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ARE WE A DYING RACE?[1]

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(Concluded.)

THIS subject is too large to be treated exhaustively in a brief paper, and I shall undertake only to mention what seem to me to be some of the most important deteriorating forces which, operating in connection with public sanitation, are tending slowly but surely toward final race extinction.

First in importance, because of its widespread character and the profound mischief which it works in the human organism, must be mentioned the narcotic habit. Whatever may be the particular poison to which the individual is addicted, whether alcohol, tobacco, opium, cocaine, tea or coffee, chloral, absinth or hashish, the vice is one and the same. It is the gratification of the desire for artificial stimulation, the craving for unearned felicity. While alcohol, tobacco, opium, cocaine, and chloral must be placed at the head of the formidable list of drugs which are capable of producing a temporary exhilaration at the expense of subsequent depression and ultimate degeneration, the other drugs named, if less potently mischievous, are nevertheless evil and only evil in their tendency, a fact which is steadily forcing itself more and more upon public attention, after having long been recognized by the observing and sagacious medical man.

The recent studies of Andriesen, Tuke, Hodge, and others have shown how these drugs destroy man, soul and body, by producing degeneration of the delicate fibers by means of which nerve-cells communicate with one another, thus isolating the individual units of the cerebrum, and so destroying memory, co-ordination, will, and judgment, and wrecking the individual physically, mentally, and morally. Nine hundred million dollars spent annually for drink and an almost equal amount expended for other poisons is a thunder-voiced fact telling of race degeneration proceeding at a hurricane pace.

Next in the category of destructive forces, I must enumerate the slavery to conventional dress, which binds or holds our mothers, sisters, and daughters in a grip so strong that a quarter of a century of earnest agitation has only just begun the work of emancipation. A careful study of this subject during the last twenty-five years has convinced me that, aside from the liquor and tobacco habits, there is no deteriorating force which deals such destructive blows against the constitution of the race as the unphysiological customs

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in dress which prevail among civilized American women. Scarcely a woman can be found who has reached the age of twenty-five or thirty, and has worn the conventional dress, who is not suffering from dislocation of the stomach, the kidneys, the bowels, or some other important internal organ, the displacement of which is a far greater calamity than the dislocation of a shoulder, a hip, or any other joint. The present outlook is, however, somewhat hopeful. The bicycle has forever delivered women from the thraldom of long skirts, and gives encouragement that the necessity for breathing capacity may yet banish the corset and its accompanying tight bands.

Next in the list I will venture to mention a cause which decency usually seeks to keep out of sight, but which duty forbids me to ignore; namely, sensualism. Physicians, perhaps better than any others, understand how deep this evil strikes into the vitals of society, and how wide-spread it is in all ranks and conditions of life. Public prostitution is certainly the grossest, but it is by no means the largest nor the most pernicious, phase of this evil. Its full meaning can only be appreciated by the physiologist who comprehends the fact that the functions on which depend the divine possibilities of fatherhood and motherhood also embrace the potency of physical and mental manhood and womanhood. The secret forces which operate to perpetuate the race, at the same time serve in a marvelous way, first, to develop in the individual manly or womanly traits and instincts, second, to supply an ever-needed source of vital force and energy. The diversion and abuse of the most sacred of all the bodily functions must be held responsible for a vast amount of individual incapacity and a large share of the growing racial weakness.

Another mischief-working influence to which the attention of physicians is constantly drawn is that to which the eminent Darwin forcibly calls attention in the following words: "A man scans with scrupulous care the character and pedigree of his horses, cattle, and dogs before mating them; but when it comes to his own marriage, he rarely or never takes any such care." In a paper read before the Academy of Medicine at Buffalo, a few months ago, Dr. Rulison gave statistics showing clearly that the criminal, the insane, and the defective classes are increasing at a most alarming rate. To use his own words: "The unhealthy and vicious class is increasing more rapidly than the desirable one. In the days of Malthus the danger lay in the population's increasing more rapidly than the means of subsistence; this danger no longer threatens, but a more serious one, in the survival and overwhelming increase of imperfect physical and mental beings."

Dr. Rulison suggests as a remedy that in every community a medical examining board should be constituted, and that society should be divided into three classes: first, those who are physically, mentally, and morally sound, having good habits and no hereditary disease for at least three preceding generations; second, those having the same physical qualifications, but with a family history extending back only to their grandparents; third, those not included in the preceding classes. He would have such laws enacted as would prohibit the intermarriage of persons of different classes. The effect of this would be to create an aristocracy of health. The inquiry would be, not, "How much is the young man or young woman worth in bonds, bank stock, or real estate?" but, "How much is he worth within himself?" not, "How much gold does he expect to inherit?" but, "What sort of a constitution has he inherited?" Royal blood would thus be red blood, and not blue blood. When

the importance of these facts, both to the individual and the race, comes to be recognized fully, it will result in the establishment of a nobility of health, rather than a nobility based upon wealth or position.

Dr. Rulison's idea respecting the regulation of marriage by law is doubtless Utopian and impracticable, but this is true only because the importance of this matter is neither understood nor appreciated, and is not likely to receive due recognition for a long time to come.

So-called luxuries and unhealthful recreations are certainly chargeable with no inconsiderable share of the damage inflicted upon our degenerating race. Superfluities in diet, so-called dainty foods, rich, complicated, and consequently indigestible dishes,— pies and desserts, the rich sauces and entrées innumerable in name and composition, but nearly uniform in indigestibility,— are just about as well adapted to the making of bones and brains and muscles as to the making of a house.

Some years ago an itinerant clergyman, traveling through a Western State, spent the night with a farmer, and in the morning sat down with the rest around the breakfast table, to prepare for the long horseback journey which lay before him. The host invited him to ask a blessing upon the food about to be eaten. The reverend gentleman glanced over the table, taking a mental inventory of the food prepared for the dozen hungry mouths awaiting it. There were hot biscuits steaming from the oven, semitransparent with lard and yellow with saleratus; there were savory mince-pies, rich preserves, pickles green as grass, coffee black as ink, fried pork, fried eggs, fried potatoes, and a generous supply of doughnuts on the sideboard. Pausing a moment, after his survey of the indigestible viands, with a solemn voice the clergyman said, "Friends, this breakfast is not worth a blessing," and concluding that a breakfast not worth a blessing was not worth eating, he went on his journey without it. The farmer doubtless considered the blunt preacher a very ungrateful guest, and it is doubtful whether the lesson was of any practical value to him ; but certain it is that a great share of the breakfasts and dinners eaten are not fit to be blessed or to be swallowed.

Theater-going, fashionable parties, and the giddy round of so-called pleasures furnish another cause which has ruined the constitutions of thousands of men and women. The wholesome, simple, sensible measures of our grandparents are no longer tolerated by the precocious youth of the present day.

Another most important factor in the deterioration of civilized races is to be found in the unnatural conditions imposed during the school-going period of life,— many long hours spent in poring over books, sitting in an unnatural posture in an overheated and ill-ventilated schoolroom, the cramming system too much in vogue in all public schools, the distaste which the cultivated habit of inactivity develops for vigorous muscular work, together with wrong conceptions of life which are the natural result of our mediæval system of education, turn out, every year, at the season for college and university commencements, a growing army of school cripples,— lean, cadaverous young men and women, "sicklied o'er with the pale cast of thought," and maimed for life unless an unusually vigorous constitution or extraordinarily favorable circumstances enable them to recover from the damaging influences to which they have been subjected.

The writer is in full accord with the New York professor who believes that our universities ought to build up an aristocracy ; but he differs widely from

that learned gentleman in the sort of aristocracy which a university education ought to produce. What we want is an aristocracy of Christian manhood and womanhood, an aristocracy of men and women who believe that the body is the temple of the Holy Ghost; that man was made in God's image, and that God himself dwells in the human form divine; that to abuse it is to insult God; that to squander one's vital forces is as much a sin as to break open a safe or execute a forgery. Our race deterioration will not cease until we again write over our sanctuaries of learning and of worship the motto the ancient Greeks carved above the portals of their temples, "A sound mind in a sound body." We must recognize as a solemn reality that religion includes the body, and that the laws which govern the healthful performance of the bodily functions are as much the laws of God as those of the decalogue. So long as man regards his body as a harp of pleasure, to be played upon as long as its strings can be made to vibrate, so long will he continue to travel down the hill of physical decadence and degeneration in spite of quarantine laws and the most minute sanitary regulations. But when he recognizes his divine origin and obligations, and himself as the crowning masterpiece of creation, his body a precious thing, to be sacredly preserved, developed, expanded, and purified for service to humanity in this world, and a never-ending opportunity for development and joyous existence in the world to come, — then only will he begin to climb toward the heights from which he has fallen, where he may once more stand forth as the crowning glory of creation, the masterpiece of God, "the beauty of the world, the paragon of animals."

THE BLOODLESS SPORTSMAN.

HAST thou named all the birds without a gun?
Loved the wood rose, and left it on its stalk?
— *Emerson.*

I go a-gunning, but take no gun;
I fish without a pole;
And I bag good game and catch such fish
As suits a sportsman's soul;
For the choicest game that the forest holds
And the best fish of the brooks
Are never brought down by a rifle-shot,
And are never caught with a hook.
I bob for fish by the forest brook,
I hunt for game in the trees,
For bigger birds than wing the air
Or fish that swim the seas.
A rodless Walton of the brooks,
A bloodless sportsman I;
I hunt for the thoughts that throng the woods,
The dreams that haunt the sky.

The woods are made for the hunters,
The brooks for the fishers of song;
To the hunters who hunt for the gunless game
The streams and the woods belong.
There are thoughts that moan from the soul of the pine
And thoughts in a flower bell curled;
And the thoughts that are blown with the scent of the fern
Are as new and as old as the world.

So, away! for the hunt in the fern-scented wood
Till the going down of the sun;
There is plenty of game still left in the woods
For the hunter who has no gun.
So, away! for the fish by the moss-bordered brook
That flows through the velvety sod;
There are plenty of fish still left in the streams
For the angler who has no rod.
— *Sam Walter Foss.*

THE DIETETIC HABITS OF OUR EAST INDIAN COUSINS.

BY G. P. EDWARDS.

THE dusky-skinned natives of India, however far removed from us in language, manners, and location, are nevertheless blood relations from kinship several thousand years nearer than Adam. The Caucasians and East Indians are descended from a common ancestral race, the Aryans. The branch of the Aryan family which is now represented by the Caucasian race is one far away, not only from the original birthplace of the race, but from the original simplicity in habits of life which we find to a large extent preserved by the natives of India. It may on this account be worth while to study the habits of the modern East Indian, whose proverbial conservatism renders it possible for us to form a very just conclusion respecting the habits which prevailed among our own ancestors four or five thousand years ago.

The space allotted us for this article will not afford opportunity for consideration of all the habits, manners, and customs of modern India, so we shall confine our attention to a single question, which will be of special interest to GOOD HEALTH readers,— that of diet.

A vast majority of the people of India subsist largely on a vegetarian diet. Many are strict vegetarians. India being an essentially agricultural country, its people, from Cape Cormorin to the Himalayas, are largely engaged in the cultivation of grains, fruits, and vegetables. In southern India and in Bengal, rice and dahl are the chief grain products, and are the staple articles of diet among the people ; while the cocoanut and the plantain, the luscious mango, and the pineapple, flourish in abundance. In the central provinces and in northern and western India, wheat and the pulses are grown, and furnish nourishment to the millions of inhabitants. In the central provinces many varieties of berries are found wild on every hillside, and in the hill country of northern India, corn, nuts, and beans are plentifully produced, and apples, pears, and peaches grow in abundance. Aside from the foods already mentioned there are many other kinds of fruits and vegetables which either grow naturally or are produced in abundance. Among these are the orange, date, fig, guava, and tamarind, the tomato, potato, egg-plant, squash, onion, and cauliflower.

In ordinary years, when the rains are regular, these various foods are produced in enormous quantities, the wheat product even influencing the markets of the world. In 1888 forty-one million bushels were exported. But the population of India is very dense, in some provinces over four hundred to the square mile, and the masses of the people are very poor. The holdings in land are very small, ten acres being about the average.

The people of India are very tenacious of the customs of their forefathers, and hence the ancient methods of cultivation are still in use. The ground is scratched over with a wooden stick for a plow, and the seed scattered about to take root as it may. At harvest-time, after the money lender has taken his share and the government rents are paid, there is but little remaining ; but on this the family must eke out an existence until the next harvest. In view of this it is easy to understand why when the rains fail and drouth withers up the young crop, famine prevails with all its sad results.

The cost of the common food-stuffs of India is usually very small. Rice, of which there are eight or ten varieties,

EAST INDIAN FARMERS PLOWING.

sells at one or two cents per pound. There are many varieties of dahl, some of which resemble quite closely the lentils grown in America. These seeds, rich in nitrogenous elements, are grown all over India, and supply a large part of the nourishment of the common people. The price varies from one to four cents a pound, according to the quality. Wheat is even cheaper, whole-wheat flour being sold at two cents a pound.

The extent to which these food grains are used is indicated by the great number of grain shops which one sees while passing along the streets of an Indian city. An equally common sight is the vender of parched grains. From early in the morning until ten o'clock at night he may be seen on the streets, sitting beside a large flat basket in which are smaller baskets containing parched dahl, rice, wheat, corn, and peanuts. For one cent enough of these foods may be obtained to make a good meal; and they furnish the entire diet of the poorer classes. This may account, in a measure, for the excellent teeth which most of these people possess.

Fruits in general are rather more expensive, though some kinds are remarkably cheap. Pineapples, the finest I have ever eaten, cost only six cents each. Dates sell for four cents a pound. Delicious oranges may be had for eight cents per dozen, and bananas are plentiful the year round at two cents a dozen. They are rather small, but have an excellent flavor. Indeed, there are so many kinds of fruits and vegetables grown in India and ripening at different times of the year that in a good year the markets are well stocked with fresh supplies all the year round.

In view of these facts it is easy to un-

derstand why the Hindus live largely on a vegetarian diet. It is the cheapest diet, and it is the best, supplying in the purest and most attractive form all the elements necessary for the proper nourishment and support of the human body, and being free from those stimulating poisons and waste products which in a flesh diet cause so much mischief, especially in a warm climate.

Samuelson says, in his excellent book on India, that as a rule the Hindus are more intelligent than the Mohammedans. There may be other causes operating to some extent to produce this result, but I believe the chief reason is that while the Hindu lives almost wholly on a vegetarian diet, the Mohammedan clogs his brain with the waste products of decaying flesh. And in this connection it is quite pertinent to mention the fact that it is among the Mohammedans that the use of intoxicating liquors is making such rapid strides. There is no doubt that the stimulating effect of a meat diet leads to the use of stronger stimulants.

The Hindus believe, and rightly, that the use of flesh foods stimulates the animal passions. For this reason the widows of India — and there are many — are denied meats altogether, as well as other stimulating foods. But these are not the only reasons why the Hindus are vegetarians. There is in the Hindu mind a deeply rooted feeling that the cow is a sacred animal, and that to take its life is a sin. She is called the foster-mother of the Hindus, and is perhaps the object of more reverence and more care than any other animal in India.

Many Hindus have a similar regard for all animal life. The diet of the Hindustani Brahmins, of the Jains, the Buddhists, the Mumarees, the worshipers of Vishnu, and the Hindu widows is strictly vegetarian. The Jains are extremely care-

HINDU WOMEN GRINDING CORN AND WEAVING.

ful not to destroy the life of any animal or injure any living thing. They will not even ride on the backs of domestic animals or employ them as beasts of burden. If a Jain meets a Mohammedan leading a sheep to the slaughter, he feels in duty bound to rescue the animal and pay its value to the owner. Dangerous wild animals, such as the tiger, the lion, and the venomous snakes, are avoided; the peaceful elephant and the deer roam the forest unmolested; the cow and the sheep give milk to their young; the birds build their nests without fear in the habitations of man; and the fishes in the streams sport about in perfect safety. Man and the lower animals live in harmony. What a contrast to this picture is that other, in which we see the hunt, the slaughter-house, and the bloody feast!

What must be the influence on the minds of Hindus, who have such tender regard for the lives of their fellow creatures, to see Christians from day to day taking the lives and devouring the dead bodies of animals which they hold so sacred? No wonder the spread of Christianity in India is slow when its representatives put so many obstacles in the way of its progress.

To show how one barrier to the spread of the gospel in India is removed by vegetarian missionaries I will relate an incident which occurred at our medical mission in Calcutta. One day a Hindu came to see the doctor. After examination it was suggested that he remain for a few days for treatment. The very first thing that troubled him, when this was proposed, was the thought of the flesh food that might be supplied to him, and it was with serious concern that he anxiously inquired about it. But when he was told that we were vegetarians and did not eat flesh food of any kind, he at once consented to remain.

MEMORIAL HOSPITAL (U. P.) AT SIALKOTE, INDIA.

Of late years there has been some improvement in the diet of Christians in India. The many advantages to be derived from a vegetarian diet are coming to be appreciated more and more, especially by missionaries who come in close contact with Hindus and learn of their feelings in this matter. It is also acknowledged by many that those who live on a plain and simple diet, composed of grains, fruits, nuts, and vegetables, are better able to withstand the effects of India's scorching sun.

It is to be hoped that vegetarianism among the missionaries of India, and elsewhere as well, may become general, and that one reproach against God's cause being thus removed, many Hindus may be influenced to accept Christ.

Calcutta, India.

THE CAUSE OF NERVOUSNESS.[1]

BY J. H. KELLOGG, M. D.

NERVOUSNESS is simply a morbid expression of a sensation. When a person is in perfect health, all his organs are in a normal state, and he has no consciousness of their existence. It is only when the nervous sensibility is enormously increased and heightened by disease that we realize their existence.

The nerves of the external parts, which are normally more sensitive than those of the internal organs, give expression to the sensations, and make us conscious of our environment through the senses of touch, smell, sight, hearing, taste, and other general sensations; while the internal nerves are for the most part concerned with the special functions of the different organs, and do not, when in a normal state, manifest themselves through sensations. Thus any sort of sensation experienced in the internal organs is evidence of a morbid state; but the external nerves, being largely concerned with sensation, may express themselves very actively and yet be in an entirely normal state. For instance, when I place my hand upon the table, and feel it, that is a normal sensation; but if I feel something touching my hand when there is nothing there, that is an abnormal sensation. The nerves are all the time reporting to the brain just the condition of every part of the body. If the heart goes a little slower than usual, the sensory nerves report this to the brain, and there comes back a response calling upon the thermogenetic muscles, which are the furnaces of the body, for more energy. On the other hand, if the temperature rises the twentieth part of a degree, immediately there is a report to the brain-centers that the temperature is rising, and that the draft must be turned off a little and the fires of the body slowed down. The heat-regulating function of the body is so nicely adjusted that if there is a great rise of temperature,—for instance, if we go out into the sun where we are exposed to a high degree of heat,—it not only lessens the heat of the body, but cools it by evaporation.

Now when the sensory nerves are doing their duty and reporting in a normal way, there is no special sensation experienced except upon some strong excitement of the nerves, as when a strong pressure is brought to bear upon some part of the body. A person sometimes feels feverish, and experiences a burning in the palms of his hands and the soles of his feet, when there is really no rise of

[1] Abstract of a Sanitarium parlor lecture.

the body temperature. This is an abnormal sensation. Thus when a person suffers from sensations of cold when he is not cold, and from sensations of heat when he is not warm, it is a morbid expression, and an evidence of a diseased condition of some sort. The same is true of all the senses. A lady once said to me, "Doctor, I have had music in my head for three years. Why, it is infernal. The music is all right enough, but it is dreadful to have it there all the time, because when I want to go to sleep, there is a band of music playing in my head all the time." Now this was an abnormal condition of the nerves of hearing. I have met many curious cases of this sort. One patient complained that she heard voices talking to her all the time.

When the difficulty is with the sense of sight, there sometimes appear to be specks or sparks before the eyes when there are no specks there; sometimes the apparition is of a violet light or a green light, or a white light, or a sudden blackness coming before the eyes. Sometimes a person will complain of a coppery taste in his mouth or a taste of alkali or soda. A man told me the other day that he felt as if he had soap in his mouth. There is often a disturbance of the olfactory sense, which carries the impression of a smell when there is none.

These results are often bewildering. Sometimes a person thinks he is going to die of apoplexy; or he has crawling sensations in his legs, and is sure he is going to be paralyzed; so he is in a state of distress of mind from morning until night. These sensations are only the morbid expressions of the condition of the nerves — not that the nerves are necessarily diseased, but that they are morbidly disturbed.

The causes of these disturbances or morbid expressions of the nerves are very various; the most common of all causes, however, is indigestion. Yet the majority of people who suffer from these nervous symptoms realize no pain or disturbance in the stomach; but an examination of the tongue and the contents of the stomach shows them to be filled with poisons generated by decaying food substances. These poisons are absorbed into the blood, and the whole body is disturbed by them. There are thousands of people living under a tremendous burden just because their stomachs have gotten into such a state that the food they eat becomes poisoned, and the poisons manifest themselves not only in all these various nervous sensations, but in dulness of the intellectual powers and in various other miseries. When a man gets into such a condition, he may run up a column of figures, and forget how much it is, so that he has to go over it, perhaps two or three times. Thus he is perplexed and bothered in various ways, until he consumes three or four times as much time as he ought to in everything he does, just because he cannot get his mind closely fixed upon his work. Or perhaps he gets into a state of chronic inattention, and becomes incapable of carrying on business. When a woman gets in such a condition as this, things don't go right; she thinks that she is going all to pieces at times, has "nervous spells," and has to go off by herself and have a good cry, which proves a sort of outlet or escape for some of the extra energy that she has gotten up, and usually quiets her nervousness somewhat.

Now these conditions do not grow out of a diseased condition of the brain or spinal cord, as is often supposed, nor usually from diseased nerves, but from a foul stomach where rank poisons are being manufactured and absorbed into the body, and are thus contaminating the blood, brain, and nerves. A person is just as surely poisoned in this way as if

the poison were administered under the skin by a hypodermic syringe. Indeed, my experience has convinced me that these morbid conditions of the stomach and intestines are responsible for at least ninety-nine hundredths of all the nervousness of which people complain. The proof of a theory is in the trying of it; and this one has proved true in so large a proportion of the cases coming under my care that I ceased long ago to try to treat nervous symptoms, except in a palliative way, but have made a point of striking at the root of the trouble — the stomach.

Of course, there are other causes of nervousness besides the stomach. Some people are born with diseased nerves; and there are also reflex causes which affect the nerves. There are cases in which the irritation of the rectum may be so great as to cause such a wasting of the nerve energy that the patient is kept in a state of constant nervous exhaustion. It is like the case of a dam in which a muskrat has dug a hole; at first the water runs into the dam faster than it runs out through the hole made by the muskrat, but gradually the hole grows larger, until finally the water runs out faster than it runs in. So it is when there is a serious waste of energy from some cause in the body. But with a large share of nervous cases, there is water enough to run the mill, and the wheel is all right, only it is clogged up so that it cannot run; that is, the body is so filled with poisons that it is unable to perform its work. In many cases also there is a morbid condition of the system as a result of which the nerve-centers are unable to store up energy from the food. This is generally the result of the influence of poisons which have been absorbed in the alimentary canal, or originating in the body, and have not been properly burned up or eliminated by exercise.

The evident remedy for this condition, then, is to regulate the diet and all the habits of life in such a way that the manufacture of poisons in the stomach shall be discontinued, and the system be so relieved of all encumbrances that nature can return to her normal state. When this is accomplished, these morbid sensations will have vanished, and the weary sufferer will find a fresh delight in living that could never have been experienced under the old régime.

THE LOWLIEST FLOWER.

NAY, not too low!
Pale, tender flower, half hidden in the grass;
The sun and dew, and kindly winds that blow
Will find you as they pass.

Nay, not too low!
Pure, humble life, whose wayside graces meet
Few friendly eyes. God's watchful angels know
How fair you are — how sweet!

— *Madeline S. Bridges.*

WHEN I see about me in the fields of intellectual attainment and culture, in the walks of business, and in family life, so many disasters and tragedies long drawn out, of failing health and collapse of nerve, brain, and muscle, I feel that health is the only bulwark upon which everything we prize in intellectual culture and religious perfection can ever be reared. — *G. Stanley Hall.*

THE DEPOPULATION OF FRANCE.

BY MARY HENRY ROSSITER.

No greater problem confronts the French nation to-day than the alarming decrease in the native population. The evil is not of recent origin, but has been growing for more than sixty years. In the thirty-four years preceding 1867 the loss amounted to more than 3,900,000. It is a question of births, and not of deaths, for the death-rate in France is lower than that of other countries. The very fact that France compares so favorably with other nations as to mortality demonstrates plainly that her decrease in population comes from the hardest possible cause to reach — failure in natality.

A comparison of four equal periods, beginning with 1873, shows that during the first there were twenty-six births for every thousand inhabitants; during the second, twenty-five; during the third, twenty-four; and during the fourth, but twenty-three. In strong contrast with this showing is the record of neighboring peoples for a corresponding period. English statistics give thirty-two births for every thousand inhabitants; Prussian statistics, forty-one; and Russian, forty-eight — more than double those in France.

The Germans are quite as awake to the situation as the French. Not long ago, when some one in the Reichstag proposed to increase the effective force of the German army, a deputy cried out: "Why this new sacrifice? It is useless. The population of France is decreasing with such rapidity that in fifteen years its army will be only the half of ours."

Even now the French government finds difficulty in maintaining the average of the annual military contingent, although it has lowered the standard of height two centimeters and made other concessions for the sake of numbers.

This dangerous symptom of degeneracy is the subject of general and serious discussion. Many important factors in the problem have thus been discovered. In the first place, the number of marriages is decreasing. In 1889 there were in all France 272,734 marriages, 13,000 less than in 1884. This diminution is general, and threatens to continue. Pride of position and the love of luxury, of pleasure, of travel, of self-indulgence, operate here, as they do in the United States, to keep a great many young people from undertaking the double burdens of matrimony. In France this influence is intensified by the necessity of dowry, the strong family and class spirit, the general laxity of morals. Here a young man cannot marry without his father's permission until he is twenty-five years of age, but he may be as dissolute as he pleases without losing in anywise his social position or his rights of inheritance.

In Paris, licentiousness is made so easy and attractive, or rather, all the sentiments and affections that have to do with love and marriage are so fearfully and publicly profaned and caricatured, that one often wonders why marriage with her restrictions and requirements, her ideals and her illusions, does not gather up her skirts about her and abandon altogether a city where her laws and privileges are of so little moment. As it is, there is very little real marriage in this land, most matrimonial alliances being made for practical considerations on the part of men, for the sake of being married on the part of women. Among the poorer classes men marry so often with the evident intention of securing a cheap laborer that the saying has passed into a

proverb, "At Antilles a man buys a negro; in France he marries a wife."

In the second place, even the people who do marry show no great desire to undertake the duties of parentage. Out of 10,824,000 families it is estimated that only 2,032,000 have more than three children, 7,280,000 altogether have only 7,872,000. The *Journal des Debats*, in a discussion on the subject, piquantly remarks: "We can foresee the time when it will be considered something very fine to be born at all, and people will cite the individuals who have had this good fortune."

Another evident and recognized influence is the law of celibacy for priests and nuns in the Catholic Church. From the standpoint of the maintenance of family life they constitute a formidable element of society. According to M. Leon de Fort, in the *Revue de Deux Mondes*, there are 42,527 priests, 17,776 monks, 90,343 nuns, in all 150,646 persons of both sexes, held by religious vows to a celibate life. This does not include young priests, deacons, and underdeacons, who increase the number to 204,477. While this unnatural system acts directly, in one way, as a check on the population, it acts perhaps even more strongly in an indirect way by its unfortunate tendency toward laxity of morals.

Immorality is after all the chief agent at work against the growth of the French nation. As Alfred de Musset forcibly puts it: "Debauchery is the glowing brazier wherein the forces of the youth of France are being consumed." More than eight per cent. of the children that are born in France are illegitimate, and in the city of Paris the proportion rises to twenty-eight per cent. These children, even when allowed to live by their mothers, die at a greater rate than others, although the mortality among all infants is sufficiently discouraging. From 1883 to 1885 it amounted to seventeen per cent. of the total number.

The number of infanticides has so increased that it has been proposed by some philanthropists to re-establish the "turning-boxes" of the first half of the present century. These were contrivances established by the government which allowed an unfortunate mother to deposit her child secretly and without formality to be cared for by the state. Those who answer the plea that the state ought not to pay for the sins of individuals argue that it would be better for the state to find live children in the "turning-boxes" than to see so many corpses in the streams.

There does exist, however, at least one institution for the benefit of these little foundlings. It is called the Union Francaise, and is a society organized by Mme. de Banau in 1887 for the establishment of colonies for abandoned children in the country and provinces. Sanitariums for sick and diseased children are also being established in healthy districts among the mountains and on the seashore.

Reformers and economists are crying out against defective legislation, against faulty hygienic arrangements, against the license of the streets in great cities. They are agitating for laws to lessen the obstacles to marriage between citizens and between foreigners, to facilitate the naturalization of the latter, to suppress infanticide, to reward poor men who have raised large families. Some would even levy an annual tax on men beyond a certain age who are unmarried.

One of the most important organizations in the interest of improved morality, and hence in the interest of national family life, is the "Central Society of Protestation against the Licentiousness of the Streets." Such men as Jules Simon, Beranger, La Berge, and Frederic Passy have given it their support, and its avowed object is to "purge the walls of

Paris of the obscenities which defile them, to clean the show-cases, to sweep the sidewalks."

To American eyes this is the most imperative need of France, of Paris in particular. There is little hope for a stronger, more vigorous and numerous population so long as the nation's capital is one vast public harem, not, like those of the heathen Orient, confined within the limits of palace walls, but overflowing and stretching beyond the fortifications. Even the innocent and pure-minded who venture into the streets of Paris cannot altogether escape the flaring signs, the images, the pictures, the transparencies, the gestures, and the pantomimes that are a constant "rape of the eyes," as a magistrate expressed it.

In the social as well as the physical world the law holds good that "Action and reaction are equal and in contrary directions." If a nation swings to excess in sin, it must swing back to weakness and decay. In the gradual loss of her national vitality France is reacting from persistent defiance of the laws of purity and temperance.

Fresh Air at Receptions.

The late Dr. Dio Lewis, in speaking of the indifference manifested by people in general in regard to the importance of ventilation, tells of an occasion on which he was invited to attend a reception given by the Young Men's Christian Association. It was held in a room fifty feet long, twenty feet wide, and ten feet high, with no opportunity for the entrance of air except what came in by the door. The room was packed with people, and there they remained for two hours — the air growing fouler with every breath they drew — when an adjoining room was opened, into which they passed to and fro for refreshments. It scarcely need be added that the erratic doctor did not himself remain long to enjoy the privileges of the occasion. In commenting on it he gives vent to his feelings in the following terse and racy manner: —

"And this is a Young Men's Christian Association, whose constant profession is obedience to God's laws! Let me assure them that the physical law comes first in order. . . . There is no filth more filthy than that which comes in the air from other people's lungs and skins. Think of it — three hundred persons shut into a room containing only ten thousand cubic feet, and shut up like three hundred bugs in a bottle, with only an opening at the cork. I call on all intelligent men and women to put a stop to this abuse of the body by demanding at all receptions, whether public or private, sufficient fresh, clear, pure air to feed their lungs, and if they are denied it, to do as I always do, take my departure at a very early hour."

A MAN may have the wisdom of Solomon in other matters, and yet be fool enough to forget that his stomach is his best friend. — *Joseph Whitton.*

LOSE no chance of giving pleasure, for that is the ceaseless and anonymous triumph of a loving spirit.

IT is always safe to learn, even from our enemies; it is seldom safe to instruct, even our friends.

HE only is safe who has health.

PROGRESS IN THE TREATMENT OF THE INSANE.

HIPPOCRATES was the first to give attention to the cause and treatment of insanity. Before his time those afflicted with this malady were supposed to have in some way merited the displeasure of the gods, and were therefore doomed to suffer the consequences of their anger. The father of medicine, however, considered insanity as a mental disorder, and, according to his best knowledge, treated it as such. But sad to relate, his investigations and practise were not improved upon as time passed; for during the Middle Ages patients suffering from this disorder were tortured and burned, being considered to be possessed of the devil; and even as late as the eighteenth century, lunatics were bled, deprived of light, exercise, and sufficient air, and were frequently put in chains or thrown into dungeons, badly fed and poorly clothed. It is even said that in France the public were admitted to the asylums on Sundays and holidays, and allowed to annoy and laugh at the patients as a pastime. Certainly, of all the ills to which human beings are subject, none have been so little understood as those affecting the mind. In the October number of *Harper's Magazine*, Hezekiah Butterworth gives a very interesting account of a recent visit to the famous retreat for the insane at Gheel, Belgium. The following extracts from the article, giving some idea of the place and the principles and methods pursued in the care of this class of invalids, which of all others naturally appeals to our deepest sympathy, cannot fail to be of interest: —

"Gheel, a town of Belgium, is one of the ancient miracle-places of the Catholic Church in Europe. It has a shrine at which, for centuries, the insane have been reputed to be cured. Whatever may have been the facts or superstitions in such cases, modern science has wrought what one might claim to be miracles there in the treatment of nervous diseases; for when Belgium, always alert in social reforms, wished to make an experiment of caring for her insane poor by giving them the freedom of the open air and the fields, she chose Gheel as the place where the trial of the new method should be made. Here her department of charitable institutions has reversed most of the methods of the past in the care of the nervous patients by placing such invalids in small boarding-houses in the wide, open, sea-cooled country, and giving them their freedom under sympathetic supervision. The experiment of the Belgian government, at first held to be perilous, has proved as successful as its purpose was beneficent; it is one of the merciful miracles of modern science, whose influence seems destined to fill the world. The streets of Gheel, worn for a thousand years by the footsteps of unhappy pilgrims, are now visited by the philanthropic investigators of all lands, who study the merciful ways of treating the most pitiable of human afflictions.

"I was traveling from Geneva to Antwerp with a medical friend who had made a long study of the morbid manifestations of nervous diseases. An asylum seemed to fly by the swift car window, and it left in my mind the shadow of its wing.

"'Is it true,' I asked my friend, 'that there is a town in Belgium where thousands of insane or nervously afflicted people are allowed to roam free, and where the farm folk for many miles around are employed in boarding and caring for them?'

"'You mean Gheel in the Campine, the place where Belgium has made a new experiment in the care and treatment of

her insane poor — the old miracle-place of St. Dymphnea. Yes,' he continued, 'it is true that some two or more thousand nervous patients are so cared for there in the freedom of the open air.

"'Gheel in the Campine, or open sea country,' he explained, 'is a place of wide horizons, of green gardens and fields, where the arms of the great windmills are always going. It is situated some twenty-six miles from Antwerp, in the same province. Its titular saint is the Princess of Dymphnea, who was slain by her father, an ancient king of Ireland, for her virtuous conduct there, at whose death, or martyrdom, deranged people were said to have been restored to health. A shrine arose there to commemorate this supposed miraculous healing. It is now a very beautiful church, with a long history — a place of prayers for the recovery of the insane, full of legendary lore. St. Dymphnea's tomb became a place of pilgrimage for the healing of deranged folk.

"'The town now is a state hospital, some thirty miles in circumference, where the patients are treated in cottage boarding-houses, and where wonderful cures are reported to have been wrought.

"'The strange thing about Gheel is,' he continued, 'that most of the patients become harmless there. As the open-air hospital is now conducted, it is one of the most successful experiments in mental healing that has ever been made.'

"I became intensely interested. The partial failure of mental powers accounts for so many things that are strange and sad in life that I have long felt, though not myself a physician, a most sympathetic interest in what relates to the help and healing of the insane.

"'Gheel is a commune, a kindergarten, for those who have become children again,' continued the doctor. 'It leads the imagination into free air and fields.'

"'A commune—a kindergarten.' I recalled the old New England traditions of tying those whose wills became weak, and nerves unbalanced and irresponsive, to bedposts and staples; of such as rattled their chains on the approach of friends, and whose cries and moans made wakeful nights in lonely houses, until merciful death brought the healing of silence; of suicides who, on account of their disease, were buried in lots apart from the common villages of the dead, and upon whose graves, in old England, if not in New, the ignorant cast stones with looks of terror.

"The high tower of Antwerp cathedral began to rise in the blue air — the 'lace tower,' whose chimes never cease — the crown of glory of the land and sea. We were in the city of Rubens soon, and the next day the doctor met me in the hotel reading-room, and said: 'It is a lovely day; let us go to Gheel.'

"It was a lovely day, and the country was most beautiful along our way. I never saw a more restful, level landscape. There is a vivid, lustrous greenness in the low countries of Belgium and Holland that, except in England, is seldom to be seen elsewhere in the world — a greenness that leads to the semicircle of the embanked sea, where everything gleams, glows, and glistens. Everywhere were blooming gardens, and picturesque peasant women at work in them. At a little distance from the city, giant windmills began to appear, — antique, castle-like structures, with great arms that seemed to be putting to flight some invading foe. On the level landscape, and in the clear, bright air, near and far, they always attracted and delighted the eye.

"The conductor on guard cried out, 'Gheel!' I looked out.

"'Where?' I asked.

"There was spread out before us much the same broad green landscape, bright sunlight, and windmills. We passed from

the car to the platform. In the distance two great churches arose, one of them seemingly in the fields. They looked like cathedrals from which the city had vanished.

"The people who left the cars walked leisurely along the blooming sidewalk of a winding road. A *hôte*, as a host is called, or one who boards the paying patients, came down to the depot to meet some one who was being treated there. A *nourricier*, as a cottager who cares for the poor is called, appeared there also in a peasant frock, and went away alone. There were dog-carts in the road; these cheerful carts, in which three dogs do the work of a horse, are everywhere in Gheel. The peasants peddle their milk and vegetables in these picturesque vehicles, and the patients ride in them.

"I followed the doctor, who followed the people. We came at last to a little town like a place in a German story-book. The houses were old, the streets clean and simple. I saw no hospital — nothing that would remind one of such an institution. But the hospital there is not an institution; it is a place, a village, a hamlet.

"We turned a corner at last, when there came to view a lovely vision. It was an arch formed by a mile or more of linden-trees. The vista was a long cool shadow in the broad fields of the sun. On one side of this avenue was the hospital, a little village of neat brick houses, and on the other side houses of the farm folk, with thatched or straw-covered roofs, with green moss about the chimneys.

"Two patients passed us. One had a cheerful face, the other seemed to be the ghost of a life. The doctor directed my attention to them. 'At Gheel,' he said, 'a patient who is recovering is given the charge of one who is disordered and depressed. The method gives to one responsibility, and to the other hope; it helps both.'

"A little woman came ambling by with a fantastic handkerchief over her head. She seemed to be in the realm of imagination. She stopped and dropped a courtesy.

"'Have you lost your way?' she asked.

"'I never was here before,' I replied.

"'Always keep your way when you have it, and you will never get lost.' She dropped another courtesy, and said: 'Trouble dwells in houses. I live out of doors; it is good for my head. I should be well enough if I had n't any head.'

"More pleasing scenes were coming into view. The peasants were returning from market in dog-carts. The little dogs were perfect pictures of the happiness of helpful industry.

"We entered a small, neat brick house, and there met the superintendent of the commune, who speaks English well.

"'Gheel,' said the superintendent, evidently intending the information for me, 'is an open establishment without walls, without gates, or any instruments of force. The patients who come here are examined, and their cases are studied in the hospital cottages; they are then sent out into the commune, each district of which is under a medical inspector. A large number of these patients think that they are persecuted, but the *nourriciers*, or farm people who board them, have learned such control as to dispel such illusions from their minds. It is not intended that a harsh, censorious word should be spoken at Gheel.'

"'Let us go out into the roads of the commune,' said the doctor. He led the way, and I followed him. We passed by green gardens and vine-shaded doors. We became tired at last, and sat down on a wall under the trees, near which the fans of a giant windmill were circling in the bright clear way.

"Said the doctor, 'It is a new imagi-

nation that helps to heal in mental disease; and the open air, the plain, nourishing food, the religious faith, the sight of restored people, all favorably affect the deranged fancy. The very atmosphere of the place is quieting — the air, the fields, the gardens, and the linden-trees. And perhaps even more helpful than all is the hope that is in all faces.'

"Indeed, all that I saw and heard in this green garden of the sands of the sea had for my ears this simple interpretation — the power of the human heart to make a better imagination is one of the most transforming influences of life. This is the lever of uplifting hands everywhere, and this is one of the secrets of the miracles of beautiful Gheel in the Campine."

REST.

LET us rest ourselves a bit.
Worry? Wave your hand to it,
Kiss your finger-tips and smile
It farewell a little while.
Weary of the weary way
We have come since yesterday,
Let it fret us not, in dread
Of the weary way ahead.

—*James Whitcomb Riley.*

A Woman's Medical College Opened in Russia.

The opening of a medical college for women in St. Petersburg last fall was an event of the greatest importance, not only to those who will be most directly benefited by it, but to all who long for the uplifting of women in all lands. The following details were gathered by the *Literary Digest* from an article in a St. Petersburg paper: —

"The number of those who have passed the severe examinations and secured admission is one hundred and sixty-five, of whom more than half have come from the provincial cities. Forty-seven are the graduates of colleges, the remainder being graduates of special educational institutions and gymnasia. The average age of the students is twenty-four years, the youngest being twenty years of age and the oldest thirty-seven. Ninety per cent. are orthodox Christians of the Greek Church, three per cent. Catholics of the Roman persuasion, three per cent. Lutherans, and three per cent. Jewish. The extraordinary percentage of the Orthodox Russian woman is significant of the strong hold of liberal ideas upon Russia."

The need of women physicians in Russia is thus set forth by one of her leading physicians: —

"The life of the provincial physician is a life of heroism, of sacrifice; and who are so capable of self-abnegation and pioneering as women? In the district where I passed the summer, one physician had daily one hundred and twenty patients in his dispensary. At the rate of five minutes to a patient, ten out of twenty-four hours have to be spent in dispensary service alone. In addition, the physician had under his control a hospital containing twenty-five beds. Twice a week he had to operate — on the average in a dozen cases more or less serious. Finally,

he had a territory of about twenty miles to cover each day in visiting patients too ill to come to the hospital — altogether, an amount of work exceeding that of those condemned to hard labor in the state prisons, and for which the twenty-four hours are scarcely sufficient. Such is the task of the provincial physician employed by the local assembly, and it requires extraordinary love of one's profession and rare devotion to humanity to enable one to cope with the Herculean labors devolving upon him."

Latin Prescriptions.

The use of Latin by the medical profession in writing prescriptions has been often remarked, and to some people has been a cause of annoyance; but there is strong sense in the practise, nevertheless. In the first place Latin is a more concise language than English, and hence less liable to be misunderstood; and being a dead language, it is not subject to change. In the second place, a large part of the drugs used are derived from plants, and bear the same scientific names that the plants bear in botany. A large share of these have no English names at all.

As a means of safety it is evidently useful; for an uneducated person, or any one for that matter, would not think of trusting to memory for a Latin prescription, while he might very naturally do so for an English version of it.

Finally, the Latin language is used by educated men the world over. A Latin prescription can be filled in any country on the face of the earth where there is a drug-store. One firm in New York put up a prescription, and before it reached them again, it had been filled in London, Paris, Berlin, Constantinople, Cairo, and Calcutta. It would have been impossible to get an English prescription filled thus.

Foul Odors.

It seems that the ancients had at least some sense of the injurious nature of foul odors, for in an ancient magical manuscript, according to a London journal, "it is directed that three grains of incense be taken with three fingers and placed under the threshold to keep away evil spirits which might come in the form of offensive odors." But they had the same idea that prevails at the present time in too many homes,— that if an offensive smell is covered up, it is gone, whereas the perfume simply hides the evil without remedying it. The thing to do when a foul odor is perceived, is not to find another odor that is strong enough to overpower it so that it is not apparent to the nostrils, but to find the cause of the bad odor and remove that. Then, indeed, is the evil removed effectually, not to return.

Birds as Surgeons.

Some observations in regard to the treatment of wounds and even fractures by the feathered creation were recently brought before the Physical Society of Geneva by M. Fatio. The case of a snipe had come under his notice, of which he says that with its beak and feathers it made a very creditable dressing, applied plasters to bleeding wounds, and on one occasion secured a broken leg by means of a stout ligature. He once captured a snipe which had on its chest a large dressing of down taken from its own body, and fixed to the wound by the coagulated blood. Twice he brought home a snipe with interwoven feathers strapped over the site of a fracture of one of its legs.

M. Magnin records a case in which a snipe, observed to fly away with a broken leg, was subsequently found to have forced the fragments into a parallel position, and secured them by means of a strong band

of feathers and moss intermingled. The observers were particularly struck with the application of a kind of flat-leafed grass which was wound around the leg spirally and fixed by means of a sort of glue.

Crossing the Legs.

A recent writer earnestly protests against the common habit of crossing the legs at the knees when sitting, claiming that it is at least one cause of cold feet, headache, varicose veins, ulcers, and other troubles due to poor circulation in the lower limbs. The reason of this lies in the fact that just under the knee, where the greatest pressure comes in this position, there are large veins, arteries, and nerves, whose walls are pressed together, thus interfering more or less with the circulation and the sensation. It is said that women are more liable to acquire the habit than men, and it may be added that doubtless one reason for this is the height of ordinary chair seats. Will not some one please invent a chair — a common chair — with an adjustable seat, so that whatever the height of the person, the chair can be made comfortable? For what is more uncomfortable than to be obliged to sit for an hour or more in a straight-backed chair with a seat so high that the toes can barely touch the floor? Small wonder that some relief is sought by crossing the legs. It is noticeable that when low chairs, adapted to the height of the person, are furnished, the legs usually remain straight and the feet firmly on the floor.

When the Barbers were Surgeons.

During the Middle Ages the barbers were persons of importance in Europe. Besides their usual duties of shaving and hair-cutting, they undertook operations in minor surgery, and were noted for their skill as blood-letters, also treating bruises and all wounds that were not considered of a mortal nature. The craft finally gained such strength that they formed themselves into a corporation, which had its coat of arms, and its members the privilege of carrying swords. In the beginning of the fifteenth century these barber surgeons aroused the enmity of the regular surgeons to such a degree that the latter agreed not to visit any patient attended by a barber. As surgery became a science, and medicine grew less empirical, the barbers' craft lost its healing branches, and the animosity between its followers and the surgeons and doctors passed away.

Good Health a Basis of Physical Courage.

Courage springs from three sources — nature, education, and conviction. It is useless to say to a man, "You must be courageous." Every day we see that the example of parents, education, admonitions, do not suffice to implant virtue in children. There is a vital element in education which must be prepared long before, like the soil and the seed before the harvest; parents must bequeath to their children the inheritance of a sound constitution. What is most difficult in education is persistence; what is most efficacious is example; severity is useless. The paramount object of education should be to increase the strength of man, and to foster in him everything which conduces to life. We sometimes imagine that the most important branch of culture is that which we attain through education and study; that the progress of humanity is wholly represented by science, literature, works of art, which are handed down from one generation to another; but in ourselves — our blood — there is a no less important factor. Civilization has remolded our nerve-centers; there is a cul-

ture which heredity transmits to the brain of our children; the supremacy of present generations depends upon the greater power in thinking, the greater skill in acting. The future and the power of a nation do not lie solely in its commerce, or its science of its army, but in the hearts of its citizens, the wombs of its mothers, the courage or cowardice of its sons.

Let us remember that fear is a disease to be cured; the brave may fail sometimes, but the coward fails always.— *Angelo Mosso.*

The Hygienic Value of Singing.

Singing has a distinct value as a hygienic measure as well as a source of pleasure. Dr. Barth, a German physician, says that singers have the soundest lungs because they exercise them more than other people. The average German takes into his lungs 3,200 cubic centimeters of air at a breath, while professional singers take in 4,000 or 5,000. The tenor Gunz was able to fill his lungs at one gasp with air enough to suffice for the whole of Schumann's song, "The Rose, the Lily;" and one of the old Italian sopranists was able to trill up and down the chromatic scale two octaves in one breath.

A singer not only supplies his lungs with more vitalizing oxygen than other persons do, but he subjects the muscles of his breathing apparatus for several hours a day to a course of most beneficial gymnastics.

Daniel Boone's Physique.

In writing of Daniel Boone, Audubon says: —

"The stature and general appearance of this wanderer of the Western forests approached the gigantic. His chest was broad and prominent; his muscular powers displayed themselves in every limb; his countenance gave indication of his great courage, enterprise, and perseverance; and when he spoke, the very motion of his lips brought the impression that whatever he uttered could not be otherwise than strictly true. In retiring for the night he merely took off his hunting shirt and arranged a few folds of blanket on the floor, choosing rather to lie there, as he observed, than on the softest bed."

LING, the famous originator of the Ling system of gymnastics, was a Swedish fencing-master. He had never studied medicine, but noticing the good effects of exercise on his own health and on the development of others, devised a system of educational gymnastics and also a system of medical exercises for invalids. Their aim was to produce graceful carriage, invigorate every part of the body imperfectly developed, and to secure a good control of the muscles by the mind.

The Real Athlete.

Eugene Sandow, the world's strongest man, in an article in the *St. James Gazette*, condemns the modern system of athletic training, and advocates simple rules for normal development. He declares the word "athlete" is misused and abused; that the real athlete is not the man who is a skilful oarsman, a fleet sprinter, or a clever boxer, but "the man who by constant and persistent exercise has raised his entire bodily strength and health to such a state of unity that he is fit to perform any feat requiring muscle and activity, providing he receives a little special tuition in that particular feat. He is, in short, a man who has all his muscles and organs working in perfect harmony."

Not one trained athlete in a thousand

presents a symmetrical muscular development. There is a lump of muscles here, with a notable lack there. The result of this irregular development is that the whole fabric is weak; for, as the well-known aphorism runs, "A chain is no stronger than its weakest link." The well-developed man is the strongest man, and he is equally developed in all his muscles. This is the real athlete.

A Noble Example.

Leland Stanford University has recently taken a stand which should be an example to every university and college in the country. It has expelled over forty students for vulgarity and licentiousness. A short time ago the dean of one of our prominent universities stated that the faculty did not assume to look after the morals of the students, and held its only business to be to afford instruction. But President Jordan, of Leland Stanford, boldly announces that "scholarship and morals go together, and one cannot be looked after without the other." If society is to be reformed by education, the work must begin with the colleges.

A Specific for Burns.

A Parisian doctor has discovered that a solution of one part picric acid to seventy-five parts of water will surely and speedily cure the worst burns and scalds, and recommends that barrels of the solution be kept in foundries, etc., in which workmen could be immersed in case of accident. The pain is instantly removed, sores and blisters prevented, and a cure completed in four or five days.

DEEDS OF ASPIRATION.

WHAT though your lot in life seems poor and small?
What though in great accomplishment you fail?
Let not the thought of this your soul appal,
Nor think your days are spent without avail.

A noble aspiration is a deed
Though unachieved, and He who judges man
Upon his lofty throne will give it heed,
And all will be rewarded as they plan.

—*John Kendrick Bang.*

As we meet and touch each day
The many travelers on our way,
Let every such brief contact be
A glorious, hopeful ministry—
The contact of the soil and seed,
Each giving to the other's need,
Each helping on the other's best,
And blessing each, as well as blest.

—*Susan Coolidge.*

HYGIENIC HINTS.

(Taken from parlor lectures by Dr. J. H. Kellogg.)

THE application of cold water is a gymnastic exercise for the skin just as pulling weights or swinging clubs is an exercise for the muscles.

Professor Liebig, one of the most eminent of German chemists, said, half a century ago, "We cure a disease by drugs only by producing new diseases."

If a child has indigestion and worms, the worms always follow the indigestion. No parasite can live in a perfectly healthy alimentary canal.

A shower-bath in the morning before breakfast is a good appetizer. It stimulates the skin, promotes the production of gastric juice, and creates a demand for food.

The best way to warm cold feet is to dip them into cold water and then rub them vigorously. If they are toasted over a register, they will get cold again, but the cold water and the rubbing will bring a lasting reaction.

If a person drinks too much water, the salivary glands stop making saliva. An ounce of dry food chewed for five minutes will produce two ounces of saliva, while an ounce of water taken into the mouth, and held there and chewed for five minutes, produces almost no saliva.

The cellar of a house should always be especially well ventilated, for a house is like a ventilating shaft; there is always a current of air coming up from the cellar. There should be cellar windows around the top of the cellar, so that the current of air can pass directly out of doors.

Linen underwear is the best for contact with the skin. The advantage of linen is that it absorbs moisture quickly. Wool absorbs moisture, but retains it for a long time. If one wears a woolen undergarment and perspires freely, it becomes moist and uncomfortable and does not dry readily; but if one of linen becomes moist, it will dry in half an hour.

White spots on the finger-nails represent flaws in the nutrition of the body. These flaws will always be found in cases of fever. They are evidences that for some reason nature has not done her duty in building up the nail. The nail is really a record of the life history, just as the hair is. Every hair is irregular in outline. A weak place here, a flaw there, represents the loss of a meal, or a night's sleeplessness. If a man has had a fever, it is written in his hair as well as upon his finger-nails.

The idea that pepsin is an aid to digestion is a delusion. There is hardly one case of indigestion in a hundred in which the trouble arises from a deficiency in pepsin. If anything is lacking, it is almost always gastric juice. If pepsin is habitually kept in the stomach, the stomach will not take the trouble to make it, and may lose its power to do so. An English physiologist took two guinea-pigs of the same weight, and fed them the same amount of food, giving one pepsin and the other none. The one that was fed pepsin gained faster than the other for about six weeks; then he began to lose, and at the end of three months the one that took no pepsin was heavier and stronger than the other. This shows that by the long-continued use of pepsin the stomach becomes debilitated.

Butter is unfit to eat unless it is made from sterilized cream. Every drop of milk contains numerous germs. All kinds of germs get into the milk before it is made into butter. The strainer only takes out the coarser particles of dirt. When the milkman gets down to the last half pint of milk, he throws it away, because it contains too much filth. The black specks that are found in milk are swarming with germs, which will inoculate the milk. In twenty-four hours they multiply so that in a single ounce there are several millions. While the milk is standing for the cream to rise, these germs are gradually coming to the top, because they require air, just as grain, potatoes, and wheat require air. As the cream rises, it entangles the germs so that when the cream is skimmed off, it is filled with germs, and these infect the butter. A bit of butter no larger than the head of a pin contains more germs than you could count in a day. These germs multiply so rapidly that when taken into the stomach, they grow and increase in numbers faster than the body can destroy them.

SOME DAY.

BY M. ASHLEY, M. D.

SOME day all doubt and mystery
Will be made clear,
The threatening clouds which now we see
Will disappear.

Some day what seems punishment,
Or loss, or pain,
Will prove to be God's blessing and
Our everlasting gain.

Some day our weary feet will rest
In sweet content,
And we shall see how we were blest
By what was sent.

In looking back with clearer eyes
O'er life's short span,
We 'll see with wondering, glad surprise
God's perfect plan.

A Chair of Hygiene.

Professor J. B. Mayer, of Christ's College, Cambridge, in a recent address at the vegetarian societies' jubilee, said that although "the medical staff in our universities has been greatly strengthened of late years, the one chair worth all the others put together is still denied, a chair of hygiene. Physicians endeavor to purge the Augean stables of our cities; they enforce cleanliness in house and street; and it is a work worthy of Hercules; but for guidance as to food and the cure of the body we must still resort to ancient oracles."

Kills Himself.

The eminent French philosopher, Flourens, evidently recognized the fact that the human race is deteriorating when he exclaimed, "In the luxurious and perverted mode of life common to this present age, man does not die, but kills himself," the reason for which seems to have been well comprehended by Schopenhauer, who declared, "Man no longer comprehends the language of nature: it has become too simple for him." Another eminent German, Goethe, recognized this same fact in the declaration, "The being who lives unnaturally must meet early destruction."

EVIL-SPEAKING is like a freezing wind. It seals up the sparkling waters and tender emotions of the soul; it binds up the hearts of men in uncharitableness and bitterness of spirit as the earth is bound in the grip of winter.

BATTLE CREEK SANITARIUM QUESTION BOX.

BY J. H. KELLOGG, M. D.

1. WOULD you advise the use of walnuts or butternuts as food?

Ans.— These are not the choicest nuts. They are clothed in a tough, indigestible, adhesive skin, somewhat difficult to get rid of. They have also an acrid oil, which gives rise to irritation of the skin, and a rising of food after their use. They are wholesome only for people with sound digestion. The best nuts are, first, chestnuts, then almonds. Most other nuts require some sort of treatment before they can be digested. Peanuts are ordinarily hard to digest, but when subjected to the process of removing the essential oil so as to get rid of this irritating element, they are very easily digested.

2. Do we wear too great a weight of clothing?

Ans.— Unquestionably, in a great many cases, people weary themselves by carrying about too great a weight of clothing, especially heavy skirts. I am not sure that men are so much at fault as women, and yet men are somewhat at fault because they imagine that the best way to secure warmth is by the addition of thick, heavy overgarments which fit the body closely and so do not allow a circulation of air. Garments so adjusted as not to allow a circulation of air are objectionable for warmth, for the heat must be retained. But by close-fitting garments the heat is conducted from the body. Heat is retained for some time when there is a circulation of air beneath the clothing. I have known delicate ladies who were trying to carry about dressmakers' advertisements which weighed from fifteen to twenty pounds. They reminded me of the men who carry great signs on their backs — one placard in front and one behind. I think our American women are doing the same thing,— advertising milliners and dressmakers, and really leading a laborious life.

3. How often should garments next the skin be changed?

Ans.— It is an excellent plan to change every day, alternating with two suits a week. By this means the exposure of the garments to the air purifies them. When the garment accumulates effete matter from the skin, it loses its value as a non-conducting agent, hence it is not so warm as before. Many people who suffer from cold feet discover that clean stockings are warmer than those that have been worn a few hours.

4. Do hose need changing more frequently than other garments?

Ans.— Yes, it is better to change the stockings every day, as the feet secrete freely, and are generally encased in almost air-tight coverings. Leather is not very porous, so the secretion is retained, and the stockings are more soiled than the other garments.

5. Do you claim ever to have cured a dilated stomach?

Ans.— No, I have never cured anything in my life, except a corn — and I am not sure that I cured that, because corns come back again. But I have seen dilated stomachs get well under proper treatment. People with dilated stomachs have been cured. I never did it, but nature can do it. I have seen a dilated stomach gradually come back to its proper place under the right treatment. A prolapsed stomach is more easily cured than a dilated stomach, but the moder-

ately dilated stomach can be cured. The prolapsed stomach can be cured in a majority of cases unless the patient has waited too long. After one has reached the age of sixty or seventy years, amelioration is all that can be expected.

6. How can one prepare sterilized butter, cream, or milk?

Ans.— Simply by boiling it. Sterilized butter is made from sterilized cream. Cream is sterilized by boiling. It must be boiled from fifteen to twenty minutes. It is possible to sterilize milk by heating it to a temperature of 160° each day for three days in succession. Milk will usually keep almost indefinitely if cooked in this manner.

7. What do you think of pure maple-sirup, and molasses prepared from sugar-cane? What about boiled honey?

Ans.— These are not the best kind of sweet. The best kind of sweet is fruit sugar. Honey is preferable to sugar-cane because it has little sugar in it. Half of it is levulose and the other half is glucose. It ferments easily because it contains dirt. Bees do not always take pains to alight on the nicest spots, and I suppose they do not always wipe their feet before going into the hive and stepping upon the honey. But honey is more digestible than any cane-sugar, other things being equal. It should, however, first be sterilized by heating to the temperature of boiling water.

8. Is there such a treatment as osteopathy? and what is its value?

Ans.— There is a treatment called osteopathy. "Osteopathy" is not a scientific name. If it means anything at all, it means a disease of the bone. Homeopathy means a certain kind of medical treatment, and allopathy means another method; but osteopathy simply means a sick bone — a pathological bone. However, the term is applied to a method of treatment. The theory of osteopathy is that the seat of disease is in the joints; that if there is anything the matter with a man, he must have something out of joint, and his diseases are to be removed by setting his joints, or by packing the tendons back in place, or by rubbing some of the little nodules of the bones. The rubbing is good, and so many people are benefited by it, notwithstanding the philosophy of the remedy is false. The old-fashioned magnetic doctors helped people by rubbing them — not because there was any magnetism about it, but because the rubbing was good. Osteopathy originated in what is known as the "Sweet family," living in Rhode Island. These brothers all claimed to be doctors, because they descended from a man who was a seventh son of a seventh son, such a person being considered a doctor by heredity. It was supposed that by some intuitive or congenital peculiarity he became a "born doctor," and did not need an education. These Sweets practised bone-setting. Osteopathy, according to its own history, is simply a development of the old bone-setting theory of the Sweets.

9. Do you consider one climate better than another for a person suffering from stomach trouble?

Ans.— The best thing for such a person is to have a good climate for the stomach at the dinner table. It is the cyclones and tornadoes and hurricanes in connection with the dinner table that form a bad climate for any stomach. I have heard people complain of the bilious climate of the South; that they could not live there on account of the bilious climate. The biliousness is in the man, not the climate. It means simply that there are germs in the stomach, and this means bad food at the table — beefsteak, mutton chops, chow-chow, and other unwholesome things.

THE EVIL EFFECTS OF ALCOHOL.

BY J. H. KELLOGG, M. D.

(Continued.)

13. A DRUNKARD'S LIVER. — The appearance of a drunkard's liver is characteristic. "Hob-nailed liver" is another name for the diseased organ as found in spirit drinkers. It is shrunken, hard, and almost totally useless, benumbed alike to pain and to proper sensibility. Externally it looks like the hob-nailed sole of an English cartman's shoe, from which resemblance it received its name. This kind of liver is found in those who have freely indulged in drink for several years. The livers of more moderate drinkers are found filled with fat.

These derangements of the liver give rise to numerous other disturbances, of which abdominal dropsy is one common form. Diabetes, a very fatal malady, especially in spirit drinkers, is a peculiar disease which is generally caused by some of these derangements of the liver. Fatty liver, in which the organ sometimes becomes enormously enlarged and changed to fat, and "nutmeg degeneration," in which it comes to resemble the smooth surface of a half-grated nutmeg, are also among the common effects of alcohol upon habitual users of the poison.

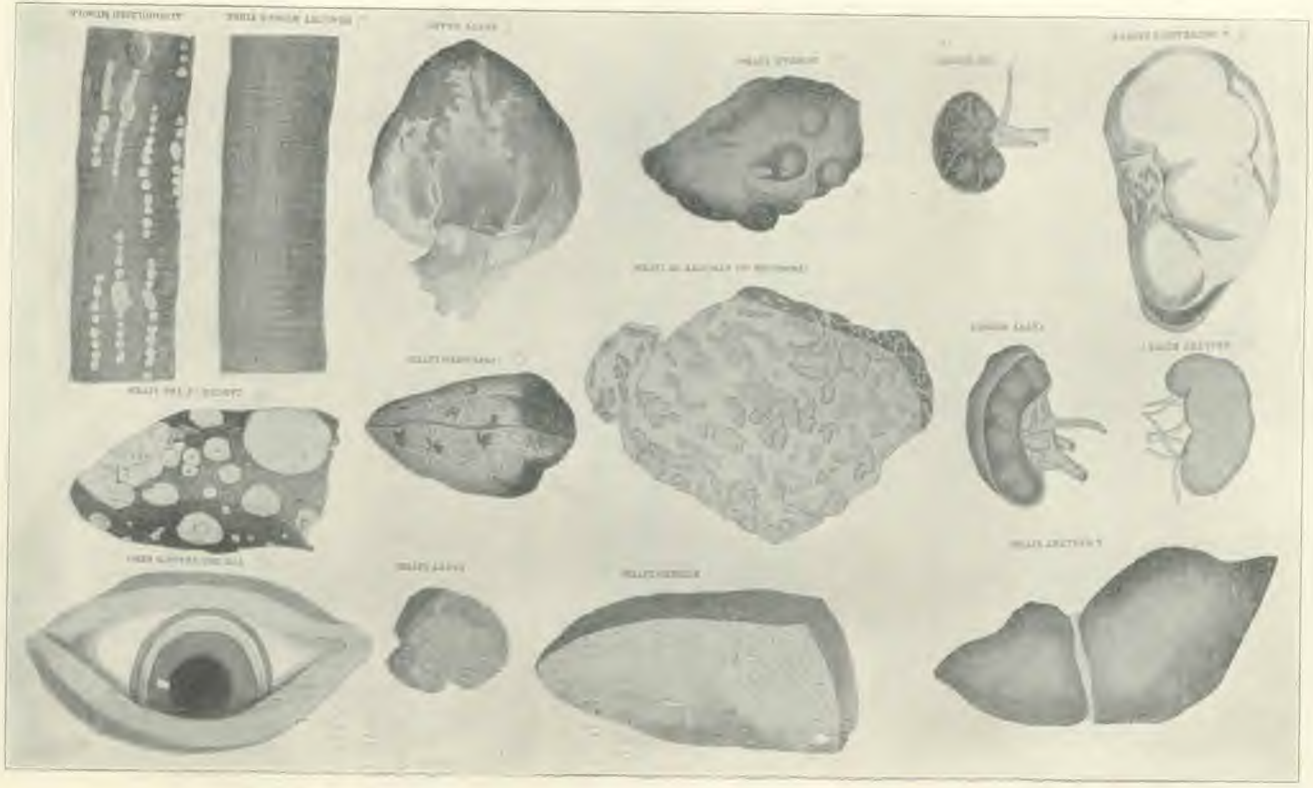
14. ALCOHOLIC CONSUMPTION. — Sir B. W. Richardson pointed out the fact that alcohol, instead of preventing, actually produces consumption, and that of a most fatal type. He stated that a person suffering from alcoholic phthisis shows no improvement under treatment. The disease steadily, surely, and usually quite rapidly, progresses to a fatal termination.

15. ALCOHOL VS. STRENGTH. — The laborer, the traveler, and the soldier use alcohol under the delusion that it produces strength. When fatigued, the laborer takes a glass of grog and feels better, or thinks he does. He imagines himself stronger. His increased strength, however, is wholly a matter of imagination.

The use of alcohol makes a man *feel* stronger — makes him believe that he can do more work, endure more fatigue and hardship, and withstand a greater degree of cold than he could without it; but when an actual trial is made, it soon becomes apparent that the ability is lacking. Numerous experiments have shown that alcohol decreases muscular strength. Says Dr. Brunton, "The smallest quantity takes somewhat from the strength of the muscles." Says Dr. Edmunds, of London, "A stimulant is that which gets strength out of a man."

Some years ago the writer made a series of experiments for the purpose of determining the influence of alcohol upon the muscular strength. The combined strength of all the different groups of muscles in the body was found, in the case of a healthy young man, to be 4,881 pounds. The young man was then given two ounces of brandy, and in two hours the test was repeated, when his strength was found to be only 3,385, a loss of more than one third. A notable diminution in strength was still present ten hours after the administration of the brandy.

16. ALCOHOL VS. ANIMAL HEAT. — The sensation of warmth produced by taking a glass of wine or brandy is delusive. The circulation is unbalanced, and for a few moments there is a seeming increase of heat; but the thermometer shows that the temperature is really lessened. Dr. Parkes, the eminent English sanitarian, says, "All observers condemn the use of spirits, and even of wine or beer, as a



preventive against cold." The names of Dr. King, Dr. Kane, Captain Kennedy, and Dr. Hayes may also be cited as holding to this opinion. In the last expedition in search of Sir John Franklin, the whole crew were teetotalers.

Professor Miller states that the Russian military authorities "interdict its use absolutely in the army *when troops are about to move under extreme cold*, part of the duty of the corporals being to smell carefully the breath of each man on the morning parade, and to turn back from the march those who have indulged in spirits, it having been found that such men are peculiarly subject to be frost bitten and otherwise injured."

Dr. Carpenter is authority for the statement that the Hudson's Bay Company have for many years entirely excluded spirits from the fur countries to the north, over which they have exclusive control, "to the great improvement," as Sir John Richardson states, "of the health and morals of their Canadian servants and of the Indian tribes."

17. ALCOHOL VS. LONGEVITY.— It is very easy to prove that the influence of alcohol, as of every other poison, is to shorten life. Dr. Willard Parker, of New York, shows from statistics that for every ten temperate persons who die between the ages of twenty-one and thirty, fifty-one intemperate persons die. Thus it appears that the mortality of liquor users is five hundred per cent. greater than that of temperate persons. These statements were based on the tables used by life insurance companies.

18. ALCOHOL NOT A STIMULANT.— The popular idea that alcohol is a stimulant is doubtless the chief occasion for its use as a remedy by physicians. But modern researches have shown that alcohol cannot in any proper sense be regarded as a stimulant. It lessens vital activity in all diseases. The giving of alcohol to weak and fainting persons is a most pernicious and injurious practise, as the drug serves to still further depress and weaken the vital forces. The feeling of increased strength imparted by alcohol is deceptive, as we have elsewhere shown. This is true in relation to both mental and muscular effect.

Notwithstanding the constant protest of both moderate and immoderate drinkers, that alcohol does not harm them, that it is a necessary stimulus, a preventive of fevers, colds, consumption, etc., and the assertion of certain scientists that it is a conservative agent, preventing waste and so prolonging life, the distinguished English actuary, Mr. Nelson, has shown from statistical data which cannot be controverted, that while the temperate man has at twenty years of age an average chance of living forty-four and one-fifth years, the drinking man has a prospect of only fifteen and one-half years of life. At thirty years of age the temperate man may expect thirty-six and one-half years more of life, while the dram-drinker will be pretty certain to die in less than fourteen years.

19. EFFECTS OF MODERATE DRINKING. — It is quite useless for moderate drinkers to suppose that by using alcohol in small quantities they will escape its evil effects. It is a poison in all doses. As Dr. Smith says, "In whatever dose, the direction of the action of the alcohol must be the same."

Dr. Chambers says, "The action of frequent divided drams is to produce the greatest amount of harm of which alcohol is capable, with the least amount of good."

The effect of the constant action of a small quantity of the poison is far greater than that of excessive but only occasional quantities. Hence the habitual moderate drinker, even of wine, beer, or hard cider, is much more subject to chronic nervous

disorders and degenerations of various sorts, than the man who goes on a spree once in two or three months.

20. Alcoholic Heredity.— Dr. S. G. Howe attributed one half of the cases of idiocy in the State of Massachusetts to intemperance, and he is sustained in his opinion by the most reliable authorities. Dr. Howe states that there were seven idiots in one family where both parents were drunkards. One half the idiots in England are of drunken parentage, and the same is true in Sweden, and probably in most European countries. It is said that in St. Petersburg most of the idiots come of drunken parents.

Proportion of Alcohol in Various Liquors.— Although alcohol is made from fruits, grains, and other substances used as food, it is not naturally found in foods, but is the result of processes which change the wholesome elements of the food into a harmful and poisonous substance. It is also evident that the essential difference between the various kinds of alcoholic drinks is merely in the proportion of alcohol which they contain. Thus, brandy, whisky, gin, and rum are from two fifths to three fifths alcohol; wine, one tenth to one fifth; cider, one twentieth to one tenth; beer and ale, one twenty-fifth to one sixteenth; small beer, two or three parts in a hundred.

From the above it will be seen that cider, which is by many hardly considered an intoxicating liquor, contains more alcohol than beer, and as much as some kinds of wine. Apple juice, like the juice of the grape, when first expressed from the fruit, is entirely wholesome; but within a few hours fermentation is set up by the germs which the liquid receives from the air and from the fruit itself. Alcohol is thus formed, the quantity increasing until all the sugar present has been converted into alcohol and carbonic acid gas.

Hard cider is a very intoxicating beverage, and produces a very bad form of intoxication. What is called new or sweet cider often contains a considerable amount of alcohol. If the amount is not sufficient to produce intoxication, it may be sufficient to produce an appetite for alcoholic beverages, which will probably lead to the use of stronger liquors. Many persons have become confirmed drunkards in this way. It is quite difficult to tell the exact moment at which cider changes from a harmless to a dangerous beverage. When the liquid effervesces, as it is certain to do after it is a few hours old, it invariably contains alcohol.

Moderate Drinking.— Many persons argue that the injury done by alcohol is due only to its excessive use. There are two facts which show the great danger of moderate drinking: 1. The use of alcohol in small quantities, often — we may perhaps say usually — leads to its use in larger quantities, in consequence of the formation of the alcohol appetite. After small amounts of alcohol have been used for a time, larger, stronger, and more frequent drinks must be taken to produce the same effects, and thus the moderate drinker becomes, if not a sot, a hard drinker, taking quantities of alcoholic liquor which at first he would have considered very dangerous. 2. Many of the worst effects of the use of alcohol are to be seen in moderate drinkers. The destructive changes by which the normal structures of the vital organs are so changed as to disable them, thus causing serious and incurable maladies, are frequently found in persons who consider themselves very temperate, and who have never been intoxicated in their lives.

Said the eminent Sir Henry Thompson, a famous London surgeon, "I have no hesitation in attributing a very large proportion of some of the most painful and dangerous maladies which come under

my notice, as well as those which every medical man has to treat, to the ordinary daily use of fermented drinks, taken in the quantity which is commonly deemed moderate."

Careful records have been kept for many years by life insurance companies, both in this country and in England, statistics from which show that human life is greatly shortened by the habitual use of alcohol, even in so-called "moderation."

"*Bitters.*"— Many persons are unsuspectingly led into habits of intemperance by the use of various kinds of patent medicines advertised as "bitters," "tonics," etc. Few, if any, of these mixtures are free from alcohol. Some that are said to be free from alcohol, and on that account are called "temperance bitters," actually contain more alcohol than some which make no such claim. Some of the most popular of these nostrums contain as much alcohol as the strongest liquors. "Jamaica ginger" contains so much alcohol that it will burn in a spirit lamp. The habitual use of these compounds is quite as harmful as the use of alcohol in any other form, and sometimes even more injurious on account of the presence of other harmful drugs.

(To be continued.)

Alcohol for the Insane.

Dr. Richard Maurice Bucke, in a recent report of the asylum for the insane in London, Canada, makes the following statements concerning the use of alcohol in that institution:—

"As we have given up the use of alcohol, we have needed and used less opium and chloral; and as we have discontinued the use of alcohol, opium, and chloral, we have needed and used less seclusion and restraint. I have during the year just closed carefully watched the effect of the alcohol given; and the progress of cases where in former years it would have been given, and I am morally certain that the alcohol used during the last year did no good. With humiliation I am forced to admit that in the recent past my noble profession has been to an alarming extent, and is still too much so, guilty of producing many drunkards in the land directly or indirectly by the reckless and wholesale manner in which so many of its members have prescribed alcoholic stimulants in their daily practise for all the aches and pains, agues and dances, coughs and colds, inflammations and consumption, fevers and chills, at the hour of birth, and at the time of death, and all intermediate points of life, to induce sleep and to promote wakefulness, and for all the real or imaginary ills that come under the eyes of our great Æsculapian descendants."

Death-Rate of Innkeepers.

An important list of mortality statistics has just been issued by the registrar-general of Great Britain, in which it appears that innkeepers furnish the highest rate of mortality, and engineers and ministers the lowest. The greater share of the deaths among innkeepers are reported as due to alcoholism, while among ministers and engineers only two deaths a year, from each class, were from this cause. This is a particularly good showing for engineers, and one highly gratifying to the public, whose lives are so often in the hands of this class of men.

THERE is a society in France which wages continual war against tobacco under this motto: "Tobacco destroys the body, attacks the intellect, and besots the nations."

COMPLICATIONS OF WHOOPING-COUGH.

BY KATE LINDSAY, M. D.

THE most common and fatal complication in whooping-cough is capillary bronchitis. The infant suffers much more severely from a cold on the lungs than an adult, for its bronchial tubes are not only very small, but the walls thin, and the muscles weak and unable to contract with sufficient force to expel the catarrhal secretions which accumulate on the lining membranes. The tubes thus become filled up so that very little air can reach the air-cells of the lungs, and they soon collapse. Neither can the respired air escape, and in consequence the blood is filled with carbonic acid gas, giving to the skin a dusky hue. Unless this condition can be immediately relieved, death speedily ensues.

The whooping-cough germs cause a great deal of irritation and catarrh in the entire respiratory tract, this inflammation extending even into the smaller bronchial tubes in severe cases, or when the patient takes cold during the course of an attack of whooping-cough. This difficulty is greatly aggravated where children are crowded together in close, ill-ventilated rooms, as in tenement-houses, where they are compelled to breathe over and over again the same air, already filled with the bodily wastes and the germs of disease. Naturally the younger children suffer most from this reinfection, because they are in the poisoned air all the time, while the older children run out and in doors during the day and have a change of air and surroundings. It is on this account doubtless that girls usually have the disease more severely than boys.

As it is much easier to treat complications by preventing them than to deal with them after they are fully developed, and as the very treatment which will prevent complications is that which will be most effectual after they are developed, we will consider the prevention and treatment of complications at the same time.

It is most important in whooping-cough that the patient have pure air, of the proper temperature and moisture. It is never a safe thing to put a number of children suffering from this disease to sleep, or to allow them to be long together, in one room; and it is also very unwise to put a child under three years old, who cannot change his surroundings even during the day, to sleep with older brothers and sisters who have the whooping-cough, although they may have it in a milder form than himself. Change of location has often been advised with good results to the patient. No doubt much of the favorable effect of the change comes from the fact that the patient breathes cleaner air than when at home. If there is no other room to which the patient can be removed, while the one usually used is aired, a little tent may be made around the child with quilts or blankets, and the doors and windows opened for a short time two or three times each day, so as to clear the air of germs. All the bedding and clothing should be taken out and aired daily. As much of the air contamination comes from dried sputum and vomited matter and other excretions allowed to dry on the clothing, bedding, carpets, or floors, care should be observed to clean and disinfect everything soiled by discharges before it dries. It will help to make the air fresher and cleaner to wave a damp towel, wet with some disinfecting solution, in the room every few hours. A kettle of hot water should also be kept on the stove or coils, as the steam will keep the air moist, and

lessen the irritation and dryness of the air-passages. Moist, warm, fresh air tends to lessen the disposition to paroxysms of coughing, and thus prevents spasmodic closure of the bronchial tubes.

Steam inhalations of water vapor or menthol, benzoin, eucalyptus, or similar drugs often give relief in these cases. Being of an antiseptic nature, they hinder the germs from developing so rapidly, thus preventing irritation, and diminishing the frequency and severity of the paroxysms of coughing, which are always more or less dangerous for a very young or feeble child. Convulsions often occur after a long fit of coughing in the case of infants and nervous children. These sometimes prove fatal from the severe congestion of the brain and spinal nerve-centers, resulting in the rupture of a blood-vessel of the brain or spinal cord. When the coughing fits are very frequent and severe, there is also danger of overdistention or even rupture of the lung cells, resulting in shortness of breath and bronchial asthma in after life. This furnishes another reason for the importance of lessening the length and severity of the paroxysms. They are also a severe strain on the heart, and may cause much damage to this organ, especially if it be already weak from rheumatism or some other organic disease.

In case of strangulation from spasmodic closure of the glottis, relief can usually be afforded by sprinkling the face with cold water and drawing the tongue forward, so as to cause the little patient to catch its breath. Heat and cold applied quickly to the upper spine and chest, using first the hot fomentation for a minute or two and then the cold, or ice if possible, for half a minute to a minute, will tend to cause the spasm to relax, and relieve the nerve-centers of congestion. Massage of the neck under and below the angles of the lower jaw, and down and along the inner border of the large muscle which turns the head from one side to the other, will also cause the paroxysms to relax and expectoration to be much easier.

If there is a high fever, cool sponging, with hot fomentations to the chest, followed by cool compresses, gives much relief, or a moist, tepid pack may be applied to the chest without the fomentation. Take cotton wool an inch or more in thickness and of a size sufficient to completely cover the chest, dip it in cool or tepid water, and spread evenly over the chest both back and front, letting it come up well around the throat, cover with oiled silk or muslin, oilcloth, or some other waterproof covering; then add another inch of dry cotton, and bind closely to the body with a flannel bandage fastened with safety-pins.

When there is evidence of indigestion, an emetic of warm water, or warm water with a teaspoonful of tincture of ipecac in it, will often give relief by unloading the stomach of spoiled food and the morbid discharges swallowed. When the bowels are inactive, an enema or a dose of castor-oil will often afford great relief to the unfavorable symptoms. The patient who a few hours before had a high fever and was panting for breath, will often after such treatment fall asleep quietly and breathe easily, the temperature meanwhile falling two or three degrees. The writer has seen a child who seemed almost in the death throes revive and recover after a thorough freeing of the stomach and bowels from their load of fermenting matter in a case of acute catarrhal pneumonia during whooping-cough.

Catarrh of the stomach and bowels sometimes accompanies whooping-cough, the food being passed through the alimentary canal in the form of hard spoiled curds and masses of other undigested

food. In such cases the contents of the stomach are likely to be frequently vomited up; and unless the mucous surfaces of the bowels and stomach can be gotten into a more healthy condition, there is danger that death may occur from starvation. The first thing is to free the alimentary canal of spoiled food and morbid secretions by a mild purge, as a dose of castor-oil or frequent enemata, and let the stomach rest for a day, or at least twelve hours, until the irritated surfaces have a chance to heal over, and the diseased glands to recover sufficiently to secrete healthy digestive fluids. Plenty of water may be given, as the fever uses up the fluids of the body rapidly, thus creating a fierce thirst. When the stomach and bowels have had a chance to rest a short time, some simple food may be given, a time being chosen when there is the least likelihood of a coughing fit. This will usually be just after a paroxysm has subsided. It must be borne in mind, however, that any overloading of the stomach will cause distention from gas, which will often provoke a spasm of coughing, resulting in the rejection of the food which has been taken and perhaps a convulsion in the case of a nervous, sensitive child. A hot bag or fomentation placed to the stomach for half an hour after taking food will sometimes enable the patient to retain and digest the meal. Be sure that the child is not fretted, disturbed, or excited in any way at this time. Talking, laughing, and crying all tend to provoke coughing, and should be avoided as far as possible.

The diet should be very simple, — milk and lime-water, well-cooked gruels, and some mild fruit juice, the latter being given at a meal by itself, and not with other food. It will often stimulate an appetite for breakfast to give the juice of a sweet orange or some mild fruit juice about half an hour before the regular meal. The food should be of such a quantity and of such a form that it can be digested easily by the little patient. In the case of a child under a year old, milk in some form should constitute a good part of the bill of fare. In some cases it may be peptonized, in others it may seem to have a better effect if given diluted with from one fourth to one eighth of lime-water. Sometimes milk in any form disagrees with the patient; in such cases, malted gruel, bromose, and some of the infant foods may be tried. Gruels, porridges, rice, and other grain preparations will often be well received if thoroughly cooked for several hours. Soft-cooked eggs and well-toasted bread softened with milk or cream are usually well relished and digested by older children. Meals should be given at regular intervals according to the patient's age, and no eating between meals allowed. The number of meals in a day will depend upon how much the patient can take at once. Usually it will not be necessary to feed young infants oftener than once in two hours, and older children once in three to five hours. Serious injury is often done to children too young to talk by filling the stomach with food when they are only crying from thirst, which water alone will satisfy.

Sometimes a child seems greatly inclined to sleep after a coughing fit. This is a grave symptom when the stupor is very profound, especially if there is much fever, and indicates congestion of the nerve-centers. It may sometimes be relieved by an enema; if this does not prove sufficient, administer hot and cold sponging or a hot and cold spray to the spine, use cool compresses to the head, and soak the feet in hot water.

The most common after-effect of whooping-cough is the result of a predisposition to consumption. This is most likely to occur in small children, or those

who are delicate and badly nourished or have had pneumonia or bronchitis during the whooping-cough attack. It is an important matter to keep the patient from taking cold. A full flannel undersuit should be worn over the entire body, either next the skin or over a suit of thin gauze. A cold spray every morning, if the patient is strong enough to react from it, or a cool sponge, or even a dry hand rub with the body exposed to the air, will help to harden the surface so that it will endure changes of temperature and react from them quickly.

If a whooping-cough patient is not fairly well started toward recovery six weeks after the onset of the disease, or is still losing flesh, and has fever with a chill or even slightly chilly feelings in the morning, it is sure evidence that some grave complication is being developed. But in such a case do not waste any time in trying some vaunted "tonic" or much-advertised "bitters." Set to work to improve the nutrition of the patient by a carefully selected diet, and carry out the measures which have been recommended for the palliation of the unfavorable symptoms.

There is never a more effective time for the application of the traditional ounce of prevention than during an attack of whooping-cough, measles, scarlet fever, or other acute diseases to which children are subject. Though not in themselves necessarily dangerous, the complications arising from them through lack of proper care and precaution send many children to untimely graves, and leave hundreds of others with weaknesses destined to afflict them through their entire life.

Urinary Incontinence in Children.

To cure urinary incontinence, or "wetting the bed," in a child, give him a simple, non-flesh dietary, avoiding mustard, pepper, candies, and all other indigestible food. Let him eat twice a day, and nothing later than four o'clock in the afternoon. If the child is young, he may eat three times, but should take nothing later than four or five o'clock. Let him drink water freely in the forenoon, but avoid water-drinking after four P. M. Give the child a cool sponge bath, with vigorous rubbing, every morning. Have him take plenty of out-of-door exercise. He should get healthfully fatigued every day. See that the bowels are kept open, employing an enema if necessary in the morning until the bowels have been regulated by proper diet. The free use of fruit, granose, and nuts, especially malted nuts, will be found advantageous. A sitz bath at 85° F., for twenty minutes before retiring, should be given every night at bedtime. Lastly, raise the foot of the bed one foot, so that the child will sleep upon an inclined plane with the head downward. The use of drugs is rarely necessary.

Ingrowing Toe-Nails.

Toe-nails should never be cut rounding at the corners, but should be allowed to grow square. Ingrowing toe-nail has been cured by allowing the nail, with the sliver which causes the suffering, to grow out beyond the end of the toe, where it can be cut off squarely and kept so.

Sand as an Extinguisher.

Water will not extinguish burning kerosene oil, but dry sand will; and it is a wise precaution to keep a box of it in some convenient place to be used in an emergency. If this is not at hand, the flame should be smothered by throwing some heavy rug, woolen substance, or a damp towel over it.

Seasonable Menus

BREAKFAST

Fresh Fruit
Toasted Granose Biscuit with
Sterilized Nut Butter
Jellied Oatmeal with Baked Apple Sauce and
Toasted Whole-Wheat Wafers
Date Sandwiches

DINNER

Sweet Potato Soup
Nuttose Hash
Mashed Peas with Tomato Sauce
Dry Granola with Cream or Almond Cream
Whole-Wheat Puffs
Stewed Fruit
Nuts

BREAKFAST

Baked Apples
Macaroni with Kornlet
Corn Puffs
Vegetable Oyster
Toast

DINNER

Tomato Soup
Stewed Parsnips Baked Beans
Crystal Wheat with Cream
Cocoanut Crisps with Stewed Prunes
Farina Pudding

RECIPES.

Jellied Oatmeal. — Cook oatmeal or rolled oats with an additional cup or cup and a half of water, and when done, turn into cups and mold.

Baked Apple Sauce. — Pare, core, and quarter apples to fill an earthen crock or deep pudding-dish, taking care to use apples of the same degree of hardness, and pieces of the same size. For two quarts of fruit thus prepared, add a cup of water, and if the apples are sour, a cup of sugar. Cover closely, and bake in a moderate oven several hours, or until of a dark red color.

Sweet Potato Soup. — To a pint of cold mashed sweet potato add a pint and a half of strained stewed tomato, rub together through a colander, add salt to season, and half a cup of cream. Reheat and serve.

Macaroni with Kornlet. — Break macaroni into inch lengths and cook in boiling milk and water. Prepare the kornlet by adding to it an equal quantity of rich milk or thin cream, and thickening with a little flour, a tablespoonful to the pint. When done, drain the macaroni, and add the kornlet in the proportion of a pint of kornlet mixture to one and one-half cups of macaroni. Mix well, turn into an earthen dish, and brown in a moderate oven. Nut cream may be substituted for cream in this recipe; and for breakfast the macaroni should be cooked the day before. Green corn pulp may be used in place of the kornlet.

Vegetable Oyster Toast. — Cook a quart of clean, sliced vegetable oysters in a quart of water until very tender; add a pint and a half of rich milk, salt to taste, and thicken the whole with two tablespoonfuls of flour rubbed to a smooth paste with a little milk. Let it boil for a few minutes, and serve as a dressing on slices of well-browned toast previously moistened with hot water or cream.

THE QUESTION OF PUNISHMENT.

BY MRS. E. E. KELLOGG.

THERE are few measures employed in the training of children so universally relied upon, yet put into practise with so little thought and consideration, as punishment for wrong-doing. Punishment has been defined as "any pain, suffering, or loss inflicted on a child because of crime or offense." This definition, with special emphasis upon the word *any*, constitutes the idea of punishment prevalent with too many parents. An arbitrary punishment of some sort is commonly employed, and often the same punishment serves as a corrective measure for a dozen different misdemeanors. A child tells a falsehood: he is shut in a dark closet as a punishment; at another time he is greedy at the table, or perhaps he pinches his little sister; again, he is disorderly or slow about his work — for all of these offenses he serves a sentence in the closet.

Now how is he to tell which of these misdeeds is the greater, since the same penalty has been meted out to him for all? For falsehood, for bad manners, for carelessness, and for unkindness, he has received the same punishment. If he is deterred from again transgressing, it will be through fear of the punishment, and not through fear of committing sin. It is also probable that he will soon perceive that there exists no relation between your punishment and his deed, and come to look upon punishment as a sort of torture which your superior position permits you to inflict upon him whenever he fails to meet your approval. And if he also notes what is so apt to be the case, that the lightness or the severity of the punishment is dependent upon the mood of his parent, there will be likely to spring up in his heart feelings of bitterness and rebellion toward him.

The true office of punishment is not merely that of an atonement for the wrong committed, but should also serve as a remedial measure to reform the offender, and should be so ordered as to make plain to the child the nature of his offense, and to create in him a desire to amend his ways. The end sought by the parent in the punishment of a child should be the development and establishment of self-government in the child's character. Punishment that fails in this respect is of little value. To the child sufficiently mature to understand, the object and necessity of punishment should be explained. He may be told that he needs to be punished when he has done wrong, to make him remember not to do the same thing again. Tell him how, for fifteen centuries, God's chosen people, whom he loved to call his children, were under his special training, and that the story of those years, as written in God's word, tells us that when they sinned, he corrected them. "The very greatness of God's love for them made it impossible for him to allow them to go on in sin unpunished."

Show the child that you feel sorry to have to punish him, but that it would be a terrible thing to allow wrong-doing to go on unpunished until it came to be so nearly second nature that he could not stop doing wrong. Tell him that parents have thus sometimes failed to punish their children, and these children have grown up wicked and lawless in consequence, but that no parent who really and truly loves his child after the manner that God loves his children, would do that way.

Tell him the story of Eli's neglect in the training of his sons, and of God's displeasure. Teach him and help him to understand the eleventh verse of the twelfth chapter of Hebrews, "Now no chastening for the present seemeth to be joyous, but grievous: nevertheless afterward it yieldeth the peaceable fruit of righteousness unto them which are exercised thereby." Let the child thus see that punishment is a remedial measure for his own good; get him to feel the necessity and importance of it, and you have planted the seeds of self-government. And if he learns, as he may very early in life, from his mother's eyes and the tone of her voice, that love, and not irritation, is the motive which actuates her in the administration of punishment; if he feels that she is in close sympathy with him, that she too suffers because of his wrongdoing, then, although the discipline may seem hard, he will feel the justness of it, and be willing to accept and profit by it.

There are some children who learn to appreciate the value of punishment to that extent that when their conscience accuses them of wrong, they sometimes ask to be punished, or punish themselves. A little girl of eight years who had been taught the value of punishment, was given permission to attend a picnic with her playmates and teacher. On the morning before the picnic, which was to be held in the afternoon, she treated some of these playmates quite unkindly. Being afterward led to feel that she had done very wrong, she herself suggested that she should forego the pleasures of the picnic as a punishment. She was allowed to follow the dictates of her conscience in the matter, and remained at home from a pleasure party she had been anticipating for weeks. The tears rolled down her cheeks as she stood at the window watching her little playmates board the cars for the ride to the picnic grounds, and her mother and teacher suffered so much in sympathy they would fain have substituted a lighter penalty for the offense, had they not felt the principle of self-punishment was one that ought to be encouraged. The child bravely took up such pleasures as were available, and tried to make the hours at home seem less lonely, but that she deeply felt her deprivation was often evinced by the tears she strove to keep back as the afternoon wore away. At the bedtime hour she told her mother that it was very hard to endure such a punishment, but that she was very glad she chose it, as she believed it would keep her from again being unkind to her playmates.

The spirit in which a punishment is received largely determines its benefit upon the offender, and this is quite as frequently dependent upon the parent as the child. Too often it is a feeling of anger or retaliation which moves the parent to action. Children are frequently so vexing that the irritated parent jumps to punishment without thought of the consequences. Says a well-known writer upon this point: "There are strong provocations to anger in many a child's conduct, especially to a parent who is of an intense nature, with an inclination to quickness of temper. Perhaps a child is disobedient at a point where he has been repeatedly told of his duty; he is quarrelsome or insolent, he gives way to a fit of ungovernable rage, he clutches his hands into his mother's hair, he meets a proffered kiss with a slap or a scratch; his conduct may be even that which would excite anger in a saint, but it certainly is such as to excite anger in the average parent, who is not a saint. Then while the parent is angry, and while punishment seems merited by the child, the temptation is to administer it, but that temptation is one that ought never to be yielded to. Punishment may be needed in such a case, but the punishment, to be surely

just, and to be recognized as just, must be well considered, and must be administered in a manner to show it is not the outcome of passionate impulse.

"'What!' inquires a surprised parent, 'do you say I must never punish my boy while I am angry with him? Why, then I should hardly ever punish him at all. It is while I am sitting up for him hour after hour when I 've told him over and over again that he must come in early evenings, that I feel like taking hold of him smartly when he does come in. If I should say nothing to him then, but leave the matter until the next morning, I should sleep off all my feeling on the subject, and he would n't be punished at all.' And that father in that statement of the case spoke for many a parent in the whole matter of the punishing of a child while angry. The punishment which the child gets is the result of the passion of the parent, not of the parent's sense of justice; and the child knows this to be the case whether the parent does or not. Not until a parent has himself in perfect control ought he to take his child in hand for the judicial investigation and treatment of his case as an evil-doer."

I have read of one mother afflicted with a quick temper who felt the only safe method for her to pursue was to defer punishment for at least six hours. With very small children there may be instances where immediate action seems necessary, but ordinarily it were far better that the culprit go unpunished than that punishment be administered when the parent is under the influence of excitement or anger. The deferment of punishment is also frequently essential because of the child's own inward state. In many cases of wilful transgression, obstinacy, or perverseness, the child's mind is in such a perturbed condition that punishment immediately following wrong-doing is productive of no good. The close student of child nature tells us that the physical attitude of the child shows much of the inner workings of his mind; that when his lips are shut tightly, his hands clenched, and his little body unyielding, it is an evidence that he has closed the door of his heart for a time to his mother's influence.

Says a well-known writer upon this point: "The moment for correction is not then, but when the flexibility of his body indicates that his soul is open to outside influences. Many mothers, not understanding this fact, would feel it their bounden duty to punish the child until through fear or pain he had become exhausted or overcome, and thus apparently submissive, but the result upon the child of such a procedure is often most disastrous. There is a sort of combativeness about a child when his temper is aroused, a barricade of opposing forces when he is perverse or sorely tempted, that operates against correction, and makes it of no lasting value to him. Wait until the tide of feeling is subdued before correction is given." To thus wait before correction till a suitable time, when the child is in a receptive mood, is one of the hardest things for a parent to do, and particularly so if the child's demeanor has aroused or vexed him. It requires great self-control and patience and firmness on the part of the parent, but it is the only way to secure the child's best good, a consideration which should always be uppermost in the mind of the parent.

THE STRANGER WITHIN THY GATES.

BY MRS. S. M. I. HENRY.

"A LITTLE stranger arrived at our house this morning," is the conventional announcement of the birth of a child. Congratulations are expected; but for the child, often, condolence would be in order, because he has really come a stranger to a strange land, in which he is destined to a long and perilous search for his real kindred,—may be never to find them, certainly not in the house within whose walls he first opened his eyes. He is a stranger to those who gave him being, and, sadder still, must so remain to the end, because there is so little in common between him and them.

He was not expected or desired. He is loved after a selfish fashion, now that he is here; but he is a *stranger*.

An old proverb says: "It is a wise son that knoweth his own father." I would like to frame a counterpart to this old saying; viz., It is a foolish father who is not acquainted with his own son.

A knowledge of your child, to be complete, must begin with self-knowledge: at least, self-knowledge will prevent and avert unpleasant surprises; for the analysis of your own nature is worked out in the development of the child, so that he, as well as all the world, can read it. The man who has not been willing to look his own defects squarely in the face, nor to make a study of the means by which they may be overcome, is no more able to take up the advance lessons which are written in his child's being than is the student to master astronomy before he has been willing to apply himself to the rudiments of mathematics.

The father and mother are rudimentary to the child, and should be first mastered as a study. They should be so well acquainted with themselves and each other, and should so intelligently arrange all prenatal conditions that they can reasonably expect to recognize the child at birth, and be recognized by him as at least acquaintances, and not strangers.

A few years ago I was very much interested in a bit of history, sweeter than romance, which was brought to my notice.

A class of college students became thoroughly awake to the obligations of life, under the careful training of a conscientious teacher. The subject of heredity had been discussed in a special lecture course, and made a deep impression upon them. Soon after graduation there were several marriages, two of which were by the most carefully intelligent and conscientious selection, to the end that they might serve God and the race, in their work together and through their children.

They agreed that the very best that God could work through them should be given to their children; and from the first they conformed to the laws which God has written not only in his word, but in nature. They made a study of the children they anticipated, while as yet there was nothing of them, and decided, after earnest deliberation, what they would, under God, produce in their children. One couple decided to produce a singer who should honor God in the gift; and the other, a student of nature, whose investigations should result in the betterment of the race.

In due time a boy and a girl were born; and from the first it was evident that they did not find life a painful surprise, nor the homes into which they had come a strange land. They were not *strangers*, but familiar acquaintances, intimate friends with the *lives* from which they

had sprung. There were no misunderstandings between those children and their parents: the same thoughts and purposes flowed like the sap of the vine through all alike; and while the children were still in arms, it was clear to all who were in the secret that these parents had by their faith brought their expectations nigh. During the few years that had passed up to the time when these circumstances were brought to my knowledge, that development which is the truest education had been going forward in a perfectly natural way, like the growth of a tree. The children were strong, healthy, happy, each with a definite purpose in life, a divinely appointed plan to grow by, engraven on the very bones.

I have often wished that I might have known these homes and these children; but a part of the plan was that there should be no notoriety, that the secret should not pass beyond a certain limit; God should have a fair chance to bring his work to its completion in his own way. So while the facts were given me as an illustration of the principles which I was teaching, all names and dates were withheld. But I am sure that somewhere this beautiful problem of life is being worked out to the delight of the eternal Father and for the glory of his name.

The "little stranger," as a rule, grows up to a cheerless heritage, misunderstood and defeated all his life, as any lonely alien must be in a foreign land.

After a while he begins to make a hole in the ground for himself; but sometimes it takes years of snubbing and pushing away to make the ardent-hearted boy take kindly to it. He would prefer the home nest, the clasp of his mother's hand, to anything in the world. The impulsive, affectionate girl does not all at once take her "secrets" to some other ear; but after a while the estrangement which began before birth is accomplished: the unanswered questions, the unsympathetic atmosphere, the unreasoning requirements, the arbitrary rulings, have done all that prenatal discontent had left unfinished, and it comes to pass that child and parent are less to each other than many an acquaintance of a day, or the chance chum of a journey.

"LET US WITH OUR CHILDREN LIVE,"

is the text of an illuminated motto which was placed on the wall of my home by a wise friend when I was little more than a bride; and I am glad to pass it on. From the first moment of that life by which the child is to be, live with him, know him, as the roots of the vine know the farthermost twig of the fiftieth summer.

A man whom I know said one day to his mother, as he laid his hands on her shoulder, "Mother, you and I have been friends always;" and the sweetness of that fact was able to cleanse for her any waters of Marah.

"ALONE with thee, my God, alone with thee!
Thus wouldst thou have it still — thus let it be;
There is a secret chamber in each mind,
Which none can find
But he who made it — none beside can know
Its joy or woe.
Oft may I enter it, oppressed by care,
And find thee there."

HEALTHFUL AND UNHEALTHFUL HOMES.

If one could enter the average American home and take a peep around, what would he see?

I speak as a sanitary engineer whose professional duties carry me through the millionaire's palace and the crowded tenement, and into dwellings all over the country. I can therefore easily picture what would be seen in these homes.

And first I would remark that these dwellings as a rule are comfortable. Their occupants know how to enjoy themselves. Even where their means are small, and where rich furniture and decoration are not found, there are yet signs of culture and refinement.

But I see many in these homes who seem in grief, many who wear the mourner's garb. There are gaps in the family circle, and some sit sadly alone because a father or a mother or some other dear one has been prematurely taken away. Upstairs is a vacant chamber where a brother or a sister used to sleep. In the attic is a crib once occupied by a tender infant which now rests beneath the sod.

Open this closet and notice the array of medicine bottles on the shelf. Ask how often the doctor's visits are made. Observe the wan cheek of some invalid member of the family and how much the conversation bears upon sickness.

The first greeting, "How do you feel to-day?" implies that "feeling bad" is a common experience.

We do not ask, "Is your house standing all right?" unless it is common for houses to fall down; and so questions about health imply that a great many people "enjoy poor health."

Is all of this sickness and death providential? Do not the million inmates of these homes care about their health? or are they ignorant of how best to preserve it? Is not a great deal of this suffering preventable?

I answer most emphatically that much, if not most, ordinary sickness is preventable, and it is blasphemy to lay it to Providence.

People do care about their health, but they don't know how to preserve it. They leave these matters to the doctor, and his business is to cure, not to prevent, disease. Hence has arisen the need of a new profession, aptly called "the house physician." His province is to prevent sickness and to keep people well; to provide the ounce of prevention which will save spending money for drugs and doctors' bills.

In houses where sickness prevails, there is usually something wrong with the sanitary arrangements. Of course people will get sick, and all must die in time; but a vast number of maladies are avoidable.

There is no need of so many persons' dying of consumption, typhoid fever, diphtheria, or scarlet fever, if reasonable precautions are taken. Neither is there any necessity for so much rheumatism, or neuralgia, or cerebro-spinal meningitis, or malaria, or many other diseases which abound everywhere.

Three things are essential to health: Pure air and sunlight in our homes, a dry soil for a house site, and pure water for drinking. Provide these, and half the ordinary maladies will disappear.—*Chas. F. Wingate.*

"THE paths of pain are thine —
Go forth with healing and with hope."

THE SUNSHINY WOMAN.

WHEN we come to count over the qualities that endear our friends to us, says a recent writer, almost all of us think first of cheerfulness. The sunshiny men or women, who bring a bright word or a glad smile with them, are always welcome. Every heart knoweth its own bitterness, each soul has its own troubles and trials and vexations; and so we turn to the one who can lighten our sadness with the radiance of a cheerful spirit.

Sunshine of the soul is largely a matter of cultivation, for there are few so fortunate as not to have had some grief. The selfish sit down and brood over their sorrows. They give themselves up to fits of despondency and moodiness, and are a sort of moral wet blanket on the pleasures of all with whom they come in contact. They tell you their sorrows and bedew you with their tears until it seems that there must be a kind of luxury of woe in which they rejoice.

After all, the cheerful spirit is but an example of "that brave attitude toward life," of which Stevenson wrote. It is a courageous bearing of inevitable burdens, a determination not to fret and not to add to the sorrows of the world the griefs of one's own heart.

A woman who had had many sorrows and heavy burdens to bear, but who was noted for her cheerful spirits, once said in explanation: "You know I have no money. I have had nothing I could give but myself, and so I made the resolution that I would never sadden any one else with my troubles. I have laughed and told jokes when I could have wept. I have always smiled in the face of every misfortune. I have tried never to let any one go from my presence without a happy word or a bright thought to carry with him. And happiness makes happiness, and I myself am happier than I would have been had I set down and bemoaned my fate."

The gospel of happiness is one that every woman should lay to her heart. What it means to a man to come home at night to a cheerful wife, no one but he who has had to fight the hard battle of life knows. If he is prosperous, it is an added joy; but it is in misfortune that it shines like a star in the darkness. A complaining wife can kill the last bit of hope and courage in a sorely troubled heart, while a cheerful one gives new courage to begin the fight over again.

The mother who lets her children grow up to be moody and discontented, subject to blues and sulks, is failing in her first duty. She is handicapping them in the race of life. Cheerfulness is one of the prime requisites to success and happiness. The sunshiny man or woman has every one for a friend, for "this sad old earth must borrow its mirth, it has sorrow enough of its own."—*Ladies' Home Journal.*

Children's Clothing.

An American lady now residing in London, England, writing to *Babyhood*, emphasizes the statement that children are not dressed comfortably or healthfully. She tells of one little girl attending the same school as her own children, who wore dresses with low neck and short sleeves to school all winter, being protected only by a wrap, and says that the custom is very prevalent in that country. It makes one shudder to think of the woes induced by such a dress. What agonies of chilling must that little one have suf-

fered! When will mothers begin to realize that their children are human beings —not dolls for the display of finery?

The face and hands are supplied by an all-wise Creator with an increased thickness of the epidermis, which serves to fortify these parts of the body against cold and exposure of all kinds. But the arms and neck are not so protected; hence the danger to health and life from leaving them insufficiently clothed. The arms should be as warmly clad as the rest of the body; and the chest, that warming-oven for the lungs, should be very carefully protected from cold. This will be accomplished not by overdressing this part, but by equalizing the amount of clothing on the entire body.

No wonder the land is echoing with the cry of alarm at the increase of consumption when such earnest invitations are extended to this disease to settle in the lungs of our little ones.

Washing Flannels.

"Shave a quarter of a pound of soap into a granite saucepan, add one quart of boiling water, stir over the fire until dissolved," writes Mrs. S. T. Rorer in the *Ladies' Home Journal.* "Pour this into a tub half filled with water at a temperature of 100° F. Mix well. Have on the left side of the tub a bucket of clear, warm water, 100° F., into which put a half teaspoonful of household ammonia. Take each piece of flannel singly and immerse it in the suds. Soap should never be rubbed on flannels, nor should flannels ever be rubbed on a board. Wash them by pressing and drawing through the hands, rubbing the soiled places quickly with the hands. Rinse at once in clear water, and wring by pressing one hand under the other, or through a wringer. Never twist in the wringing. Shake well and hang to dry immediately; then proceed to wash the second piece. The flannels when nearly dry must be taken from the line and pressed with a hot iron. Be careful that it is not, however, too hot, or it will destroy the color. Flannels washed in this way will retain their soft texture and original size until completely worn out. No deviations from these directions, however, can be made. For colored flannels make a suds as above. To the warm water for rinsing add four tablespoonfuls of white wine vinegar, or a tiny bit of acetic acid which has been thoroughly dissolved. It is always well to wait for a bright day before washing flannels. They should be dried as quickly as possible."

Public Laundries.

One of the greatest conveniences of modern times is the public laundries, where for a nominal sum any housewife can go and do her family washing. There are a number of such laundries already established in European cities. All modern appliances are provided, and the work can be done there more cheaply and more thoroughly than at private houses, and, besides, it avoids the steam and inconvenience of having the washing done in the home.

Begin Again.

Begin again,
The year is new,
The past is dead!
Let tears be few
And quickly shed;
The man of hope
Will stronger be
To do his best,
And trust the rest
To charity,
Than he who mourns
Despairingly.

— *G. A. Warburton.*

EDITORIAL.

THE DIETETIC VALUE OF FRUITS.

P. VERGELY, who has made a careful study of the diet of infants and young children in this class of disorders, finds that one of the most important features of the dietetic management of diseases of the stomach and intestines is to abstain from meats. Beef tea, beef juice, animal broths, raw meats, and similar meat preparations, which have been so generally employed in all kinds of conditions, he finds to be highly injurious in these cases. It must be remembered that the kidneys are taxed to an enormous extent by the elimination of poisons which are formed in abundance by the action of germs throughout almost the entire intestinal tract in these cases. A meat diet greatly increases the quantity of these poisons by furnishing a medium in which germs grow with the greatest rapidity and virulence. The diet, during the acute stages at least, should consist of well-boiled, carefully strained gruels, fruit soups, fruit juices, and malted nuts.

Fruits are so generally regarded as a luxury that their dietetic value as a food seems to have been largely overlooked. Fruits without doubt formed a leading constituent, perhaps the chief element, in the original bill of fare of the human race, just as they now do in that of the gorilla, the chimpanzee, and the orang-outang, the classes of lower animals which come next to man in the scale of being, and the majority of savage tribes whose habits have not been modified by contact with civilized man.

The many popular errors concerning the indigestion of fruits are perhaps responsible for their sparing use. Lack of knowledge respecting their great value in a variety of diseased conditions must also be held responsible to a considerable degree for the fact that they occupy so small a place in the usual bill of fare of civilized nations.

The value of the "grape cure" in certain forms of intestinal disease has long been known. The "apple cure," the "peach cure," and the "strawberry cure" have each had their advocates as rivals to the "grape cure." A recent writer on medical dietetics remarks that the rationale of the "grape cure" and other forms of fruit cures is not yet understood. We think the reason is plain, since the bacteriological investigations reported in this journal some months ago have shown clearly that those micro-organisms which are most abundant in certain forms of indigestion, particularly those accompanied by so-called biliousness, coated tongue, bad taste in the mouth, etc., do not thrive in any fruit juice, and die quickly in grape juice. This fact shows quite conclusively that the value of a fruit dietary in indigestion is chiefly due to the germ-destroying properties of the fruit juices.

This action of fruit juices is doubtless due to the acids which they contain. Professor Koch, of Berlin, has conclusively demonstrated the fact that a small quantity of citric acid added to a glass of water is capable of destroying all disease-producing germs which it may contain. Other fruit acids seem to have similar properties. At any rate, the writer's experiments show that the juices of grapes, apples, lemons, and other acid fruits remain sterile when inoculated with stomach fluid which gives rise to a very abundant bacterial growth when inoculated into beef tea, gelatin, and other nutrient media of animal origin.

The germicidal property of fruits renders them of immense value in the treatment of biliousness, nervous headache, sick-headache, fevers, and the stomach and intestinal disorders of both children and adults. It is necessary, of course, to adapt the particular kind of fruit eaten and the form in which it is presented, to the digestive organs of each

individual case. It is also necessary to note that fruits are not compatible with all other kinds of foods. For example, fruits and vegetables constitute a poor combination for persons suffering from slow digestion as the result of dilatation or prolapse of the stomach, or hypopepsia. Acid fruits and cereals are not a good combination in cases of hyperpepsia, because of the excessive acidity of the stomach whereby the gastric digestion of starch is seriously interfered with.

Fruits are certainly of great value in many forms of disease, because of the acids which they contain. These acids, when taken into the blood, break up some of the compounds of waste substances which have been formed, and thus give rise to an increased excretion of these substances through the kidneys. In this way fruits are a great advantage in the treatment of rheumatism, gout, gravel, and all the different morbid conditions which accompany the so-called uric-acid diatheses. The observations of Haig respecting the relation of uric acid to neurasthenia give to fruit a great dietetic value in this disease. He has shown that neurasthenia is almost always the result of the accumulation within the system of tissue wastes, largely in the form of uric acid. The free use of fruits aids in the elimination of these poisons, not only by breaking up the compounds which they form within the body, but by stimulating the kidneys to increased normal activity.

Remembering the interesting fact pointed out by Bouchard, that rheumatism is really a poisoned condition resulting from the decomposition of food-stuffs in a dilated or prolapsed stomach, we may also attribute the beneficial effects of a fruit diet in rheumatism and allied conditions to its value in suppressing the formation of poisonous substances in the alimentary canal.

Obesity, which is, like rheumatism, a diathesis, may be successfully treated by a fruit dietary. This is due not only to the fact that fruit is a natural food, and thus aids the system to establish normal tissue changes and a normal balance between the processes of assimilation and disassimilation, but also because it affords a very comfortable means of reducing the amount of nutrient material received to a minimum quantity.

Fruit is chiefly water, the amount of nutrient material it contains varying from five to eight or ten per cent. in most fruits, rising to a higher figure only in dried fruits, such as dried grapes, prunes, dates, etc. The writer has succeeded in reducing excessive weight in the most satisfactory manner by prescribing a diet consisting almost exclusively of grapes or apples, allowing only a small bit of thoroughly dried bread or zwieback in connection with the fruit. In some cases the fruit may be allowed as often as three or four times a day, to relieve an uncomfortable sensation of emptiness.

In fevers, fruits, especially in the form of fruit juices, are a most convenient and certainly the most appropriate of all foods. It is now almost universally recognized that beef tea and meat preparations of all sorts should be wholly proscribed in cases of fever, as the patient is already suffering from the accumulation of waste matters to such a degree that the addition of even the small amount contained in beef tea or a small piece of meat, may be sufficient to give rise to an exacerbation of the disease, and lessen the patient's chances for recovery.

German physicians make great use of preparations of fruits in fevers, particularly of fruit soup, which is made by boiling for some time one part of dried fruit of some sort with four or five parts of water. In cases in which considerable irritation of the stomach and intestines exists, the soup or decoction thus prepared should be carefully strained, so as thoroughly to remove the skins and all other extraneous matters. The juice of oranges, grapes, raspberries, blackberries, huckleberries, tamarinds, currants, or cranberries may be added to water as a beverage in fevers. Thus used, they not only increase the quantity of water which the patient is enabled to drink, by giving to it a distinct and agreeable flavor, but also aid the elimination of poisons with which the system is struggling, by a slight diuretic action. Fruit juices used in the same way

are likewise highly beneficial in Bright's disease and other forms of kidney disease in which it is desirable to increase and maintain the flow of urine. The grape-fruit, the lime, the shaddock, and the pomegranate also afford agreeable acid juices which may be used in the same manner. The antiseptic value of fruit juices must also be recognized as a positive benefit in these cases.

There is no single article of diet of such great value in the treatment of intestinal inactivity or constipation as fruits. For this purpose fruits must be eaten freely, being taken, as a rule, in cases of this sort, at the beginning of the meal or a little while before it. Fruit is most effective when taken by itself in this manner. Raw apples, steamed figs, peaches, apricots when not too ripe, prunes, oranges, and tamarinds are of the greatest value for this purpose. Tamarinds or pomegranates furnish an acid from which a very pleasant beverage may be prepared. Tamarinds used in this way sometimes serve a useful purpose in cases of constipation.

Persons who employ a fruit diet for the relief of chronic symptoms such as rheumatism, neurasthenia, sick-headache, etc., should not, however, expect to be cured in a few days or a few weeks, but should adopt the free use of fruit as a regular practise. In cases of periodical sick-headache, which is almost always connected with dilatation of the stomach, the patient may advantageously adopt the plan of systematically confining himself to a fruit diet for one or two days preceding the time of the expected attack; or it may be sufficient to confine the diet to fruit for a single one of the daily meals, as for breakfast. Persons who require a fruit diet are generally benefited by an adoption of the two-meal-a-day plan, nothing being taken after three or four o'clock in the afternoon, so that the stomach may be prepared as thoroughly as possible for the reception of fruit the next day. As regards the particular fruit to be eaten for special conditions, the most important thing to be said is that fruits, if possible, be taken fresh and as soon after reaching maturity as possible. Canned fruit and dried fruits are inferior to fresh fruit; still they are far better than none, and if properly prepared, they may render very great service. Each fruit has its own special adaptation and limitations.

The banana is, aside from the date, the fig, and the raisin, the most nourishing of all fruits. The amount of nutrient material contained in a pound of bananas is almost equal in sustaining value to that found in a pound of beefsteak. The amount of nitrogenous or albuminous substance found in a banana approximates five per cent. In the dried banana the proportion is about twenty per cent., or one fifth. Humboldt calculated that the banana, grown in suitable soil and properly cultivated, is capable of producing more food to the acre than any other plant. When well matured, the banana is easily digestible.

According to Sergeant Parke, Stanley and his white associates subsisted almost exclusively upon banana flour for two years in the wilds of tropical Africa. The writer is inclined to attribute to this fact, in a large degree at any rate, the success of these intrepid explorers in withstanding the almost innumerable dangers to life and health from disease incident to travel in that portion of the world in which Stanley has rendered such great service as an explorer.

A gruel made of dried banana flour is not only highly nutritious, but in the highest degree wholesome, and is often tolerated when ordinary farinaceous preparations, such as milk, buttermilk, etc., are promptly rejected. The banana contains a small amount of starch; but this is so easily digested by the saliva that within an almost incredibly short space of time the stomach contents are found to contain a larger proportion of well-digested starch and similar substances previously existing in the banana and not requiring digestion, than can be produced in the same length of time in any cereal substance placed under the same conditions. Bananas which have been picked so green that when found in the market they are wilted and tough, are entirely unfit to eat. Green bananas may be baked the same as apples, and are by

some greatly relished when thus served; indeed, the fruit is, on the whole, much better used in this way.

Apples may be eaten either raw, stewed, or baked. If eaten raw, they should be thoroughly ripened, else in mastication large masses will enter the stomach in a condition to interfere with digestion, giving rise to fermentation or other disagreeable symptoms.

Pears may be cooked in the same way as apples, but are less useful in relieving constipation, and are not usually so readily obtained. Pears, however, have the advantage over apples that they are usually of a more mild and palatable flavor, so that they do not require the addition of sugar, which is often added to sour fruit in such excessive quantities as to render the fruit entirely unwholesome. Instead of adding cane-sugar to sour fruit, the better plan is to mingle together sour and sweet fruits.

The pineapple, as well as the lemon, orange, grape-fruit, tamarind, guava, pomegranate, sapota, and other tropical fruits are as valuable as they are palatable, and ought to be freely used when obtainable.

There is perhaps nothing better for checking hemorrhage from the stomach than the pure juice of one or two lemons, swallowed quickly. Nosebleed may be stopped by snuffing lemon juice into the nostril from which the blood issues; and it has long been known to obstetricians that lemon juice is one of the most effective means of checking uterine hemorrhage after childbirth.

Pineapples, when allowed to mature upon the plant, are extremely palatable and luscious, and almost as easily digested as the peach, although containing considerable more woody matter; but in the form in which they are usually obtained in this country, they are quite indigestible if eaten raw, and only the juice should be swallowed. The juice of the pineapple contains a digestive principle similar to pepsin. It may be used with advantage as an application to the throat in diphtheria.

The strawberry, which is one of the most popular favorites of all the various kinds of domestic fruits, is generally well received by the most delicate stomachs, if care is taken to avoid rendering it indigestible by the addition of cream and sugar, ice-cream, etc. The better varieties of strawberries are sufficiently sweet, and require no sugar. They are best when fresh, being less well adapted to canning than almost any other fruit. The strawberry is said to contain a larger proportion of iron in its water-free constituents than any other fruit. There is occasionally a person who cannot eat strawberries because of some idiosyncrasy, as the result of which an exceedingly troublesome rash appears.

A combination of fruits with nuts which have been thoroughly cooked and completely disintegrated is found of great value. "Fig bromose," "banana bromose," and a number of other similar products have proved of great value in the treatment of chronic constipation and various other conditions in which a fruit-and-nut diet is indicated.

APPENDICITIS.

THE modern disease known as appendicitis has become so common that one might be inclined to denominate it a fad, were it possible to conceive that any intelligent person would, while in the possession of his faculties, seriously undertake to invite an attack of this serious and oftentimes fatal malady.

Appendicitis, as its name indicates, is an inflammation of the appendix, or appendix vermiformis, to speak more correctly, of the cecum, or first portion of the large intestine, or colon. Numerous types, stages, and varieties of the disease have been discovered, but it is not necessary here to enter into a technical description of the malady. It suffices to say that it is ordinarily accompanied by pain and more or less swelling at a point about half way between the highest point in the hip-bone in front and the umbilicus.

An acute attack of appendicitis is usually

accompanied by a chill, a rise of temperature, and severe pain at the point designated. Other symptoms are present, as vomiting and indications of serious intestinal disturbance, the symptoms often closely resembling those of peritonitis. Indeed, peritonitis, or inflammation of the peritoneum, not infrequently accompanies this disease, the inflammation beginning with the appendix and extending to the surrounding structures. An attack of appendicitis may terminate in recovery within a few days without serious symptoms, or it may be relieved by the development of an abscess, discharging into the intestine, the peritoneal cavity, or externally.

Appendicitis is popularly supposed to be most frequently due to the swallowing of the seeds of grapes, raisins, cherries, and other small fruits. This supposition is not, however, borne out by the observations made by surgeons who have had an extensive experience in the removal of the affected organ, since foreign bodies are very seldom found in the appendix. The writer has removed a good many appendices, and has never yet found a single foreign body, except in one case, which contained a fecal calculus which had evidently been formed within the appendix itself.

It is the writer's opinion that appendicitis is most often the result of catarrh of the large intestine, which extends by contiguity into the appendix. The appendix is separated from the large intestine by a simple sort of valve. As the result of inflammation this valve may be closed, so that secretions accumulate within the appendix; or it may, as the result of other forms of disease, become abnormally relaxed, so that the fecal matters contained in the colon are not excluded from the appendix. In these cases various foreign bodies may find their way into the little pouch which forms the appendix.

Another cause of irritation and inflammation of the appendix is, in the writer's opinion, to be found in the free use of calomel. This drug, which is insoluble in the intestinal fluids, often finds its way, when freely used, into the cecum, settling in the pouch-like end of this organ, the appendix vermiformis, and is slowly acted upon by the salt, or chlorid of sodium, which comes in contact with it, giving rise to an exceedingly irritating and corrosive chemical compound; viz., bichlorid of mercury.

That foreign bodies are sometimes found in the appendix is due not directly to the fact that the foreign substance has been swallowed, but for the reason that, as the result of disease, the valve which protects the appendix has become relaxed so that the mouth of the pouch remains open, ready to receive whatever drops into it.

The question of practical importance which every person suffering from this disease or threatened with it is likely to ask himself, is whether an operation is necessary in his case. Scores of times this question has been asked us, and we have been glad to reply, "By no means." The theory held by some surgeons that the appendix is a useless and dangerous appendage, and in man represents only a biological vestige, is wholly an error. Professor Andrews, of Chicago, has recently made the sagacious suggestion that the real function of the appendix is to secrete a lubricating mucus which, poured into the colon near the junction of the small intestine with it, greatly facilitates the movement of the food residue along the alimentary canal. This view of the function of the appendix seems exceedingly reasonable, so that it must be admitted that the organ cannot be spared so easily as some have maintained; and certainly its removal should not be undertaken without abundant reason to believe that such an operation is imperatively necessary.

A very large proportion of the cases of appendicitis may be cured by proper treatment, and the return of the disease prevented by proper dietary. For example, the painful swelling and tenderness may, in the great majority of cases, be removed by a large hot enema, taken twice or more times daily, preferably in the knee-chest position, supplemented with fomentations over the lower abdomen, covering the seat of pain. The fomentations should consist of large thick flannels, wrung out of water as hot as can

be borne without burning the hands, and the applications should be changed every three to five minutes, so as to maintain as high a temperature as the skin will bear without injury. The diet in these cases should be simple, bland, and unstimulating. Nothing can excel in value in these cases such foods as granola, taken in the form of mush, fruits, — particularly strawberries, peaches, and grapes, preferably well stewed,— granose, malted nuts, and other foods of like character. The writer has seen many cases recover by the aid of the simple treatment outlined. In some cases the ice-bag will be found necessary at the beginning of the disease.

THE RACE GOING DOWN.

THE race is going down, physically, mentally, and morally. How do we know it? Here are facts which cannot be controverted: There are at the present time, in the United States, nearly three times as many lunatics, three times as many imbeciles, twice as many drunkards, twice as many criminals, and three times as many epileptics, per thousand inhabitants as there were fifty years ago. And it should be noted that this increase is not simply numerical, but one of proportion. With the increase of population, there must, of course, come an increase of insane and other defectives; but if there were a gain in the physical stamina of the race,— in other words, if the improved knowledge of sanitation and the various advantages in the conditions of life which civilized human beings at the present time enjoy were having the effect really to improve the vitality of the race,— we ought to find the ratio of defectives, criminals, etc., as compared with sound and well-controlled individuals, diminishing rather than increasing.

An increase of ten per cent. in the proportion of defectives occurring within fifty years would be an appalling fact. It would mean, if continued long enough, complete race demoralization and extinction; it would be an unmistakable indication of progress downward instead of upward, and retrogression instead of real race progression. A ten per cent. increase in the proportion of defectives in fifty years would mean at least a doubling in five hundred years, and starting with ten defectives of all classes per thousand (the number is much larger than this) and doubling every five hundred years, it would require only three or four thousand years to render the whole population defective, provided there was no increase in the rate of downward progress; and we know perfectly well that race degeneration gains momentum like a falling body.

But it is not so small an increase as a gain of ten per cent. in fifty years to which we call attention; instead, it is an increase of nearly three hundred per cent., or thirty times the small ratio named. Let us look for a moment at the significance of this enormous rate of racial deterioration: Suppose, for example, that defectives should continue to increase at the rate of three hundred per cent. every fifty years, as has been the case during the last fifty years; starting with the supposition that there are to be found in our population at the present time at least thirty defectives to every one thousand persons (the number is doubtless greater than this), let us see where we should land a few centuries hence. In fifty years the number of defectives per thousand would be three times thirty, or ninety; fifty years later, or at the end of the twenty-first century, the number would be three times ninety, or two hundred and seventy; fifty years later, or about the year 2050, the number of defectives would have increased to eight hundred and ten per thousand; and long before another half century, even before the lapse of another quarter of a century, or somewhere about the year 2060, the number of defectives would be one thousand to the thousand — the whole population would have become degenerates.

These facts show beyond controversy that the human race, even in the most civilized

lands, and where are afforded the greatest freedom and the best conditions for physical, mental, and moral health which any country offers, as in the United States, is going downward at a most appallingly rapid pace. And this deterioration is not simply physical, as shown by the number of physically weak individuals, but it is mental and moral as well. A few are recognizing these facts; and it is this recognition which is giving rise to the erection of gymnasia, the organizing of gymnastic clubs, health associations, and various societies which have for their purpose the physical, mental, and moral improvement of the race; but unfortunately these influences affect but a very small percentage of the population. Probably not more than two or three per cent. of the entire population of any of our great cities are to any considerable extent benefited by the efforts which are thus made in behalf of the physical improvement of the individual.

The increasing use of tobacco and of intoxicating liquors, the increase of sexual vices, and the operation of various other deteriorating causes far outweigh the little that is being done in the opposite direction: and hence it is apparent that, without the adoption of some more radical and thoroughgoing measures than those in operation, there is nothing before the race but degeneration and ultimate extinction, and that not many thousand years ahead.

What will be the condition of civilized nations a century and a half hence, when society is entirely composed of degenerates, and when the whole lump of humanity is permeated with the leaven of physical, mental, and moral perversion? How much longer time will be required for complete race extinction? Our figures may not be exact, and we are not disposed to set a particular date at which the last puny, weazened, infirm specimen of the genus homo shall expire "without medical assistance" and "without benefit of clergy," but the awful fact stares us in the face that we are going down at a rate which, unless materially diminished, will at a time not many centuries distant bury the race in oblivion; and this rapid rate of decay is more likely to be accelerated than diminished, unless some new and powerful agency is set in operation whereby the downward progress shall be stayed.

It is the mission of this magazine to serve as a sort of John the Baptist, — a voice crying in the wilderness of disease, degeneracy, and death, and pointing the way upward and away from the awful fate which threatens the race. The door of salvation stands open for all who will enter it. This door leads into the highway of righteousness, which means not simply church-going, contributions to charity, religious formalism, but a recognition of the great moral law which, if followed, leads man to right-doing in all his relations to life, physical, mental, and moral.

It is the mission of this magazine not only to raise a note of warning, but to point the way to a healthier, nobler life,—a life based upon the maxim of the ancient Greeks, "A sound mind in a sound body."

CAN'T ENDURE THE SIGHT OF IT.

We have recently received from some friend the following clipping from a Western newspaper, in which an editor tells us what he thinks of Good Health and its mission: —

"AN INCENTIVE TO SUICIDE."

"Somebody is sending the editor a copy of Good Health, published at Battle Creek, Mich. It is a great magazine, in some respects, but it makes a man introspective and gloomy. It tells us that the race is dying out; that we are degenerating in morals, and stature, and vitality; that we are all more or less insane; and that meat is rank poison. Through the whole magazine we think we hear the soft tread of the undertaker and the mournful tolling of the funeral bell. It is full of warning, and microbes. We wish some one who is contemplating suicide would come and take this magazine away with him. So long as this fearful magazine is about, with its somber warnings about beefsteak and coffee, pancakes and doughnuts, we shall have to give them all the go-by, and subsist on Postum Cereal, granose, zwieback, and prunes. But what we wonder is, how

the world has got along these years, poisoning itself with steaks and fried-cakes and coffee, before GOOD HEALTH burst into bloom. But if somebody will come and carry away this magazine, we shall not insist on any answer to this question."

We thank our editorial friend for complimenting us so highly. We have not had anything cheer us up so much for many a day. We are glad to know that GOOD HEALTH is a great magazine; we are trying hard to make it so. But it encourages us much more to know that it makes Mr. Editor take a good square look at himself, even though it does make him feel "gloomy." The world is rushing on at such a rapid rate that what society needs most of all just now is to be made to stop and think. What men and women need is self-examination. A little introspection now and then is wise and profitable for the very best of men, and certainly nothing is of greater service to us than to look facts squarely in the face.

It is encouraging to know that the facts and arguments presented in this magazine are cogent enough to compel men to do this, to cause them to stop and look into their hearts and lives, and that the standard which it holds up is high enough to make a man who smokes or drinks, or otherwise flagrantly violates the laws of health, feel sad and gloomy at the wreck and ruin he is working in the divine temple which we call the body.

This editor evidently recognizes the fact that in our assertion that the race is dying, and in the facts upon which the assertion is based, we have told the truth, sad and depressing though it may be. The proportion of insane was put down at 1.7 in a thousand, leaving quite a margin of healthy individuals yet, and the editor in question evidently belongs to the sane class; for he clearly recognizes the momentous bearing of the fact that lunatics, criminals, and other defectives are multiplying at a sufficiently rapid rate to make a nation of defectives in the course of three or four centuries.

Our good friend is in error, however, in imagining that the dolorous sounds to which he refers emanate from the pages of GOOD HEALTH. Evidently his nerves were a little shaken, and he had a premonition.

In another respect also our friend is in error. He certainly is mistaken when he says GOOD HEALTH "is full of warning, and microbes." GOOD HEALTH is full of warnings *against* microbes, but the paper is guaranteed to be thoroughly sterilized. It delights us to know that GOOD HEALTH exercises so potent an influence even in an editorial sanctum that cigars, lager-beer, even tea, coffee, and griddle-cakes, cannot exist there. It is just this disinfectant and sterilizing influence which it is the mission of this magazine and its promotors to exert. But it seems rather inconsistent that our editor should suggest that GOOD HEALTH is an incentive to suicide, when he admits that it exerts so happy an influence upon him as to lead him to adopt such a life-insuring diet as granose, zwieback, prunes, and cereal coffee (Caramel-Cereal, not Postum, by the way).

Although our editorial friend does not insist upon our answering his query as to "how the world has got along these years," etc., he will perhaps permit us to remind him that this is precisely the thing we were talking about. The world has been getting along very fast,— down hill,— and GOOD HEALTH is earnestly seeking to make that fact apparent to all intelligent people; and if every number of this magazine succeeds in making so profound an impression upon each reader as the January number seems to have made upon the mind of this Western editor, the whole GOOD HEALTH editorial corps will rejoice and be exceeding glad.

Our intelligent friend's last suggestion is especially to be commended. If each of our subscribers, when he has read through a number of the magazine, has thereby been led to look into his daily life, and been convicted of the sins he has committed against himself, and led to turn away from such things as doughnuts and coffee, bloody beefsteaks and cigars, let him pass the magazine along to somebody else who may be likewise benefited.

Don't be disturbed by the suggestion of suicide; for people don't commit suicide by adopting a diet of zwieback, granose, and prunes, nor by discarding strong coffee, pancakes, and doughnuts.

Need Not Have Died.

The newspapers recently reported the death of Daniel L. Dowd, the famous New York gymnast, who for the last seven years has heroically fought against pulmonary tuberculosis, or consumption, holding the disease at bay until within a few months by a persistent effort of the will, and building himself up to the proportions of an unusually strong and vigorous man.

Professor Dowd was a champion heavy-weight lifter, his private record being sixteen hundred pounds. He was able to lift himself up to an overhead bar by the little finger of one hand alone several times in succession.

Three years before his death Professor Dowd became a vegetarian, a fact which doubtless aided him greatly in his fight against disease. That he finally succumbed was due to the unfavorable conditions of life which surrounded him. Instead of going to the mountain tops of Colorado, he took refuge in a hospital in New York City, and searched in vain for relief through European travel. There is scarcely room to doubt that if this useful man had followed the advice of a famous Boston physician, whose universal prescription to his consumptive patients was, "Go a mile up in the air," he might at the present day be alive and enjoying excellent health.

Consumption is almost certain to be a fatal disease in localities near the sea-level, no matter how salubrious the climate in most particulars, nor how excellent other hygienic conditions may be. The dry, rarefied air found at an altitude of five thousand feet is certainly more effective in combating this disease than any other one condition; and if to this be added the advantages to be derived from a well-equipped sanitarium, the chances for life are increased many times. The writer believes it to be the duty of every person suffering from this disease who can possibly do so, to avail himself of the opportunity thus afforded for escaping the almost certain fate which lies before him if he remains under unfavorable conditions.

The Physiological Necessity for Rest.

Recent studies of the nerve-cells found in the brain and spinal cord show that there is an actual physiological, or we might perhaps more properly say an anatomical, necessity for rest. Nerve-cells, when in a state of health, contain a large number of granules, and are full and plump in appearance; but when the muscles are in a state of fatigue, these cells appear pale and shrunken; and in the laboratory they do not stain as darkly as healthy cells, for the reason that the minute granules and rods which are found in their interior when they contain the normal amount of energy, are diminished in number. The evidence seems to be conclusive that these rods and granules are the means by which nature stores up energy in the cell; and as the cell is exhausted by work, these are gradually consumed, and thus the store of energy diminishes.

Professor C. F. Hodges, of Clark University, with other physiologists, has conducted numerous experiments relating to this subject which are full of interest. One of the results reached has been the observation that after a severe effort a rest of twelve hours is required to enable the cell to return to its normal condition; that often even twenty-four hours is scarcely sufficient for this purpose. It thus appears that there is a physiological basis for a periodical rest-day, in which the worn-out cells may be able to recover their store of energy.

Some years ago an eminent French professor arrived at a similar conclusion by a study of the oxygen-storing functions of the body. He found that the amount of oxygen stored in the body is lessened by work, and that for a laboring man more than the amount of rest obtained by the daily allowance of eight hours' sleep is required for a restoration of the normal and necessary amount of oxygen.

ANSWERS TO CORRESPONDENTS.

Corn Bread — A Book on Physical Development — Entire Wheat Flour.— J. M. C., of Alabama, writes: "1. What is the value of bread made from common Indian corn, from a chemical and also from a vital standpoint? What effect does it have on the system when eaten regularly? 2. Where can I get a good book on physical development? and at what price? 3. Is the entire-wheat flour made by the Franklin Mills, of Lockport, N. Y., a good health food?"

Ans.— 1. Bread made from corn contains 11.1 parts of nitrogenous matter, 65.1 parts of carbohydrates, 8.1 parts of fatty matter, 1.7 of saline salts, and 14 parts of water. It is a fat- and energy-producing food.

2. We commend the following books: "Beauty of Form and Grace of Vesture," price, $1.50; "Health of Body and Mind;" or "Physical Culture," published by the Emerson College of Oratory, Boston.

3. Any whole-wheat flour made by a reliable firm should be good. The best quality can be obtained from the Battle Creek Sanitarium Health Food Co., Battle Creek, Mich.

The Staff of Death.— A correspondent sends us a newspaper extract from an article published in a London journal, arguing that grains are an unnatural diet, and give rise to serious disease, premature age, etc., and asks for our opinion of the idea.

Ans.— The claim made is entirely absurd, and has no foundation except in ignorance and a defective experience. The majority of those who have denounced starch as an article of diet have based their conclusions upon the use of starchy foods without proper cooking. Grains require cooking from three to five hours, or even longer in the case of whole grains. In the majority of cases, however, cereals used as foods are cooked but a few minutes, and thus when taken into the stomach, they create irritation and disorder, instead of imparting strength and energy.

Pain in Back and Head.— W. H. G., Indiana, wishes to know the cause and cure of a pain in the back and the lower end of the spine, and in the head back of the right ear, the pain seeming to alternate between the two points. It also occasionally extends to other parts of the head.

Ans.— The patient is without doubt suffering from irritation of the abdominal sympathetic nerve. This irritation may be due to indigestion, prolapsed stomach, floating kidney, or prolapse of the bowels. Very likely all of these conditions exist together. A correct diet, and especially the use of the Natural Abdominal Supporter, will give relief. For a permanent cure the abdominal muscles must be developed by massage, the application of electricity, and exercise.

Spinal Trouble.— Mrs. E. D., Kansas, wishes to know what home treatment can be prescribed for what seems to be spinal trouble, of some two years' standing. There is pain and numbness at the extreme end of the spine, extending upward three or four inches. It is more troublesome when the patient is sitting or lying down, and she has to make considerable effort to rise from these postures.

Ans.— It is possible that this patient is suffering from some severe nervous disorder, but it is more probable that there is some rectal or pelvic disease which gives rise to the condition referred to. For a complete cure, of course, the cause must be sought out and removed. This will doubtless require the services of a skilled surgeon, who should be permitted to make a careful examination. Hot and cold applications to the lower part of the back and applications of massage and electricity will be found helpful, also a sitz bath at a temperature of 75° F. for five or ten minutes every day, accompanied by vigorous rubbing. The general health must receive attention. Possibly there may be prolapsed viscera.

Appendicitis.— Mrs. E. C. E., South Dakota, asks: "1. Can a tendency to appendicitis be cured without an operation? A boy fourteen years old has had three attacks in three months which a local physician pro-

nounces appendicitis, and recommends an operation. 2. What diet would be best both during the attacks and between them ? "

Ans.— In the majority of cases, acute appendicitis may be brought to a successful issue by complete rest in bed, large warm enemata two or three times daily, fomentations frequently renewed over the affected part, and a careful regulation of the dietary. Fruit juices, and such foods as malted nuts, buttermilk, and other simple fluid foods are most serviceable. When the attacks recur frequently, an operation is generally necessary. The operation should not, however, be performed during the acute attack, but two or three weeks after the patient has recovered from it.

2. During the attack the diet should be liquid, as stated above. In the interval between the attacks the patient should adhere closely to an aseptic dietary. Meat and coarse vegetables, condiments of all sorts, and indigestible foods, such as pickles, olives, etc., should be carefully avoided.

Olive-Oil as Shortening—Whole-Wheat Griddle-Cakes.— W. W. W., California, asks: " 1. Are foods shortened with olive-oil more easily digested than those shortened with cream or butter? Why? 2. Are not whole-wheat griddle-cakes wholesome if the griddle is greased lightly with olive-oil ? If not, why ? "

Ans.— 1. No ; for the reason that the olive-oil is a free fat, in the state of an oil rather than in the condition of fine subdivision, or emulsion, in which fats are found in nature. When taken into the stomach, these free fats coat over the starch and albumin, and thus prevent their digestion by the saliva and the gastric juice. In this respect olive-oil and butter have the same effect. Cream is an emulsion, and hence is better for use as shortening than butter or olive-oil ; however, there are some persons who cannot use the casein of cream, and must avoid its use on this account. The best shortening is sterilized nut butter, which presents the fat of nuts in a perfectly emulsified state, and is readily digestible, imparting to the food seasoned with it as delicate and agreeable qualities as do cream and butter, without in the slightest degree impairing its digestibility.

2. No ; for the reason that the fat that is burned on the griddle permeates the starchy contents, and thus renders them indigestible, as above explained.

Cankered Sore Mouth.— H. E. H., California, desires to know the cause of cankered sore mouth, with which she is troubled, though living simply and using the nut preparations and other health foods sent out from the Sanitarium.

Ans.— The cause may be hyperpepsia, which is often found in connection with a sore mouth. However, this condition occasionally comes with hypopepsia. The right quality of food is only one of the conditions necessary for good digestion. Abundant exercise in the open air, slow eating, careful mastication of the food, care as regards the quantity of the food, and other conditions, are equally essential. Possibly prolapse of the stomach may be the cause of too long retention of food in the stomach, thereby resulting in indigestion, the development of germs, and the disordered condition of the mucous membrane of the mouth described. There may be still other causes to which the condition is due. Whatever they are, they must be sought out and thoroughly removed.

Excessive Thirst — Boiled Water — Blisters on the Tongue — Dreams — Sneezing — Yawning — Digestion—Color of the Hair.— L. J. S., Ohio, asks the following questions: " 1. What is the cause of excessive or morbid thirst, especially in the summer? 2. How can the condition be relieved hygienically? 3. What can be added to boiled water to make it palatable? 4. What causes blisters on the tongue? 5. What will cure them? 6. What causes dreams? 7. What causes sneezing and yawning? 8. Which foods are digested in the stomach, and which in the bowels? 9. Is it known what produces the different colors of human hair? "

Ans.— 1. Profuse sweating, the excessive use of salts or sweets, indigestion, and the use of ice-water.

2. Profuse perspiration necessitates the free use of water. If any of the other causes mentioned exist, the remedy is plain.

3. A slice of lemon, fruit juice of some sort, or a pinch of caramel-cereal.

4. Indigestion.

5. See answer to H. E. H., page 123.

6. Dreams are never present in perfectly sound sleep. A dream is generally the result of disordered activity of the brain, occasioned by some cause which prevents perfect sleep, such as indigestion, nervous irritability, or an excessive amount of work or worry.

7. There is a sneezing center and a yawning center. The act of sneezing and yawning occurs when the corresponding center is excited. The sneezing center may be excited by a bright light acting through the optic nerve or by an irritation of the mucous membrane of the nose. Yawning generally occurs in connection with weariness.

8. Starch and proteids, or albuminoid food substances, are digested in the stomach. Fats and sugars are digested in the intestine only. The following brief résumé of the subject of digestion will render the matter clear to the mind of the inquirer: —

There are five digestive organs — the mouth, the stomach, the liver, the pancreas, and the intestines.

There are five digestive fluids — the saliva, the gastric juice, the bile, the pancreatic juice, and the intestinal juice, — one fluid produced by each of the digestive organs.

There are five digestible food elements — starch, albumin, fats, sugar, and salts.

The saliva digests starch, converting it into sugar.

The gastric juice digests albumin, converting it into peptone.

The bile, which enters the alimentary canal a few inches below the stomach, digests fat, emulsifying it.

The pancreatic juice digests starch, albumin, and fats.

The intestinal juice digests all the food elements, including cane-sugar, which is not digested by any other digestive fluid.

From the above it appears that starch is digested by the saliva, the pancreatic juice, and the intestinal juice.

Albumin is digested by the gastric juice, the pancreatic juice, and the intestinal juice.

Fat is digested by the bile, the pancreatic juice, and the intestinal juice.

Cane-sugar is digested by the intestinal juice.

Salts are digested by all the digestive fluids, those salts which are soluble in alkaline fluids being digested by the saliva, the bile, the pancreatic juice, and the intestinal juice, and those salts which are soluble in an acid medium being digested by the gastric juice.

After the food has been swallowed, the saliva, being properly mixed with it, continues to act upon it in the stomach for half or three quarters of an hour, until the contents of the stomach become strongly acid from the secretion of the gastric juice. Then the digestion of starch ceases, beginning again only after the food has entered the small intestine.

Albumin and fibrin are digested in the stomach by the gastric juice.

The casein of milk and the vegetable casein of peas, beans, and lentils, is digested chiefly in the small intestine.

Fats are digested only in the intestine, hence when free fats are taken into the stomach, they often interfere with the digestion of starch and albumin. It is on this account that fried foods, rich pie-crust, rich pastry, hot buttered toast, melted butter mixed with vegetables and farinaceous foods, are so indigestible and so productive of digestive disorders.

9. Yes; the different colors of the hair are due to the different proportions of pigment which it contains.

Diet for Looseness of the Bowels — Pain under Shoulder-Blade.— L. M. S., Ohio, asks: "1. What diet is best for one whose bowels are naturally loose? 2. What causes a pain just under the shoulder-blades? 3. Will trying to stand correctly affect one that way at first?"

Ans.— 1. A dry diet, consisting of well-toasted granose, is excellent. Cooked fruits and fruit juices may be taken moderately, coarse vegetables and meats of all kinds being avoided. Buttermilk or kumyzoon are sometimes excellent.

2. A sensitive condition of the abdominal

sympathetic nerve, particularly the solar plexus.

3. Yes, frequently.

Indigestion.— A. J. H., Iowa, has been troubled with indigestion and constipation for some time; has a ravenous appetite, but none of the health foods seem to have a curative effect. The patient asks: "1. Is this the effect of a dilated stomach? 2. If so, should I continue to eat granose, granola, and gluten? 3. I have been eating bromose three times a day; shall I continue it? 4. What causes the muscles in the lower limbs to get rigid? 5. What causes a tickling sensation in the limbs similar to that experienced when a member goes to sleep, only of very short duration? 6. If it is a nervous or muscular trouble, what diet would you prescribe? I am losing flesh very fast."

Ans.— 1. This patient probably has hyperpepsia. The stomach may be dilated; is, in fact, quite likely to be dilated as the result of the excessive quantities of food taken to appease the ravenous appetite.

2. There is no better food than granose and other health foods.

3. Bromose is one of the most digestible and wholesome foods with which we are acquainted, and is usually wonderfully satisfying. It may be well to exchange bromose for malted nuts for a time.

4. The rigidity may be due to cramp. The cause may be in the muscle itself or in the spinal cord. Vigorous rubbing or a warm bath will usually afford relief.

5. A disturbance of the abdominal sympathetic nerve. There is probably a prolapsed condition of the viscera. If this is the case, as shown by abnormal flatness of the lower abdomen, the Natural Abdominal Supporter may be worn.

6. There is nothing better than the diet above suggested, consisting of granose, fruits, and nut preparations. The case should have a careful investigation by a thoroughly competent physician. Possibly a course of treatment at a well-equipped sanitarium will be necessary.

Foods — Catarrh.— Mrs. G. T. S., Nebraska, writes: "1. What foods would be best for a child of six to take to school for a cold dinner? 2. What foods would you recommend for a family whose members are troubled with constipation and boils? 3. What home treatment would you advise for a young girl suffering from catarrh? She has neuralgia in the head, and is very sensitive to cold. 4. Are thermal or alcohol baths good for catarrh? 5. Would you advise wearing a compress?"

Ans.— 1. There is nothing better than fruit and nuttose sandwiches or bread thoroughly spread with sterilized nut butter, with fresh or baked apples, or, in the absence of the apples, stewed dried fruit of some sort. Such a lunch will make a complete and wholesome meal.

2. Granose, abundance of fresh fruit, and nut products. We quote the following list of aseptic foods from "The Stomach," published by the Modern Medicine Publishing Co., Battle Creek, Mich.:—

Peas purée.	Vegetable broths.
Lentil purée.	Corn soup.
Beans purée.	Bromose.
Nuts purée.	Malted nuts.
Granose.	Ambrosia.
Granola.	Lac vegetal.
Macaroni with tomato sauce.	Nut porridge.
	Nut butter.
Fruit toast.	Nut meal.
Sterilized butter.	Sterilized nut butter.

GRAINS.

Graham mush.	Grain jelly.
Oatmeal mush.	Jellied oatmeal.
Mixed mush.	Rolled oats.
Gluten mush.	Baked potato.
Granola mush.	Corn pulp.
Hominy flakes.	Rolled rye.
Oatmeal blanc-mange.	Rice.
Gluten water gruel.	Rice water.
Graham grits gruel.	Rice molded.
Corn-meal gruel.	Browned rice.
Graham gruel.	Hulled corn.
Oatmeal gruel.	Gluten.
Split pea soup.	Grains of gold.
Lentil soup.	Hominy.
Green peas.	Popped corn.
Barley gruel.	Corn gofio
Corn-meal.	Wheat gofio.
Cracked wheat.	Pulp succotash.
Boiled wheat.	Kornlet and tomato.
Molded wheat.	Kornlet.
Pearled wheat.	Lentil toast.
Rolled wheat.	Granose brown bread.
Graham grits.	Zwieback.
Bran jelly.	Crystal wheat.
Unfermented breads prepared without milk.	Sticks.
	Crisps.

FRESH FRUITS.

Grapes.	Oranges.
Raisins.	Pineapples.
Apples.	Pears.
Berries.	Figs.
Cherries.	Bananas.
Currants.	Melons.
Peaches.	Dates.

FRUITS COOKED WITHOUT SUGAR.

Baked apples.	Stewed raisins.
Baked pears.	Stewed tomato.
Baked apple dessert.	Apple jelly without sugar.
Baked tomato.	Cranberries and sweet apples.
Prune marmalade.	Apples stewed with raisins.
Prune dessert.	
Steamed prunes.	
Stewed prunes.	

FRUITS COOKED WITH GRAINS.

Pearled wheat with raisins.	Graham apple mush.
Pearled barley with raisins.	Granola fruit mush.
Cracked wheat with steamed apple.	Farina with fresh fruit.
Farina with fig sauce.	Poached eggs.
Rice with fig sauce.	Raisin gruel.
Rice with raisins.	Macaroni with tomato sauce.
Rice with peaches.	Banana toast.
Graham grits with raisins or figs.	Tomato toast.
	Prune toast.
	Prune pie with granola crust.

Antiseptic charcoal tablets are often helpful. In cases of constipation accompanied by acne or boils on the skin, two or three tablets should be taken after each meal.

3. The patient should have a cool sponge bath followed by a vigorous rubbing with oil or vaseline every morning on rising, a warm bath with soap twice a week at bedtime, and make a free use of the Magic Pocket Vaporizer.

4. Hot baths increase the tendency to take cold; they should be taken only at night, and once a week is sufficiently often. They should be followed by a cold bath until the skin is thoroughly toned up so that the perspiration does not continue after the bath. It is best to go to bed immediately after the bath, and a cold bath should be taken the next morning.

5. The moist abdominal bandage is of advantage, also the moist compress about the neck.

Honey.— Several new subscribers wish to know if pure honey is wholesome used instead of sugar.

Ans.— Honey is doubtless one of the most wholesome of all forms of sugar. It is composed of about equal parts of glucose and levulose. Levulose is that form of sugar in which this element of food enters the blood, cane and other forms of sugar as well as starch being, by the process of digestion, converted into the form of levulose by absorption or during the process of absorption. It must be remembered, however, that honey contains other things besides sugar, such as the pollen of flowers, dust, essential oils from the flowers, which are highly poisonous in character, also virus from the poison-bag of the bee, some of the contents of which are injected into each little cell as an antiseptic to prevent fermentation. The wholesomeness of honey may be increased by exposure to the boiling point in a double boiler for half an hour. The free use of honey, however, as well as of any other form of sugar, is in the highest degree detrimental to digestion, producing catarrh in the stomach, acidity, flatulence, and a variety of other digestive disorders.

Cutting the Hair.— I. L., Pennsylvania, asks (1) if constant cutting of the hair does not weaken the roots; and (2) if not, why men become bald-headed so much more frequently than women.

Ans.— 1. No.

2. There are various causes. Baldness is sometimes a parasitic disease, and is not infrequently contracted in barber shops. An unhealthy state of the scalp is sometimes produced by keeping the head too much covered. There is a much larger number of women suffering from baldness than is generally known, as the defect is always hidden by an ingeniously constructed and adroitly adjusted artificial substitute.

Menopause.— W. M., Virginia, inquires what causes a middle-aged lady to become suddenly very warm and to perspire freely, with a feeling of suffocation.

Ans.— The symptoms referred to are due to disturbance of the sympathetic and vasomotor nervous systems. Approaching "change of life" may be the cause.

LITERARY NOTICES.

THE *Review of Reviews* says that the January number of the *Century* "is a notable one," an opinion in which one can scarcely fail to concur upon laying the magazine down. The versatile Dr. S. Weir Mitchell begins a new story which bids fair to be of general interest; Gustave Kobbé gives some dramatic examples of "every-day heroism," in an article under that title. There is a good article on "French Wives and Mothers," by Anna L. Bicknell, with illustrations by Boutet de Monvel. Leonard Huxley, a son of the famous scientist, contributes a paper on "Some Scenes from Huxley's Home Life," which furnishes much interesting matter concerning the relations of the father to his children and the tenderer side of his life in general. Price, $4 a year; 35 cents a number. The Century Company, Union Square, New York.

THE January *Harper's* contains an instructive article on "The New Northwest," from the pen of J. A. Wheelock. Laurence Hutton contributes some very readable reminiscences of "A Group of Players," including Edwin Booth, William J. Florence, Lawrence Barrett, John Mc Cullough, Lester Wallack, and Henry J. Montague. The article is accompanied by portraits of these noted players. Elise J. Allen gives the first instalment of a carefully written, well-illustrated article on "Stuttgart." Price, $4 a year; 35 cents a number. Harper & Brothers, New York.

THE *Atlantic Monthly* for January leads out with a paper on the "Growth and Expression of Public Opinion," by E. L. Godkin. The writer believes that newspaper editorials are coming to be less and less of an influence with the people at large, and sets forth the causes which have contributed to this result. The average American newspaper reader, always in a hurry, runs his eye down column after column of more or less startling and entirely disconnected headlines, and forms his opinion of current events therefrom, not being willing to give the time and attention necessary to follow through an editorial article. There is a charming article on "The Wild Parks and Forest Reservations of the West," by John Muir, poet, naturalist, and explorer. Aside from Alaska, the public health and pleasure grounds left in the West are chiefly the four national parks, — the Yellowstone, Yosemite, General Grant, and Sequoia, — with thirty forest reservations, containing in all some forty million acres of land. Mr. Muir goes on to describe these different sanctuaries of the wilderness as only he can. Price, $4 a year; single copy, 35 cents. Houghton, Mifflin & Co., Boston and New York.

IN the January *Lippincott's* Oscar Herzberg, in an article on "Druggists, Ancient and Modern," says that the origin of the druggist is shrouded in mystery; but there is evidence that he was in existence as long ago as the time when the cuneiform inscriptions of Assyria were made, and that in Egypt one branch of the priesthood of Isis was proficient in his art. In the same number George Ethelbert Walsh describes the great botanic gardens of the world, and shows how far ahead of America most other countries are in beautiful public gardens. Calvin D. Wilson tells of some of the picturesque things that are to be seen on the eastern shore of Virginia. It seems that the "eastern shore" furnishes more of what are usually considered table delicacies than any other region of equal area in the world. Price, $3 a year; single copy, 25 cents. J. B. Lippincott Company, Philadelphia.

THERE are two articles of unusual value and interest in the January magazine number of the *Outlook*, a publication of which we are coming more and more to expect excellent things both in the way of literature and illustration. The first of the articles referred to is the initial instalment of "James Russell Lowell and His Friends," by Edward Everett Hale, which is to run

through the twelve magazine numbers of the current year. Mr. Hale is peculiarly well fitted for the work of his present undertaking, having been an intimate and life-long friend of Mr. Lowell's. In a prefatory note the writer feelingly says: "I shall feel that I have not succeeded in what I have attempted if they [the papers] do not give, all through, the sense of Mr. Lowell's eagerness to be of use to mankind, and the simple and affectionate relations which he held with everybody who came near him." The second of these articles, by W. S. Harwood (written from Stockholm), is "Sloyd: The Swedish Manual-Training System," which in every line gives evidence not only of the writer's complete familiarity with the subject but his enthusiasm in regard to its value as a means of training for children and young people. One receives from it a very clear general idea of the history and scope of the real Swedish sloyd, which, in our country, has been modified and adapted until it too often fails of its real purpose. Both articles referred to are very thoroughly illustrated. Price of the weekly *Outlook* (magazine numbers included), $3 per year; single number, 10 cents. The Outlook Company, 13 Astor Place, New York.

"THE Story of the Revolution," by Henry Cabot Lodge, beginning in the January *Scribner's*, opens with a picture of the social conditions in Philadelphia in 1774, showing it to have been the most civilized city in the country at that period. Mr. Lodge is particularly strong in his characterizations of the great men of the time — Adams, Patrick Henry, Franklin, Washington.

The illustrations for this series of articles have been in preparation for a long time. There will be a series of new historical pictures by Howard Pyle, Yohn, and Peixotto, rare portraits (some of them wood-engraved), scenes from Revolutionary battlefields as they appear to-day, unique documents from famous collections, etc. Price, $3 a year; single copy, 10 cents. Chas. Scribner's Sons, New York.

THE January *Mc Clure's* opens with a pleasant article by Norman Hapgood on Boutet de Monvel, the French painter of child life, who has set himself to the rare task of giving to his childish figures individuality, character, and youthfulness — to give the real boy and the real girl, instead of an ideal child evolved from the brain of a painter who has no real knowledge of or acquaintance with child life; and M. de Monvel considers this a noble and worthy phase of his beloved art. Another article of interest is a thrilling and well-written account of some dramatic railroad incidents from the pen of Herbert E. Hamblen, a practical railroad man. His story of his own personal experience as engineer in a head-on collision is well worth reading. Price, $1 a year; 10 cents a number. S. S. Mc Clure, New York.

THE *Interchange*, now in its fourth year, is the official organ of both the Michigan Woman's Press Association and the Michigan State Federation of Women's Clubs. It is a monthly paper of magazine form, devoted largely to the interests of women's clubs, containing articles on club work, experiences of club workers, and reports of the special work done by individual clubs throughout the State, being, as the name indicates, a medium for the interchange of thought, enthusiasm, and good fellowship among the club and press women of the State. It is both editorially and typographically a credit to the organizations which it represents. Price, 50 cents a year. Address the *Interchange*, Charlotte, Mich. Sample copy furnished on request.

THE January *Overland Monthly* opens with a well-illustrated article on "The Snake River Country." Another article likely to be of general interest is "To Klondike by River and Lake," which is the personal narrative of Thomas Magee, who made the trip last summer, and has recently returned to San Francisco. Price, $1 a year; single copy, 10 cents. Overland Monthly Publishing Company, San Francisco, Cal.

PUBLISHERS' DEPARTMENT.

THANKS to the co-operation of the hundreds of friends of the educational work represented by this magazine, our circulation is rapidly climbing up toward the twenty-thousand mark. We hope within three months of the present time to be able to present a paid-up circulation of twenty thousand or more, and see no reason why we may not, within two years, reach one hundred thousand. There are at least that number of persons in the United States who would be glad to receive monthly visits from a magazine which, like GOOD HEALTH, is brimful of practical teaching relating to subjects of vital importance. We are a dying race, and the fact seems to be little known or appreciated. The mission of GOOD HEALTH is to spread abroad the knowledge of life-saving truth.

31 VOLUMES OF GOOD HEALTH WANTED BY THE NEW HAMPSHIRE STATE LIBRARY.

Mr. ARTHUR H. CHASE, librarian of the New Hampshire State Library, has written us that the past year's numbers of GOOD HEALTH are so much appreciated there that the library wishes to purchase all the preceding thirty-one volumes, and asks that we request any of our subscribers who may have such volumes to spare, to correspond with him respecting their purchase. We have already supplied the library with volumes 19, 22, 24, 25, 27, 28, 29, 30, and 31, from our office. Those having the other volumes will confer a favor upon the publishers as well as the library by writing to Mr. Chase, New Hampshire Library, Concord, N. H.

FOUR large and interesting Schools of Health are at the present time in progress in the city of Chicago, conducted by W. A. Hansen, assisted by the nurses connected with the Medical Missionary Training-School. In connection with the schools, Dr. J. H. Kellogg is giving a series of lectures Tuesday afternoons at 2 : 30 at Willard Hall. These lectures are eminently practical in character, and are illustrated by means of experiments, models, manikins, charts, and blackboard sketches. Great interest is manifested, the hall usually being crowded, and the effort is in every way a success. Additional Schools of Health will be organized as soon as the present series terminates, and it is believed that thousands of the intelligent citizens of Chicago will, in the course of the next few months, avail themselves of this opportunity for becoming familiar with the principle of dietetic and hygienic reform.

WITHIN the last two months successful Schools of Health have been held in De Kalb and Peoria, Ill.; and South Haven, Mich. The schools in De Kalb were organized by Messrs. Gardener and Dunlap, of the Medical Missionary College, during last summer, while Mr. and Mrs. Craig organized a school at Peoria. Mr. A. B. Castle, a gentleman residing near South Haven, Mich., who has long been interested in the principles represented by this magazine, organized a school in South Haven. The instruction in these schools has been given by Drs. Olsen and Rossiter, assisted by Mrs. Nuding and Miss Lenna Whitney. Each of these efforts has been the means of enabling a large number of mothers to reorganize their homes upon a sanitary basis.

The hearty support accorded this work everywhere is ample evidence that it is a timely movement, and one which is certain to result in the accomplishment of great good.

WE are in receipt of a handsome calendar of the State Agricultural College. The authorities of the college state that it was never before in so prosperous a condition. There entered, this fall, 226 *new* students in the regular courses, this being by all odds the largest class in the history of the institution. There are also about 75 special course students; making a total enrolment this year of nearly 500. The street-car line from Lansing has been extended into the grounds, so that it is very easy for students to board in town and attend the college. Pres. J. L. Snyder, Agricultural College, Lansing, Mich., will be glad to furnish a catalogue on application.

WE take pleasure in referring enterprising young people who believe in self-improvement, to the advertisement of the Michigan Correspondence Commercial School, which appears in another column. We know the gentlemen who are conducting this enterprise, and are sure that they will do as they agree, and that their correspondence course in bookkeeping and business practise comprises a genuine and valuable training, which will prove practically helpful to all who receive it. The method employed in this teaching is something entirely new, and cannot fail both to interest and instruct every earnest student.

Teacher (to class in addition) — "Now, take two mince pies and four mince pies, what does it make?"

Johnny — "Nightmare, ma'am."

GOOD WORDS FOR GOOD HEALTH.

THE president of the Central Normal College, in Waddy, Ky., writes: —

"The first copy of GOOD HEALTH has been received, and every word read and reread by both myself and my wife. It is just what we have been needing for years, and we write to congratulate you on your choice of subjects found in the December number, and the masterly common-sense manner in which you lay bare the facts."

A teacher in the Latin and Greek department of Avalon Presbyterian College, Avalon, Mo., says: —

"I hear very favorable reports of your magazine, GOOD HEALTH. I am interested as a teacher here, and would like to use it in giving some instruction to the young ladies at the college, so will be very grateful if you will send the magazine to my address."

From the manager of the grocery department of Siegel and Cooper's big store in New York City: —

"I enclose herewith two dollars for subscription to GOOD HEALTH. My family read the copy of the magazine that I brought home with me, and will look for its coming with pleasure."

A prominent physician to whom the magazine has been sent the past year writes as follows: —

"Let me take this occasion to thank you for your appreciated favor in sending me GOOD HEALTH for the past year. It is a thoroughly good magazine, and I have enjoyed it very much."

Another physician sends these appreciative words: —

"I have very carefully examined the journal you kindly sent me, entitled GOOD HEALTH, edited by Dr. J. H. Kellogg, and consider it a very valuable magazine, full of good points in a very entertaining form."

From numerous other letters received during the last few weeks we extract the following: —

"I fell in love with the first number of GOOD HEALTH I ever saw, and have been a subscriber ever since. I am sending it to my sister for a holiday gift."

"Enclosed find two dollars for two subscriptions to GOOD HEALTH. . . . Money is scarce, but I cannot — *will* not — give up GOOD HEALTH. Words are inadequate to express my high appreciation of its intrinsic worth."

"I received the December issue of GOOD HEALTH, and after perusing its columns, I deem it the very best hygienic journal I ever read, and it heads the list of all my periodicals. It is worth its weight in silver and gold."

"I am delighted with the magazine GOOD HEALTH; it is worth ten times what it costs."

"GOOD HEALTH is very much appreciated in our family; and after being duly read and digested here, it goes clear across the continent to the northern part of the State of New York, where it has gained a few friends in a neighborhood given over to the traditions of 'good living' and consequent bad health. It will do good there, and the result will, I think, be a call for subscriptions and light from that quarter."

"I saw a copy of GOOD HEALTH about a year ago, which pleased me much. I congratulate you on having brought the magazine to its present form, and wish you every success. I am in hearty sympathy with the higher plan of living in every phase."

"I dearly love the magazine, and think each number well worth the price for the whole year."

"I have been a subscriber to GOOD HEALTH for over fifteen years, and feel that I cannot do without this valuable journal."

"The magazine is replete with graceful offerings to the public."

"Enclosed please find twenty cents, for which please send me two extra copies of GOOD HEALTH for December. The magazine is invaluable in my home, and I wish to extend its usefulness to others."

"The magazine has been received, and is highly appreciated. I consider it the best that I have read in the line of good health literature. I have turned it over to some of my friends for perusal."

"Your magazine is of great value to me as a teacher of physical culture. I am a graduate of the Columbia School of Oratory of Chicago, which, as you know, endorses many of your principles and methods."

"Enclosed find one dollar for subscription to your magazine. I am very much pleased with the tone of its contents."

"I regard GOOD HEALTH as a necessity in my home, and will do what I can toward disseminating the principles it contends for. The magazine has become a part of my life."

"I think GOOD HEALTH is a very good health journal, as the language is so plain that any one can understand the terms used. I wish you every success in your work."

"I had an opportunity to look over the October number of GOOD HEALTH, and it was so full of good instruction, and so much better than it used to be, that I said to myself, 'I must have it.'"

THE WORKINGMEN'S HOME.

THE relation between GOOD HEALTH and a workingmen's home may not be obvious to all. Perhaps that is because it is not one's own good health that is affected, but that of some poor member of the fraternity of the "Great Unwashed."

Whoever sees the crowd of ragged and dirty men making their way into the rooms of the Workingmen's Home at 42 and 44 Custom House Place, Chicago, realizes at a glance that the interests of public health, to say nothing of humanity, demand that something be done for these men. The Workingmen's Home is founded upon the principle that the bodies as well as the souls of men must be saved. It is probably the most complete enterprise of the kind ever undertaken. Its purpose is to serve as a sort of tramp hospital, where homeless and friendless men, the outcasts of society, may be rescued and restored by the combined influences of physical and moral means, — medical relief, brotherly kindness, and the regenerating power of the gospel. The various departments in the Home are supervised by students in the Medical Missionary Training-School.

The building used for the work was formerly a church. About four and a half years ago it was leased by the present management, who at once put in baths, laundry, facilities for fumigation on an extensive scale, and various other improvements. Poor men are furnished lodging at ten cents a night, and food is supplied at a penny a dish. All the patrons are required to keep clean. Baths are free, or rather they are compulsory without charge. Last winter accommodation was furnished for about three hundred men, and more than four hundred were sometimes sheltered in a single night. More than half that number were often taken directly from the police station, where they had been lying upon the cold stone floor. As a rule, men are required either to pay for or work for their lodging; but exception is made in case of those who are temporarily stranded, and all who are just starting in a new and better life.

No feature of the work has been more successful than the free laundry. There any man who wishes may come in and wash and dry his clothes. This is a wonderful boon to many a man who owns but one shirt, and yet has the instinct of a gentleman. There are more such men than one might think. The place has been crowded in the coldest weather. Many amusing as well as pathetic incidents illuminate the past of these lives, many of whom have been more sinned against than sinning. No one who has a part in such mission work as is constantly done in this place, can fail to gain a deeper and more steady belief in the persistent, ever-present good that is hidden away somewhere in the heart of every man, however low he may have fallen.

THE following answers represent the correct solution of our "ad" as published in the Chicago *Record* of Nov. 20, 1897: —

TTBEAL RKEEC — In what city is the largest sanitarium in the world located? *Ans.—Battle Creek.*

OOGD TEAHLH — Give the name of the largest and best health magazine in the U. S. *Ans.— Good Health.*

MELARAC LAREEC — What is the best substitute for coffee? *Ans.— Caramel-Cereal.*

ARCES — Something a farmer must have if he raises a crop. *Ans.—Cares.*

IMKL & ETMA — A bad combination of food. *Ans.— Milk & Meat.*

NCEA — Something a gentleman often carries. *Ans.— Acne.*

UIFTR & NIRASG — A good combination of food. *Ans.—Fruit & Grains.*

OKRP — What meat commonly used is most likely to contain disease? *Ans.—Pork.*

RESEECIX — What is necessary to perfect health? *Ans.— Exercise.*

TARWE — One of nature's best methods in the treatment of disease. *Ans.— Water.*

The questions contained in our "ad" which appeared in the *Inland* and *Learning by Doing*, are given below, with correct answers: —

TTBEAL RKEEC — In what city is the largest sanitarium in the world located? *Ans.— Battle Creek.*

OOGD TEAHLH — Give the name of the largest and best health magazine in the U. S. *Ans.— Good Health.*

MELARAC LAREEC — What is the best substitute for coffee? *Ans.— Caramel-Cereal.*

ARCES — Something a farmer must have if he raises a crop. *Ans.— Cares.*

SPYSDEAIP — What special disease is treated successfully at the Battle Creek Sanitarium? *Ans.—Dyspepsia.*

NCEA	Something a gentleman often carries. *Ans.—Acne.*
UIFTR & NIRASG	A good combination of food. *Ans.— Fruit & Grains.*
OKRP	What meat commonly used is most likely to contain disease? *Ans.—Pork.*
SAEC	Something a young physician requires. *Ans.— Esca.*
TARWE	One of nature's best methods in the treatment of disease. *Ans.— Water.*
IMKL & ETMA	A bad combination of food. *Ans.— Milk & Meat.*
RESEECIX	What is necessary to perfect health? *Ans.— Exercise.*

Space will not permit us to mention the names of all the contestants, but each can compare the correct solution with his list, and thus ascertain the number of correct replies he furnished.

The letters published below give expression to the appreciation felt by successful contestants: —

"DECATUR, ILL., Dec. 31, 1897.

"GOOD HEALTH PUB. CO.: Please accept my thanks for the draft for $25 received this morning. I enclose one dollar for GOOD HEALTH one year. It was my interest in the cause of good health that attracted my attention to your advertisement in the Chicago *Record*. For several years I have given much attention to the effect of good food on health. I am glad to find at last a publication that will guide me to more intelligent study. In advancing the cause, I shall take pleasure in calling attention to GOOD HEALTH.

"Yours very truly,

"MRS. MARION STEVENSON."

"BONAPARTE, IOWA, Jan. 1, 1898.

"Good Health Publishing Co.,

"Battle Creek, Mich.

"GENTLEMEN: Your favor of December 29, and the draft for twenty-five dollars received to-day. It was a very pleasant surprise and a very acceptable New Year's gift. Accept my most sincere thanks. I consider GOOD HEALTH the best health magazine published, not only on account of the hygienic principles it teaches, but also on account of the literary excellence of all the articles published in it. I enclose one dollar, for which please extend my subscription for one year. Wishing you the best success for the coming year, and the richest blessings that Heaven can bestow, I remain,

"Very respectfully and gratefully yours,

"CATHERINE EICH."

THE menu card submitted by Frank Shoop, Fourth and Jackson Sts., St. Paul, Minn., was considered by the committee of awards as being the best and most appropriate. Mr. Shoop will accordingly receive the $15 prize offered.

The committee would give honorable mention to the cards submitted by F. J. Jannsen, 227 E. 88th St., New York, and O. P. Leonard, Brockton, Mass., both of which were creditable specimens of workmanship.

THE KEY TO KLONDIKE.— The Northern Pacific Railway Company have issued a folder of the Klondike region which includes a fine large map of Alaska and the gold fields of British Columbia executed in full detail; and a brief description of the Klondike region; its climate and healthfulness; method of mining; routes to Alaska and Klondike; time and distance tables; outfits, packing, etc.; customs, duties, etc.; and regulations governing placer mining in that territory. The folder is illustrated by eleven good half-tones, and altogether affords just the information one would need who expects to go there. The Northern Pacific has taken great pains to present information that is definite and thoroughly reliable.

This folder can be obtained by sending a two-cent stamp with address to Chas. S. Fee, Gen. Pass. & Tkt. Agt., St. Paul, Minn.

TO SUNNY CALIFORNIA.— Every Saturday night during the winter months personally conducted Tourist Car excursions, organized by the Chicago, Milwaukee & St. Paul Railway, start from Chicago at 10 o'clock P. M., and run through Omaha, Lincoln, Colorado Springs, and Salt Lake City, to Sacramento, San Francisco, and Los Angeles, via the popular Midland Tourist Car Route.

Each car is accompanied by an intelligent and obliging courier, who makes himself useful to all the passengers. This is an entirely new departure in Tourist Car service, and is highly approved by hundreds of California passengers. A sleeping berth costs but $6, and the railroad ticket is proportionately cheap.

Apply to the nearest Coupon Ticket Agent for an illustrated time-table folder of the Midland Route to California, or address for further information, Harry Mercer, Michigan Passenger Agent, Detroit, Mich.

NEW FACTS ABOUT SOUTH DAKOTA.— To enable the farmers in the Eastern States to pass the long winter evenings in an entertaining and instructive manner, the Chicago, Milwaukee & St. Paul

Railway Company has recently published for free distribution, a new pamphlet, finely illustrated with pictures which will delight the eyes of Eastern farmers, and containing letters from their brethren in South Dakota descriptive of their experience while tilling the soil and raising cattle, sheep, and hogs in the "Sunshine State."

This pamphlet is well worth reading through from cover to cover. It will be sent free if you will send your address to either H. F. Hunter, Immigration Agent, 291 Dearborn St., Chicago; or to Geo. H. Heafford, General Passenger Agent, Old Colony Building, Chicago, Ill.

"Klondike" is an illustrated folder about Alaska and its gold mines, with rates of fare and information as to how to get there and what to expect after arrival. This publication and the above may be had free of expense by sending four (4) cents in stamps to pay postage to Geo. H. Heafford at the above address.

IN going to St. Paul and Minneapolis the wise traveler selects the Chicago, Milwaukee & St. Paul Railway.

Why?

It is the best road between Chicago and the twin cities.

It has the most perfect track.

Its equipment is the finest.

Its sleeping-cars are palaces.

Its dining-car service is equal to the best hotels.

Its electric-lighted trains are steam-heated.

Its general excellence has no equal.

It is patronized by the best people.

It is the favorite route for ladies and children as well as for men.

It is the most popular road west of Chicago.

For further information, apply to nearest ticket agent or address Harry Mercer, Michigan Passenger Agent, C., M. & St. P. Ry., 7 Fort St. W., Detroit, Mich.

THE Kansas City *Medical Index* mentions a bright lad in that section. Upon being asked by his teacher the name of the most important canal in America, he replied that it was the alimentary canal.

"A GOLDEN ERA" is the title of an illustrated pamphlet issued by the general passenger department of the Chicago, Milwaukee & St. Paul Railway on mining in Colorado, California, and other Western States.

DIRECTORY OF SANITARIUMS.

THE following institutions are conducted under the same general management as the Sanitarium at Battle Creek, Mich., which has long been known as the most thoroughly equipped sanitary establishment in the United States. The same rational and physiological principles relative to the treatment of disease are recognized at these institutions as at the Battle Creek Sanitarium, and they are conducted on the same general plan. Both medical and surgical cases are received at all of them. Each one possesses special advantages due to locality or other characteristic features.

ST. HELENA SANITARIUM, OR RURAL HEALTH RETREAT,

ST. HELENA, CAL.

A. J. SANDERSON, M. D., Superintendent.

THIS institution is beautifully located at the head of the Napa Valley. It is a fine large building, with excellent appointments, and all facilities required for the treatment of chronic invalids of all classes. It has also a record for a large amount of successful surgical work. There are several able physicians connected with the institution. The scenery is delightful, the climate salubrious; the water supply, which is furnished by mountain springs, is pure and abundant. Hundreds of cases of diseases generally considered incurable, have been successfully treated at this excellent institution during the twenty years of its existence.

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.

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 appropriate 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.

W. F. HUBBARD, 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, apparatus for the application of electricity in its various useful forms, manual Swedish movements, and massage.

COLORADO SANITARIUM,

BOULDER, COLO.

W. H. RILEY, 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 a 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.

GUADALAJARA SANITARIUM,

STATE OF JALISCO, MEXICO.

D. T. JONES, Superintendent.
J. H. NEALL, M. D., W. S. SWAYZE, M. D., ALICE SWAYZE, 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.

INSTITUT SANITAIRE,

BASEL, SWITZERLAND.

THIS institution affords the only place in Europe where patients can receive the advantages of a thoroughly hygienic diet, baths, Swedish movements, massage, and various other methods of treatment, applied after the manner and in accordance with the same principles which govern the Battle Creek Sanitarium and its several branches. The physician in charge has 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 Institut Sanitaire.

Address, 48 Weiherweg.