, five, and three years respectively, have also had good care, and are easily controlled. They have blue eyes and light hair, and are said to be nice appearing children. Who will relieve this mother's anxiety, by giving these children the influences of good Christian homes?

No. 348 is a boy about eight years of age, with blue eyes and light hair. He is a strong, healthy boy, and rather large of his age. He has not been allowed to run the streets, and has had good training. His parents are both dead, and the grandmother, with whom he has been living, is no longer able properly to care for him. He lives in Michigan.

No. 349 is a little boy seven years of age, with blue eyes and light hair, now living in Missouri. He has had good training, has not been allowed to run on the streets, and has no bad habits. His mother is in poor health, and having to work out by the day, is not able properly to care for him. We doubt not, if he is surrounded by good influences, and receives proper instruction, that he will be an honor to those who will thus direct his steps in the right path.

Two more girls aged sixteen and fourteen years respectively have been brought to our notice, but as yet we have not received a full description of them. Their father is an invalid, and the mother, having to support the family, is not able to give the girls the proper care and education. Are there not those who will offer them homes where they can work for their board and attend school?

We have a bright little boy about seven years of age on our list, whom we advertised some time ago, and thought had been provided with a home. We have just heard from the father that the family with whom we placed him in communication desire to take a smaller boy. He has dark hair and eyes, and is said to be genteel and quite manly in appearance. Will not some mother take this boy into her heart, and thus relieve the father of his anxiety to see his child cared for?

A GIRL about twelve years of age who has been left a half orphan, is in need of a home and a mother's care. The father is willing to pay something toward her support while in school. She is a strong, healthy girl, and no doubt, when not in school, could fully pay for her board in work. The father is not willing to give her up entirely. A home in Michigan or Illinois is preferred.

We are in receipt of a letter from a lady who adopted a little girl some time ago, from which we quote as follows:—

"I wish you could step into our happy home. The little Margaret with whom you supplied us has indeed been a comfort

to us, and has caused our hearts to enlarge so as to take two more little ones, a very sweet little girl, five years old, and her little baby brother, who was left without a mother at birth. I cannot tell you what a change the little baby has wrought in us and our home. Although he has been very delicate (only weighing three pounds at birth), with much care and attention on our part, he, now at ten months old, weighs sixteen pounds, and is the picture of health, a perfect wonder to all who knew him a few months ago. The little fellow has worked himself into my heart to such an extent that I feel if it is the Lord's will, I can never be without one of his wee ones again. It is indeed a blessed privilege to care for these little ones. My prayer is that I may be so guided by his Spirit that I may return the little ones intrusted to my care to him when he comes."

It had been her intention to take only the little girl, but as she could not bear the thought of separating them, she took them both, and in so doing has been truly blessed.

THE following encouraging letter was received from a little girl who was placed in a home in one of the Eastern States:—

"As mama has been writing, I thought that I would write you a few words to let you know how I am getting along in my new home. I like it the best of any home that I ever had. I have been here nine months, and been to school six months of the time. Have learned lots since I have been here. Thank you very much for getting my home for me."

WE received the following letter from a boy who had been staying in a temporary home in Michigan. He has recently gone to a permanent home in Wisconsin:—

"I thought I would write you a few lines to let you know how I am getting along. I like it here very well."

After enumerating the number of acres and cattle "we" have, he says:—

"They have given me an iron-gray pony, a nice shepherd dog, a cat, and some chickens for my own."

The sense of partnership that is seen all through the letter is quite amusing, as he had been there but one week when the letter was written. It is very gratifying to know that some of the homeless ones are being so well provided for, and we hope that the other needy children on our list will soon secure homes.

PLANT A CROP FOR THE POOR.

At this season of the year, when many of our readers are engaged in planting farms and gardens for themselves, it is a most appropriate time to recall the Scriptural injunction to remember the poor. In every town and in almost every country com-

munity, are to be found persons who, through physical disability or misfortune for which they may or may not be responsible, are not only deprived of the comforts and luxuries of life, but often suffer for the barest necessities. Let us remember the great commandment of the royal law, "Thou shalt love thy neighbor as thyself;" and thus while we are providing for ourselves, let us provide also for our poor neighbors. If each of our readers who feels an inclination to adopt this plan of providing for the needy, or for some other charitable object, will proceed at once to dedicate a piece of ground, large or small, as circumstances may permit or justify, and plant it for the poor, he will see how abundantly the great Father will prosper the crop. Mother Earth is the source of all wealth, and gladly yields up her treasures as the fruit of patient and intelligent industry. How many of our readers will join us in this plan? The writer has not a very large farm, but he intends to plant an acre for philanthropic purposes, and would like to know how many will join him.

CLOTHING FOR THE POOR.

THE call for clothing of all kinds and the numerous offers to supply assistance of this sort, have led us to organize a Clothing Department to receive and properly distribute new or partly worn garments which can be utilized for the relief of the very poor. In connection with this work it is very important that a few points should be kept in mind and carefully observed:—

1. Clothes that are so badly worn that repairs will cost more in money or labor than the garment is worth, will of course be of no service. Garments that are old, though faded, or which may be easily repaired by sewing up seams, or made presentable by a few stitches judiciously taken at some point in which the fabric is nearly worn through, may be utilized to most excellent advantage. But garments so badly worn that they need extensive patching, or clothes which have become much soiled and grimy by long use in some dirty occupation, should find their way to the rag bag instead of the missionary box.

2. Freight must always be prepaid. It costs as much to send 25 pounds or any amount less than 100 pounds as to send the full 100 pounds; consequently it would be well for those who think of sending clothes to be used in this department, to put their contributions together in one shipment, so as to get the benefit of the 100-pound rates. *We are obliged to ask that freight should be prepaid as a means of preventing loss to the work in the payment of freight upon useless packages.*

3. Clothes that have been worn by patients suffering from any contagious disease—such as typhoid fever, erysipelas, consumption, and skin disorders of all sorts, as well as scarlet fever, measles, mumps, diphtheria, and smallpox—should not be sent. Infected clothes may be rendered safe by disinfection, but we cannot trust to the proper disinfection of such garments by those sending them, who, in the majority of cases, are quite inexperienced in such work; neither should those who unpack the clothes be exposed to the risk of contamination while preparing them for disinfection at this end of the line. Such clothes should, as a rule, be destroyed. If they are not destroyed, almost infinite pains are required to render their use perfectly safe.

4. All articles received here are carefully assorted and classified, and are then placed as called for, where they will do the most good.

5. Clothing intended for the Chicago mission should be sent to Chicago Medical Mission, 40 Custom House Place, Chicago, Ill.

LITERARY NOTICES.

THE publishers of the *American Kitchen Magazine* offer a trial subscription of that journal of three months for 15 cents. This offer is made to any of our readers. Address, The Home Science Publishing Co., Boston, Mass.

"THE MARVELS OF OUR BODILY DWELLING."—By Mary Wood-Allen, M. D. The Wood-Allen Publishing Co., Ann Arbor, Mich.

This is a very interesting and popular treatise on physiology, in which the author has treated the body as a house. The author has shown much ingenuity and literary skill in producing this very readable and useful volume for young people. Like everything that Dr. Allen writes, this work is in the interest of purity and reform.

"METHODS OF MIND-TRAINING."—By Catherine Aiken. Price, \$1; to teachers, post-paid, 85 cents. Harper & Brothers, Publishers, New York.

This work presents a practical method of applying psychological principles, especially relating to the concentration of attention and memory, and is certain to have a marked influence on the teaching of the day. It is one of the most helpful books for teachers ever published, and one which will open an entirely new field of training, making work easier and results greater.

LOUISA M. ALCOTT reveals herself in a most interesting way in a number of letters (written to five little girls) which appear in the April *Ladies' Home Journal*. These letters were written during the busiest period of Miss Alcott's life, and present a pen picture of the author drawn by her own master hand. In these she talks with singular frankness of herself, her work, her aims, her home, her spiritual beliefs, and of the influence that directed her to literature. She never saw any of her five correspondents, but their youthful frankness, intense interest in all her writings, and their love for the author and for the characters of her creation, impelled her to turn aside from her work and cares to find diversion in chats with such eagerly enthusiastic, admiring, and sympathetic friends. Miss Alcott's first letter is dated 1872, and the others were written at intervals up to within a short time of her death. Curtis Publishing Co., Philadelphia, Pa.

"HOW TO FEED CHILDREN."—By Louise E. Hogan. J. B. Lippincott Company, Publishers, New York.

This volume presents a comprehensive table of contents concerning the selection, preparation, and administration of food for infants and growing children. No subject is so absorbing to mothers at the present time as the study of domestic science; and this little book, covering the entire ground of dietetics in the nursery and for school, cannot fail to be a valuable guide to those interested in the care of children.

IN the May number of *Scribner's* magazine is begun "Vailima Table-Talk," compiled from records of actual conversations of Robert Louis Stevenson with members of his family, made at the time by his stepdaughter and amanuensis, Mrs. Isobel Strong. The anecdotes give a nearer view of Stevenson than has ever before found its way into print. Ben. H. Ridgely, United States consul at Geneva, Switzerland, also narrates in this issue of the magazine, a great many of the amusing incidents that enliven the otherwise routine duties of the consul. The curious ideas that the traveling American has in regard to the duties of a consul are told with inimitable humor, and illustrated by Reinhart. Charles Scribner's Sons, New York.

ONE feature that makes *Table Talk* so helpful to the housekeepers and home-makers, is the fact that it is up to date in everything pertaining to the home. To this is added the great advantage and privilege it accords its subscribers in holding the Housekeeper's Inquiry department open to them, free of charge, for through it any of the difficulties of housekeeping may be solved for them. The April issue has for its leading article, "A Breakfast Toast," by Mrs. S. C. F. Hallowell, formerly a member of the staff of the *Philadelphia Ledger*. It also contains an excellent article on "Nursery Emergencies," by Dr. H. H. Hawxhurst; and in the Entertainment Bureau is to be found a description of a "poster party," a new and very popular way of entertaining just now while posters are the fad. If you do not already know this magazine, avail yourself of its offer to send a sample copy to any of our readers who will send their address to Table Talk Publishing Co., Philadelphia, Pa.

PUBLISHERS' DEPARTMENT.

A SYSTEM OF SANITARIUMS.—The managers of the Battle Creek Sanitarium have, within the last thirty years, built up a splendid medical institution, probably the most extensive and thoroughly scientific establishment of the kind in the world. Their constant aim has been to keep in line with, and make a proper application of, every new development in the way of medical progress. A liberal policy has led the management to adopt broad plans for their work, as the result of which they have undertaken to extend the advantages of their institution to various parts of the United States.

In addition to the branch sanitarium located at Chicago, which is in immediate connection with the institution at Battle Creek, sanitariums have been recently established and are now in operation at College View, a suburb of Lincoln, Neb.; at Boulder, a beautiful mountain town near Denver, Colo.; an done at Portland, Ore. An institution conducted in harmony with the same general plan, has, for a number of years, been located at St. Helena, Cal. It was first organized as a private enterprise by a physician who had been connected with the institution at Battle Creek, and it has since been taken under the same general management.

In addition to these six institutions in the United States, sanitariums under the same general management are now

being erected in Guadalajara, Mexico, and at Cape Town, South Africa. The work at Guadalajara is already in operation in rented buildings, and the institution at Cape Town will be opened about the first of next September.

These institutions are all organized as self-supporting philanthropic enterprises. None of them are conducted for profit. The persons connected with them, whether as managers, physicians, nurses, or ordinary employees, either donate their services entirely, or render them for a nominal compensation, all the profits accruing from the treatment of patients able to pay, being devoted to the care of the worthy poor, the extension of facilities, and other necessary improvements.

The medical profession everywhere are coming to recognize, more and more, the necessity for sanitariums. There is a large and increasing class of chronic invalids whose maladies are of such a nature that a cure can be effected only by a combination of medical treatment and hygienic care and training. This sort of treatment requires skilled assistants, under the direction of physicians who have had especial training for the work.

Quite an army of help is required for the perfect carrying out of all the details connected with a large sanitarium; for example, the institution at Battle Creek, which is, perhaps the most thoroughly organized enterprise of the kind in



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PREPARED ONLY BY

Charles Marchand

Chemist and graduate of the "Ecole Centrale des Arts et Manufactures de Paris" (France).

28 Prince St., New York.

the world, employs from four hundred and seventy-five to six hundred persons continually (the number varies somewhat at different seasons of the year), including twenty physicians, and over two hundred and fifty nurses and bath attendants. The institution has several hundred thousand dollars invested in facilities and appliances, which include extensive farms containing over five hundred acres, nearly all of which is under a high state of cultivation. There are orchards; fruit and vegetable gardens; green-houses for supplying the institution with flowers in the winter season, and for starting plants for the flower-beds in the summer season; extensive bakeries for the production of health foods; the largest and most thoroughly equipped bath-rooms in the United States; extensive apartments for the application of Swedish movements; a large gymnasium, etc., etc.

So extensive facilities cannot be afforded in every town, and perhaps not in every State, but many smaller establishments in which the same principles can, by the aid of well-trained assistants, be employed in the treatment of the sick, have long been needed in various parts of the United States. The management of the Battle Creek Sanitarium have undertaken to supply this want as rapidly as they can develop competent persons to superintend and conduct them.

* *

HONESTY IS THE BEST POLICY.—The man who sails under false colors is certain to be brought to judgment sooner or later. The Battle Creek Sanitarium Health Food Company, which has for more than twenty years been making a cereal substitute for coffee, has always taken care to tell the exact truth about the agreeable beverage which they prepare for their patients at the Battle Creek Sanitarium, as a means of winning them away from the use of those pernicious beverages, tea and coffee, which are responsible for many of the ailments from which the thousands of patrons of this institution are found to be suffering.

Within the last few years the facts with reference to the injurious effects arising from the use of tea and coffee have, through the influence of physicians everywhere, come to be so wide-spread as to create a great demand for wholesome substitutes for these harmful drinks. This has led different parties to place upon the market, under various names, cereal and other preparations intended to be used as beverages in place of tea and coffee. Some of these contain a considerable amount of pyroligneous acid, a substance decidedly injurious to the stomach, and giving rise to nausea, indigestion, and other unpleasant results; but we know of none which are so bad in their effects as tea and coffee themselves, and therefore regard all these enterprises as more or less in the interests of dietetic reform, and not to be discouraged. It is right and proper, however, that the public should know the truth with reference to these beverages.

The Sanitarium Health Food Company, which was among the first, if not the very first, to place before the public a cereal substitute for tea and coffee, they having begun the manufacture of such an article nearly thirty years ago for the use of the patients of the Battle Creek Sanitarium, claim for their preparation simply that it is a wholesome

and harmless beverage. They have never claimed that it is in any sense a food. For any one to make a claim of this sort is in the highest degree preposterous, and an insult to the common sense of the public.

In view of such astounding claims as have been made, it is not surprising that the food commissioner of Michigan, whose duty it is to see that the people of the State are not imposed upon by fraudulent foods, should consider it his duty to investigate the claims made, and to place them before the public, which he recently did in a very pungent manner.

While the commissioner erred in supposing these articles to consist of roasted barley, he was perfectly right in calling attention to the fact that they are not to be relied upon to make blood or to build up any other tissue.

Blood can be made only from food. It cannot be obtained from tea or coffee, or any cereal substitute therefor, but by the use of good, wholesome, digestible food. The food commissioner did not, as a matter of fact, tell the whole truth in relation to these beverages, as he gives them credit for a certain amount of nutritive value in consequence of the soluble matter which they contain, whereas this soluble matter is not food, or at least but a very small fraction of it is.

Let us stick to the truth. To say that a cereal substitute for coffee can be in any sense regarded as a food is as great a departure from the truth as to say that tea and coffee are innocent and harmless beverages. One untruth may do as much harm as the other, for while the believer in one statement would be poisoned, the dupe of the other might be starved to death; and of the two modes of death, the first would probably be generally considered the more agreeable.

The Battle Creek Sanitarium Health Food Company does not claim Caramel-Cereal to be a food, but that it is the most agreeable substitute for tea and coffee which has yet been discovered, and contains none of the harmful properties of these baneful drugs. It is an excellent accompaniment to the delicious health foods manufactured by this company, among which Granose and Granola are especially worthy of mention.

* *

HYDROZONE IN PURULENT OTTITIS MEDIA.—On Nov. 4, 1894, I was consulted at my office by Robert P—, aged twenty-four years; occupation, laborer in the Armour Packing Company. The patient complained that for about four weeks he had been suffering from intense pain in his left ear, making it impossible for him to sleep at night or rest during the day. The pain was so severe that at times he lost consciousness, and it seemed to extend through his entire brain.

Upon inspection, the man's face was found terribly deformed; an edematous swelling the size of one half of an ordinary loaf of baker's bread occupied the usual location of the ear and the surrounding muscles. The auricle of the ear was almost buried in edematous tissue; upon palpation the part was found intensely tender, and deep pressure evoked expressions of excruciating pain. The integument and subcutaneous tissue were thoroughly infiltrated. Ichorous, fetid pus was slowly exuding from an almost imperceptible meatus. The patient expressed feel-

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ings of chilliness, showing a possible septic contamination of his system. Every indication and sign pointed to possible suppuration of the mastoid cells, tenderness upon pressure over the mastoid being very marked. Efforts to localize the tenderness, whether in the external meatus or the mastoid, for discriminating diagnosis, were unsatisfactory.

I concluded to withhold a positive diagnosis as to whether the condition was purulent otitis media or suppurative inflammation of the mastoid, and used tentative treatment for a short time. I immediately placed the patient under heroic doses of elixir of the six iodides internally. After laborious effort, I succeeded in separating the edematous tissue sufficiently to admit the introduction of a small Eustachian catheter into the external meatus. Through this, with a small, hard rubber syringe, I injected four times daily about one half an ounce of hydrozone, allowing it later to drain away, advising hot fomentations. The patient was confined to his bed, and the best possible hygienic surroundings provided.

In twenty-four hours after the treatment was begun, the intensity of the odor and the amount and character of the discharge had manifestly lessened, the swelling was reducing, and the patient feeling better. The edema being lessened, the aperture was enlarged. I now recommended the injection of hydrozone through a catheter of larger caliber, every hour, requiring the head to be kept turned to the opposite side for ten minutes to allow the percolation of the hydrozone as deeply as possible into the middle ear, before reversing the position to allow drainage.

We continued this treatment for a week, the man's recovery progressing with remarkable rapidity, his pain and the constitutional symptoms having disappeared about the third day. At the end of eight days the swelling had entirely disappeared, his features were again normal, and he expressed himself as perfectly well. An examination showed a circular perforation in the ear-drum the size of a shot, proving that the case had been one of purulent otitis media, with septic contamination of the patient's system, and infiltration of the surrounding cutaneous tissues. Small incisions were made at two different places to permit the exit of pus from the integument. The mastoid was found not involved.

The rapidity with which the disease yielded after the introduction of hydrozone through the catheter into the middle ear impressed me with the wonderful value of the preparation; for, struggling with such cases during a practice of seventeen years, I have never seen its efficiency equaled by any medicinal or operative procedures.—*Wm. Clarence Boteler, M. D., in Medical Bulletin.*

* *

A NEW BIBLE CATALOGUE.—Send stamp to Pacific Press Publishing Co., 18 West Fifth St., Kansas City, Mo., for their new twenty-page Bible catalogue. They have the genuine Oxford Teachers' editions, the International Reference and Teachers', the Self-Pronouncing, and the Bagster editions in English, and the Hamburg, Berlin, and International editions in German.

* *

THE PILGRIM.—The Easter number will be ready the

early part of April. Everything in it will be new and original. It will contain articles by Captain Chas. King, U. S. A.; Ex-Governor Geo. W. Peck, of Wisconsin; and other noted writers. An entertaining number, well illustrated. Send ten (10) cents to Geo. H. Heafford, publisher, 415 Old Colony Building, Chicago, Ill., for a copy.

* *

THE National Educational Association will hold its next annual meeting at Buffalo, N. Y., July 3-10, 1896. No better locality for this meeting could have been selected. One of the most important railroad centers of the country, it is easily reached from any direction, while its facilities for the accommodation of so large and important a gathering, by means of commodious public halls, excellent hotels, and private boarding-houses, are unusually extensive and admirable. Buffalo is a beautiful city of charming homes, and will be second in size in the State when Brooklyn shall have been included in the greater New York. Built at the eastern end of Lake Erie and at the head of Niagara River, it is so favored by winds and isothermal conditions that its summer climate is very pleasant.

The Michigan Central will on this occasion make a rate of one standard first-class fare for the round trip, plus two dollars Association membership fee.

* *

THE Detroit and Cleveland Steam Navigation Company's steamers are now running daily (except Sunday) between Detroit and Cleveland. When traveling East or West, North or South, try to arrange to take advantage of these luxurious steamers between Michigan and Ohio. If you are contemplating a summer outing, write A. A. Schantz, G. P. A., Detroit, Mich., for illustrated pamphlet, which gives full information of a trip to Mackinac via the Coast Line.

* *

THE new Gluten Biscuit manufactured by the Battle Creek Sanitarium Health Food Company are really delicious. Although they contain no raising material of any sort, they are as light as puff-balls, and, without any shortening, they are crisp and toothsome, and exceedingly palatable. They are just the thing for persons suffering from diabetes, excess of fat, biliousness, inability to digest starch, and for those who are thin-blooded and nervously weak. Send for a sample.

* *

THE Granose Biscuit manufactured by the same company, are lighter than baking-powder biscuit, "shorter" and more flaky than the richest pie-crust, more delicate in flavor than the most toothsome pastry, and yet without one atom of lard, butter, or grease of any sort, or soda, saleratus, baking-powder, yeast, or any other rising material, nor, indeed, any of the flavorings or seasonings or other dyspepsia-producing stuffs with which our modern cooks make so many millions miserable, to the profit of no one but the doctors and the patent-medicine venders.

Granose Biscuit are the product of a long series of painstaking and expensive experiments in the food laboratory connected with the Battle Creek Sanitarium. There is nothing half so good in the line of foods. Used as a prin-

PUBLISHERS' DEPARTMENT.

cial diet, they can be relied upon to cure, without the use of medicine, nearly all forms of indigestion, almost every case of chronic constipation, sick-headache, biliousness, heartburn, sour stomach, coated tongue, water-brash, and a great variety of distressing symptoms. They contain five times the amount of nourishment of an equal weight of beefsteak, and possess the following points of superiority:—

1. Granose Biscuit are a thoroughly sterilized, cooked, and partially digested food.

2. Granose Biscuit clear the stomach of germs, and are digested when other foods disagree.

3. Granose Biscuit are the most delicately flavored and palatable of all cereal foods.

4. Granose Biscuit constitute a whole or complete food, containing all the elements of nutrition in proper proportion.

5. Granose Biscuit constitute the best of all foods for teething babies, for old people, for infants, for sedentary people,—for everybody, whether sick or well.

* *

CLEVELAND approved the bill of fare, of which Granola, Granose, and Caramel-Cereal were important features. Agreeable to the wishes of both President and Mrs. Cleveland, the White House steward now regularly supplies the family table of the nation's chief executive with the foods above named and other health products manufactured by the Sanitarium Health Food Company, of Battle Creek, Mich. Not only are these foods rapidly gaining in popularity with all classes in this country, but are also very highly esteemed in foreign lands, as is shown from the fact that large shipments are constantly being made to India, Burma, South Africa, the Gold Coast, as well as to England, Ger-

many, and other parts of Europe, and to Australia, New Zealand, and the South Sea Islands. All up-to-date grocers handle these goods.

* *

FIRST AWARD AND GOLD MEDAL AT ATLANTA.—The Health Foods manufactured by the Battle Creek Sanitarium Health Food Company have achieved the distinction of having received the first award at the great Atlanta Exposition,—a recognition of their merits which all who are acquainted with them will agree is well deserved. The large list of health and invalid foods manufactured and sold by the Battle Creek Sanitarium Health Food Company, includes the following:—


Granola, a thoroughly baked and cooked cereal product; Granose, a most delicious predigested food; Crystal Wheat, a wholesome and most toothsome breakfast relish; Caramel-Cereal, an aromatic and delicately flavored substitute for coffee; Avenola, Wheatena, Cooked Hominy Flakes, Infant Food, Graham, Wheat Flour, Oatmeal, Fruit, Carbon, Gluten, and many other kinds of crackers. Beyond all question the Battle Creek Sanitarium Health Food Company, manufactures the finest and most complete line of health foods made anywhere in the world. Inquire of your grocer for these foods.

* *

We understand that the Sanitarium building at Boulder, Colo., is being rapidly pushed to completion, and that the date for the dedication will soon be announced.

* *

THE Sanitarium swimming-bath is much patronized by ladies, who appreciate the opportunity of learning to swim under the expert tutelage of Miss Eliza B. Burleigh, the Sanitarium teacher of gymnastics.

 **Caramel = Cereal,** for the last twenty years, has been used by the thousands of invalids who annually visit the great Sanitarium at Battle Creek, Mich.

UNCONSCIOUS POISONING.—An old physician of Chicago remarked the other day: "Thousands of people are poisoning themselves daily with tea and coffee without knowing it. A great number of nervous maladies, and indigestion in various forms, are the result of the deleterious effects of the poison of tea and coffee upon the system. I myself made the discovery a good many years ago, that the headaches from which I had suffered for years, were due to the use of tea and coffee. I found whenever I took a cup of strong coffee, I had a headache as the result, and I had headaches now and then in spite of what I considered my great moderation in the use of tea and coffee. I concluded to dispense with them altogether, and when I did so, my headaches disappeared and did not return. I have cured scores of chronic headaches by forbidding the use of tea and coffee."

CARAMEL-CEREAL is a perfect substitute for tea and coffee. It is aromatic, delicious to the taste, and so nearly resembles coffee as to be easily mistaken for veritable Mocha, although, of course, not by a connoisseur.

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DIRECTORY OF SANITARIUMS.

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ST. HELENA, CAL.

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IRVING E. KECK, Business Manager.

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CHICAGO SANITARIUM,

28 COLLEGE PLACE, CHICAGO, ILL.

This institution is a branch of the Battle Creek (Mich.) Sanitarium. It is favorably located near Lake Michigan, in the southern portion of the city, close to Cottage Grove Avenue, and facing the old Baptist University grounds. A few patients are accommodated. Facilities are afforded for hydrotherapy, and the application of massage, electricity, Swedish movements, and other rational measures of treatment.

COLORADO SANITARIUM,

BOULDER, COLO.

O. G. PLACE, M. D., Superintendent.

This institution is located on a beautiful site of one hundred acres, including a fine mountain peak, and commanding extensive landscape views which, for variety and beauty, can hardly be equaled. The site adjoins the thriving city of Boulder, and is about one hour's ride by rail from Denver, the streets and principal buildings of which are easily discernible from the peaks around Boulder. The equipment consists of a large building especially erected for the purpose, two fine cottages, and every appliance for the application of hydrotherapy and for the special treatment of pulmonary ailments to be found in the best establishments of like character. Particular attention is given to the dietetic treatment of patients, and to systematic exercise, in addition to the special treatment for specific ailments. The altitude is between five and six thousand feet, just that which has been determined to be the best for pulmonary troubles. Though but few months have elapsed since the work of this institution was fairly begun, a large number of persons suffering from pulmonary tuberculosis have already been cured, and are now rejoicing in sound health. The rational hygienic treatment, with the climatic advantages, has proved effective in the cure of cases which, without the combined advantages of these superior measures, must certainly have succumbed to the disease.

NEBRASKA SANITARIUM,

COLLEGE VIEW (LINCOLN), NEB.

A. R. HENRY, President.

A. N. LOPER, M. D., Superintendent.

College View is a thriving village located in the suburbs of Lincoln, with which it is connected by an electric railway. College View is the seat of Union College, one of the leading educational institutions of the West. The Sanitarium has a beautiful location, facing the spacious college grounds, and gives its guests the advantages of a quiet, homelike place, combined with discreet and thoroughly rational treatment. It has a full equipment of excellent nurses, and has already won for itself an enviable reputation in the West.

PORTLAND SANITARIUM,

PORTLAND, ORE.

L. J. BELKNAP, M. D., Superintendent.

This institution is beautifully located in the center of the city, in a fine building with spacious grounds; and although it has been in operation scarcely more than a year, it already has a good patronage, and has evidently entered upon a successful career. Facilities are provided for the dietetic, and medical treatment of chronic ailments of all kinds. The advantages for treatment include, in addition to various forms of hydrotherapy, electric-light baths, and apparatus for the application of electricity in its various useful forms, manual Swedish movements, and massage.

GUADALAJARA SANITARIUM,

STATE OF JALISCO, MEXICO.

D. T. JONES, Superintendent.

ADDIE C. JOHNSON, M. D.,
J. H. NEALL, M. D.,

Physicians.

This institution, established in 1894, is the first and still the only one of the kind in Mexico. It affords, in addition to the unsurpassed climatic advantages of the region in which it is located, facilities for the employment of hydrotherapy, electricity, massage, manual Swedish movements, and dietetics, in the treatment of all forms of chronic disease. The altitude is the same as that of Denver, from five to six thousand feet. Guadalajara has the advantage of a climate more nearly uniform than any other with which we are acquainted. Located in the tropics, it enjoys almost perpetual sunshine, while its altitude is such as to prevent excessive heat. There is probably no better place on earth for a pulmonary invalid. It is only necessary that the advantages of this institution should become known to secure for it extensive patronage.

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BASEL, SWITZERLAND.

This institution affords the only place in Europe where patients can receive the advantages of a thoroughly hygienic diet, baths, electricity, Swedish movements, massage, and the various other methods of treatment applied after the manner and in connection with the same principles which govern the Battle Creek Sanitarium and its several branches. The physicians are persons who have received a thorough training in the institution at Battle Creek. Terms are moderate. No better place for sick persons or semi-invalids abroad than the Institute Sanitare.

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ESTABLISHED 1876

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Antiseptic-Corrective Tablets cure sour stomach, or acid fermentation, heartburn, bloating, flatulence of the stomach or bowels, foul tongue, bad breath, "nasty" taste in the mouth, biliousness, sick headache, nervous headache, constipation, and a variety of other conditions growing out of the action of microbes in the stomach and intestines.

Address for sample and circular, the

MODERN MEDICINE CO., BATTLE CREEK, MICH.



CHICAGO & GRAND TRUNK R. R.

Time Table, in Effect March 20, 1896.

GOING EAST. Read down.					STATIONS.		GOING WEST. Read up.				
10 Mail Ex.	4 L. C. Ex.	6 A. C. Ex.	42 M. & P. Tr. & Pass.	2 P. H. Pass.			11 Mail Ex.	1 Day Ex.	3 R. & L. L. & P.	23 R. & L. Pass.	5 P. H. Ex.
a. m.	p. m.	p. m.					p. m.	p. m.	p. m.		a. m.
9.00	8.10	8.15	a. m.		D. Chicago A.		6.45	1.50	9.10		6.30
11.25	5.05	10.30	6.00		Valparaiso		5.05	11.35	7.10		4.30
					South Bend		3.10	10.15	5.44		3.07
1.45	7.12	12.45	12.40		Cassopolis		2.15	9.40	5.13		2.25
2.35		11.35	3.42		Schoolcraft		1.20				
2.44	7.05	1.48	4.30	a. m.	Vicksburg		1.10	8.52		p. m.	1.30
3.30	8.30	2.40	6.20	7.47	Battle Creek		12.15	8.15	8.55	9.35	12.50
4.35	9.25	3.25			Charlotte		11.14	7.28	3.07	8.40	11.55
5.10	9.55	4.00			Lansing		10.49	6.55	2.40	8.00	11.25
6.30	10.45	5.05			Durand		9.35	6.05	1.55	6.50	10.25
7.30	11.17	5.40			Flint		8.35	5.35	1.28	5.47	9.30
8.15	11.50	6.15			Lapeer		7.49	5.02	1.00	5.10	9.05
8.42	a. m.	6.35			Imley City		7.28			4.45	
9.50	1.00	7.30			Tunnel		6.50	8.50	11.55	9.54	7.55
					Detroit		a. m.	a. m.	a. m.	p. m.	p. m.
9.25									10.40	4.05	8.00
	a. m.	p. m.			Toronto			p. m.			1.00
	8.15	5.25						9.30			
	p. m.	a. m.			Montreal			a. m.			
	8.15	7.25						9.15			
	a. m.	p. m.			Boston			a. m.			
	8.12	7.15						8.30			
	a. m.	p. m.			Susp'n Bridge			p. m.	a. m.		p. m.
	7.50	4.25						10.15	7.05		2.05
	a. m.	p. m.			Buffalo			a. m.	p. m.		p. m.
	7.00	5.40						a. m.	p. m.		p. m.
	p. m.	a. m.			New York			8.15	6.10		9.00
	8.53	8.08									p. m.
	a. m.				Boston						7.00
	10.20										

Trains No. 1, 3, 4, 6, run daily; Nos. 10, 11, 2, 23, 42, daily except Sunday.
All meals will be served on through trains in Chicago and Grand Trunk dining cars.
Valparaiso Accommodation daily except Sunday.
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† Stop only on signal.

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A. S. PARKER,
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MICHIGAN CENTRAL

"The Niagara Falls Route."

Corrected March 1, 1896.

EAST.		*Night Express.	†Detroit Accom.	*Mail & Express.	*N. Y. & Ros. Spl.	*Eastern Express.	*Atlantic Express.
STATIONS.							
Chicago	pm 9.30		am 6.50	am 10.30	pm 8.00		pm 11.30
Michigan City	11.30		8.45	pm 12.08	4.50		am 1.19
Niles	am 12.45		10.15	1.02	5.55		2.45
Kalamazoo	2.09	am 7.20	11.52	2.16	7.21		4.25
Battle Creek	2.55	8.10	pm 12.50	2.50	7.58		5.05
Jackson	4.30	10.00	2.40	4.10	9.20		6.30
Ann Arbor	5.40	11.05	3.50	5.00	10.12		7.30
Detroit	7.10	pm 12.20	5.30	6.00	11.15		9.00
Buffalo				am 12.10	am 6.45		pm 5.30
Rochester				3.00	9.55		8.40
Syracuse				5.00	pm 12.15		10.45
New York				pm 1.45	8.45		am 7.00
Boston				3.00	11.35		10.50
WEST		*Night Express.	*N.Y. Bos. & Atl. Sp.	†Mail & Express.	*N. Shore Limited.	*Western Express.	†Kalam. Accom.
STATIONS.							
Boston			am 10.30		pm 2.00	pm 3.00	pm 7.15
New York			pm 1.00		4.30	6.00	9.15
Syracuse			8.30		11.30	am 2.15	am 7.20
Rochester			10.37		am 1.20	4.10	am 9.55
Buffalo			11.45		2.20	5.30	pm 8.30
Detroit	pm 8.45	am 6.30	am 7.15		8.30	pm 1.00	pm 4.45
Ann Arbor	10.12	7.30	8.38		9.25	2.00	5.55
Jackson	11.40	8.35	10.43		10.30	3.02	7.35
Battle Creek	am 1.00	9.48	pm 12.15		11.43	4.18	9.11
Kalamazoo	1.40	10.27	1.05	pm 12.21	4.57	10.00	3.35
Niles	8.25	11.48	3.00	1.45	6.27		5.00
Michigan City	4.35	pm 12.50	4.25	2.45	7.22		6.00
Chicago	6.30	2.40	6.35	4.30	9.05		7.50

*Daily. †Daily except Sunday.

Kalamazoo accommodation train goes west at 8.05 a. m. daily except Sunday.
Jackson east at 7.27 p. m.

Trains on Battle Creek Division depart at 8.10 a. m. and 4.35 p. m., and arrive at 12.40 p. m. and 6.35 p. m. daily except Sunday.

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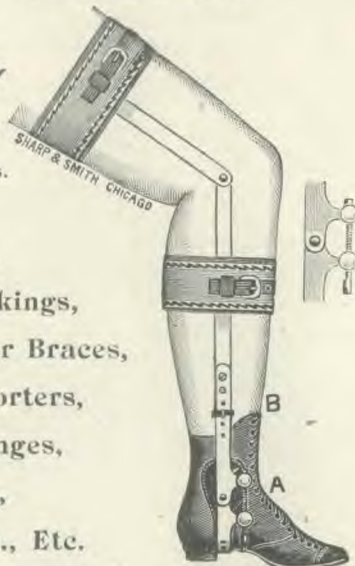
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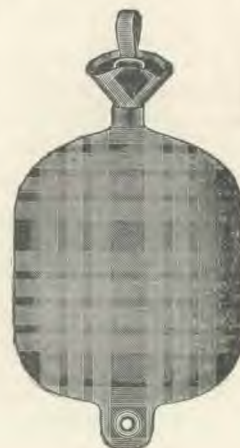
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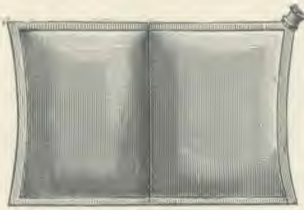


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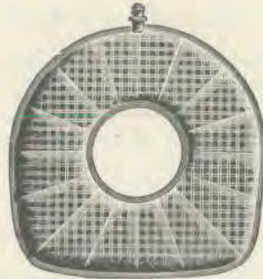
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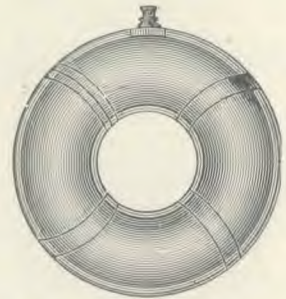
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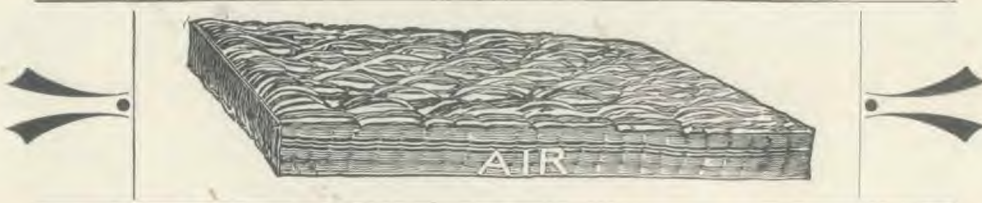
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THE Air Mattress has proved itself to be unequalled for *comfort and durability*. Not only does it fit the form perfectly when reclining, but may easily be made hard or soft by regulating the quantity of air contained. It is always perfectly clean, free from vermin or unpleasant smells. It requires no springs, as nothing is more elastic than air; and it is always "made up." It is cool and soothing in summer, and warm and comforting in winter. In cases of sickness it is indispensable, as it prevents bed-sores.

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This cut shows Camp Mattress folded  in a shawl-strap ready for traveling.

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TERRA CEIA, FLA., Jan. 29, 1896.

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I received the washer some time ago, and to say that I am pleased with it is too tame. I am perfectly delighted with it. Have shown it to several, and they are all pleased with the work and talk of buying one. Shall begin for orders and will want a dozen in a few days.

Yours truly,

MRS. E. A. LENNARD.

BATTLE CREEK, MICH.,

MESSRS. COON BROS.,

Gentlemen: It gives me pleasure to add one more to your list of testimonials for the "Cyclone Washer." We have one in our family, and do not see how we could get along without it. The washing, instead of a drudgery, has become a mere pastime. It ought to be in every family.

Sincerely,

FRANK ARMSTRONG.

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Battle Creek (Mich.) Sanitarium

HEALTH



FOODS.

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Food Cure for Constipation.

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GRANOSE CURES CONSTIPATION, not by producing a laxative effect, but by removing the cause of the disease. Granose is prepared from wheat. It is not a medicine, but a food so delightfully crisp, delicate, and delicious, that everybody likes it. **TRY IT.**

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Superintendent of the Battle Creek (Mich.) Sanitarium, Member of the British and American Associations for the Advancement of Science, the American Microscopical Society, the Society of Hygiene of France, Author of the Home Hand-Book of Domestic Hygiene and Rational Medicine, Etc.

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