10 CENTS A COPY. PUBLISHED MONTHLY. $1.00 A YEAR.
Entered at the post-office in Battle Creek, Mich., as Second-class Matter.

GOOD HEALTH

MENS SANA IN CORPORE SANO.

JUNE, 1900.

G.W.B.

VOL. XXXV. EDITED BY J. H. KELLOGG, M.D. NO. 6.

"THEN, IF EVER, COME PERFECT DAYS."

GOOD HEALTH

A Journal of Hygiene.

VOL. XXXV. JUNE, 1900. NO. 6.

A CELEBRATED PIONEER.

BY J. H. KELLOGG, M. D.

ABOUT a hundred years ago there lived a poor peasant boy in a little country village in Austrian Silesia. While at work in the woods one day, he met with a serious accident, by which the bones of one arm were so badly broken that he was told by his doctors that he must always be a cripple. The boy was then about sixteen years of age; he had no education, and was very ignorant, but he had always been observing, and had noticed that whenever horses or other animals in that country met with accidents, the veterinary doctors had a practice of binding up the injured limbs in bandages wet with cold water. He had never seen anything of this kind done for human beings, but he thought if such treatment was good for animals, it might be good for him; so he bandaged his injured arm, as well as he could, with cloths wet with cold water, changing them frequently, and in a few weeks he was perfectly well, in spite of the predictions of the doctors that he would be a cripple for life.

This boy then became so much interested in the use of water in cases of accident that he began to use water treatment among his neighbors. His case caused a good deal of talk in the little village in the forest, and the people of the neighborhood opened their eyes when they saw him going about with a good, strong arm, when the doctors had said his case was hopeless. It was not long before all his time was occupied in going from family to family, using cold-water treatment for accidents.

His faith in water grew to such an extent that after a while he formed the conception that water might be used successfully in treating diseases as well as accidents. In several cases of disease he made applications of water with remarkable success. After a time he conceived the idea that applications of water might be successfully used in cases of internal maladies, such as disorders of the stomach and liver, and his attempts in this direction were also successful. In this way he finally established a reputation as a cold-water doctor, or "water-cure doctor," treating by *Wasser-Kur*, as they call it in Germany; and a few years later the little village where he lived had become a sort of Mecca for invalids from all over the country. It was not long before thousands of people from all parts of the world were annually visiting the little water-cure at Graefenberg in Austrian Silesia, to receive cold-water treatment at the hands of Vincent Priessnitz.

Seventy-five years ago, when it took three or four months to make a voyage across the Atlantic, from New York to

Germany, and six months to go from South America to Germany, men and women from all parts of the known world, including princes and princesses, counts and countesses, baronets, knights, and members of royal families, were annually gathering at Graefenberg for cold-water treatment by Priessnitz. Soon a great persecution was instituted against him. Some people in different parts of Austria and Germany, finding so much ado made about this water-cure doctor, who was nothing but an ignorant peasant, began to be greatly disturbed over it, and raised quite an outcry against him: "What business has this poor ignorant peasant boy to be practicing medicine? What business has he to be known as 'Dr.' Priessnitz? What business has he to take these patients who have been pronounced incurable, and make them well? And what right has he to be holding himself forth as a healer of incurable diseases?" There was so much of this kind of disturbance that at length the Austrian government sent the public administrator of health to Graefenberg to see what was going on. After a careful investigation, he reported that the cures claimed to have been wrought by cold-water treatment were genuine; that it was wonderful by what simple remedies people were cured under the treatment of Priessnitz. The Austrian government therefore granted Priessnitz, "the ignorant peasant boy," as he was called, who could scarcely more than read and write, who had no medical education, and whose whole knowledge of anatomy was what he had learned from his study of animals, whose entire practice in surgery consisted in setting the broken bones of animals,— the Austrian government granted this man a special diploma over the heads of all the faculties of medical schools, permitting him to practice medicine,— no, not to practice *medicine*, but water.

The reputation of Priessnitz grew rapidly, and it was not very long before the French government sent Dr. Shuetetten, who was then at the head of the military medical service of the French army, to visit Priessnitz, and to investigate the results of cold-water treatment. He came back reporting that the thing was genuine; so the French government made provision for the establishment of water-cure institutions in France. Because of the favorable patronage of the Austrian government, the German government acquired confidence in the methods of Priessnitz, and water-cures were started all over Germany, there being at the present time one hundred and thirty-six such establishments in Germany, which is a country small in area, not much larger than some of our Western States. There are now several hundred physicians in that country who devote themselves exclusively to the treatment of disease by means of water, diet, and other natural remedies,— the practice of what is called in Germany the *Natur Heilkunde*. These physicians are so enthusiastic upon the subjects of diet-cure and water-cure that there are now in Germany thirty-six periodicals published in the interest of this method of treatment, and more than four hundred and fifty unions, or medical literary clubs, devoted to the study and practice of reform methods in diet and the prevention of disease. In Bavaria one little town has become world-famous through the practice of cold-water treatment by Pastor Kneipp, who studied the work of Priessnitz and became interested in his methods, afterward establishing a water-cure on the same plan. People from all over the world have visited him, and his methods have become so famous that they have been introduced into this country, and in New York, Chicago, Boston, and other large cities may be found representatives of the Kneipp system.

The methods of Vincent Priessnitz, while most effective, were at the same time exceedingly crude. They were not scientific, but they had the essence of a wonderful science in them; they had the kernel of a nut which has developed into a marvelous tree. Water is the most remarkable of all the curative agents known; there is no question whatever that in scientific hydrotherapy, as we know it to-day, we have the most thoroughly scientific method known to the world of dealing with morbid conditions; we have better control over the human body and over the various diseased conditions to which it is subject, through the agency of water, than by any other or all other therapeutic means combined.

A brief description of some of the methods of Vincent Priessnitz may be interesting. In order to find out whether a patient could stand the water-cure or not, he used a method very similar to that pursued by the Irish servant-girl to ascertain whether the water was the right temperature for the baby's bath. She said it was only necessary to put the baby into the water, and if it made "goose-flesh," the water was too cold; if it burned him, it was too hot. The method of Priessnitz was something like that. He applied cold water to a man, and then watched to see what effect it had. At first he did not apply it in a very careful manner, but he was always on hand when the patient had his first bath.

When a stranger arrived for treatment, he was put to bed as usual the first night, and in the morning a stout German attendant would come to the door and waken him. As soon as he arose, a wet sheet wrung out of very cold water — as cold as could be obtained in the winter, which was about 32° — was wrapped round him, and he was put to bed and warmly covered. After his teeth stopped chattering and he began to get warm and to feel a little comfortable, the attendant called again, and said he was ready to give him the next thing on the program, which was to lead him downstairs with the wet sheet around him, and take him into the basement, where there was a big stone tank supplied with water direct from the snow-covered mountain side. Into this tank of ice-cold water he was made to plunge, and required to stay there for a time. Upon coming out, his body was rubbed till it was warm and dry. Then a towel was wrung out of cold water and wound around him, with a dry towel over it, and the patient was told to go out and walk three or four miles and back before breakfast, and to drink at each of the springs which he found along the mountain path. So he was started out early in the morning, after his bath, to walk from three to ten miles, and to drink from three to fifteen glasses of cold water before taking his breakfast at 8 o'clock, which consisted chiefly of *schwartzbrod* (black bread) and sour milk. Such was the usual morning program for the beginner at Graefenberg.

The doctor, as I have said, was always on hand when the patient took his first bath, and if he endured it well, he was ready to give him further treatment; but if he did not, and anything happened, he would have nothing more to do with him. It was a sort of "kill or cure" method.

After a time, by experience, Priessnitz acquired more skill, and instead of plunging the patient headforemost into the tank of ice water, he applied cold water to some portion of the body, and watched the effects. He found that when cold water was rubbed upon the arm for some time, the skin would become red, and he learned that this was an indication that the man had good power of reaction. He discovered that one of the greatest potencies of water is its power to cause reaction.

Priessnitz made another discovery; he found that most of his patients were suffering from overworked stomachs. He made this experiment: Taking two pigs, he fed one on cold food, and the other on hot food, for six months. At the end of that time he slaughtered both pigs, made an examination, and declared that the intestines and stomach of the pig that had eaten the cold food had a natural, healthy, pink color, whereas the intestines and stomach of the pig that had been fed on hot food were dark colored and intensely congested, and when taken out, almost fell in pieces, and were not fit to use in making sausages. I do not know that this observation of Priessnitz could be termed thoroughly scientific, but I do know this,— that cold stimulates the activities of the body, while heat has the opposite effect.

This celebrated pioneer found that he could take a bilious invalid or dyspeptic, or a corpulent gormand, and could deal successfully with his case by means of water, the results seeming almost like a resurrection.

Priessnitz was one of the first to employ the douche. He had little houses built so loosely that the wind could blow freely through them, and then he had water brought down the mountains in troughs to these houses, and so arranged that it would fall from the troughs in streams about the size of the arm, and from a height of about fifteen feet. The patients were required to put themselves under these streams, which were at a temperature of about 50° in winter and a little higher in summer, putting in first one hand, then the other, next one arm, and then both arms, then the shoulder, and so on, until the whole body had had a complete application of the stream of water. Then an attendant would rub the patient until he was warm and dry. If this treatment did not kill the man, it was almost sure to cure him, because it gave his system a mighty uplift,— a tremendous stirring up.

The cold-water cure, as it was practiced in the United States, did not succeed as it did in Germany, because the people were not so hardy and vigorous as were the Germans; they had been accustomed to less simple habits of life, and had not the physique to endure such very vigorous treatment.

THE HOMES OF POOR PEOPLE.

BY EMMA WINNER ROGERS.

THE one-room cabin of the negro, with its board windows, may serve in a poor fashion to shelter the dusky children of the South, whose homes are mostly in the country or in villages; but for the working people of the cold North, and in its thickly built-up cities, the matter of suitable and comfortable housing is of the greatest importance to the health and morals of the entire community.

The working people, or the poor,— almost interchangeable terms,— make up a far larger part of the community than is generally supposed. Statistics for New York for the year 1891 show that the tenement houses there doubled in number in twenty-four years, and then numbered 37,358, sheltering 276,565 families, a total tenement population of 1,225,000. It is thus a question of how one half or more of the population of the cities shall be housed.

That the homes of the poor are far from what they ought to be, and are too often the source of sickness, suffering, and demoralization, is a well-recognized

An Inhabited Alley.

fact. Of late years an immense improvement has been made in many of the great cities abroad and at home, yet the evils of bad housing have grown to such proportions that more than one generation is needed to correct them. Professor Huxley declared of London, a few years ago, that 250,000 people were living there in a condition inferior to that of West African savages; and Dr. Gould, of New York, said not long ago, "In no other city of the world are the habitations of the poor so bad as in New York."

SETTLEMENT "NEIGHBORS."

Conditions are serious enough in Chicago in regard to the housing of the poor, even though they do not approach the evils of these older cities. Chicago is a newly built city, with ample space to expand in, with broad streets, with a system of alleys which, however unsightly, give air-space, and with few very large tenements. Its worst evils have grown up through indifference to sanitary and social conditions in the poorest wards.

Bad housing tends to the loss of hope and energy, the lowering of standards of living, and generally to moral deterioration. The frequency of dissipation and crime results naturally from the housing of ignorant people in ordinary tenement environments. It is safe to say that of the ten thousand children and youth under sixteen years of age arrested annually in Chicago for crimes serious or petty, practically all come from the poorer tenement homes.

Bad housing is also responsible for a large share of the physical disability among the poor. The London health authorities estimate that the value of labor lost in congested neighborhoods, not from sickness, but from sheer exhaustion induced by unfavorable surroundings, averages twenty days annually for each working man. It is a pitiable fact that working men so often appear broken in health by middle life, and their wives at thirty-five and forty seem like old and feeble women. The death-rate of children in the tenement districts tells its tragic story of the results of bad housing. The child death-rate in the tenement wards of Chicago is appalling. In 1898, when the general city death-rate was 14 in 1,000 of the people, the death-rate among children in the sixteenth ward was 153 in 1,000, and in the nineteenth ward, 140 in 1,000.

Among the chief evils of the tenement wards in Chicago are the badly paved and unspeakably dirty streets and alleys, lined with wooden garbage boxes, the absence of small parks and playgrounds, or open squares or dooryards, and the distance of these wards from the large city parks. In addition to these unfortunate environing conditions, we find the sewerage and grading very imperfect, many hundreds of houses being four or five feet below the street level, and either

two houses built on one narrow lot or large tenements extending nearly the entire depth of the lot. At present the majority of the tenements are two- and three-story frame buildings, accommodating from three to eight families, but the tendency is to build large brick structures covering the entire lot and housing from eight to thirty families. The alleys are built up with small houses, interspersed with stables and saloons, except where the newer type of large brick tenement stretches its dismal length over the entire lot.

Many hundreds of families live in basements which might more properly be called cellars, as they are six feet or more below the grade of the street. The pallid children and unclean and wretched-looking adults who make their homes in these basements, are sufficient evidence that existing ordinances against their use need to be enforced.

There is an awakening of the social conscience in Chicago on the question of where and how the working people shall be housed, and this is manifest both in the municipal government and among associations and individuals. Two conferences on the housing of the working people have been held in Chicago within two years, the last one being in March, 1900, and in connection with a tenement-house exhibit for the three cities of New York, Chicago, and Boston. The exhibit and conference were held under the auspices of the Improved Housing Association of Chicago, and were highly successful. Models of New York's worst tenement block, and of improved tenements; photographs of improved and model tenements in London, Glasgow, Paris, New York, and Boston; and photographs of existing wretched conditions in these cities and in Chicago, made up the chief part of this most instructive exhibit. In addition to this, maps and carefully prepared papers showed the relation of the housing question to the health, life, and morals of the people.

The conference set forth in part the history and present status of the housing question in great cities, and many facts relative to Chicago's special needs. Among these it was admitted that definite information in the form of a tenement census was the first and most imperative need. Without it, real conditions and the extent of existing evils can not be known. Enforcement of building and sanitary ordinances, and enactment of additional ordinances is imperative if the evils of the overcrowded tenement wards are to be abated. Better sewerage, paving, and cleaning of streets and alleys

LIVING-ROOM WITH DARK BEDROOM.

are not less essential, and the securing of land at once for small parks and playgrounds and open squares. It was urged that the time is ripe for building model tenements and individual houses, and

FRONT AND REAR TENEMENT.

that these would raise the standard of housing among the tenement population, and promote health and morals and good citizenship.

An encouraging fact in the Chicago outlook is the recent activity of the building department in ordering the immediate destruction of old and dilapidated tenements in various parts of the city. This, it is hoped, is the beginning of greater interest in and care for the poorest districts of the city, and every such effort on the part of the city government is sure to win the earnest co-operation of public-spirited citizens. No reforms would lessen crime, sickness, and the death-rate so much, or bring hope and cheer into sad and careworn faces so surely, as practical movements which would make the tenement districts livable and home-like.

WHY comes temptation, but for man to meet
And master and make crouch beneath his feet,
And so be pedestaled in triumph ?

— *Browning.*

JOY.

Joy! joy! joy!
There is joy for thee, O Earth!
The golden morn,
Of beauty born,
With its amber dews
And changing hues,
With its tender skies,
Whose image lies
In the sparkling sea,
That exultantly
Lifts up its voice,
And cries, "Rejoice!"
With its song that floats
From a million throats,
With its bursting blooms
And rare perfumes —
All the glorious things
That the morning brings
On her quivering wings
Are a joy to thee, O Earth!

Joy! joy! joy!
Each sound is full of joy.
From the faintest sigh of the swelling leaves,
And the twitter of birds beneath the eaves,
And the laugh of the rill down the mountain side,
To the booming roar of the tossing tide;
From the tenderest trill to the deepest tone,
There 's a gushing fullness of joy alone —
Of that joy that is thine, O Earth!

Joy! joy! joy!
There is joy for thee, O Heart!
The life that fills
Thy veins, and thrills,
With quickening heat,
Each pulse's beat;
The power that dwells
Deep, deep below,
Like hidden wells
That silent flow,
But that upward spring
Like a mighty thing,
When a gushing thought
Into deed is wrought;
The aims that rise
Beyond the skies;
The love that lies
Like a peaceful sea,
Whose waters lave,
With songful wave,
Immensity;
Each glorious thing
That Life doth bring
On her glancing wing,
Is a joy to thee, O Heart!

Joy! joy! joy!
O, life is full of joy!
And 'mid the sounds that swell on high
From the lips of Earth, triumphantly,
There blends for aye a low refrain,
A softer sound, a sweeter strain;
'T is the voice of Life, and its thrilling tone
Sings the gushing song of joy alone —
Of joy that is thine, O Heart!

— *Mrs. S. M. I. Henry.*

THE CAUSES OF NERVOUSNESS.

BY DUDLEY FULTON, M. D.

NERVOUSNESS is a condition of excessive irritability, and is manifested in ways legion by abnormal reaction to every-day things. The more common evidences of it, which we so often meet to-day, were uncommon, and are still so, in certain climates and among certain classes.

Nervousness is essentially modern. Isolated cases were doubtless formerly noted and pitied, but it did not appear in the chronic epidemic form of to-day.

There is no greater evidence of the deterioration of the race than the manifestation of nervousness. Modern improvement and modern life tend toward nervous excitability and debility, because the brain worker of to-day is more susceptible to external and internal disturbances than the muscle worker of a few generations ago. Our great-grandfathers and mothers did not suffer from nervousness; they were too healthy and rugged. If they could be brought from their graves,

they would be bewildered by the nervous antics of their descendants. They would not understand the term "nervousness." The Greeks had no word for it as we now understand the term. Even down to the eighteenth century, nervousness was supposed to mean disposition to anger, excitability, irritability of temper,— a mental quality, and not a physical disease. There is no single cause of its increase during the last half century, but a combination of influences. The primary cause is unquestionably civilization. The telegraph, the railway, and the press have intensified in a thousand ways cerebral activities and worry. Those conditions that tend to the equipoise of the nervous system flee before modern civilization as do "pork and the Indian." Present conditions draw most heavily on the nerves of nearly all classes, but particularly on those who are favored with education. Civilization is burdened with the acquiring of information. If we would know why the people of to-day are nervous, we need only contrast Greek boys with American boys in their manner of training, in their schools, in their play, and in their whole order of living.

The education of the Athenian youth consisted of play and games, the repetition of poems, and of physical feats in the open air. His life was a perpetual holiday. Of work and toil he knew nothing.

The lad of to-day struggles to acquaint himself with all the culture, history, science, languages, and literature that have appeared in the last two thousand years. When we consider his life from its early schooldays until he leaves the college, the weary hours of study, the endless memorizing and forgetting, the constrained positions, the confinement; the novels and newspapers he must be prepared to converse about and criticize; the lectures he is compelled to listen to and analyze; the strife and competition for bread; the worry and the concentration of work,— when we think of these things, we wonder not so much at modern nervousness,— better "nervelessness," perhaps,— but at the extraordinary adaptability of the human frame to adverse environment.

These underlying conditions and causes have been deeply implanted in the human soil, and with accumulative force. They are strangely hereditary. Nervous temperaments are as readily bequeathed to offspring as red hair or blue eyes.

Children born into the world with such neurotic tendencies abound in the material out of which nervous diseases are formed in later life, unless wise and systematic preventive measures are adopted. But instead of the childhood of such being a constant fortification against later weakness of the nervous system, these children are taken from their out-of-door life and play, and kept at study and brain work, and this during a period when the young brain needs time for rest and reaction from the rapid growth and development of the first six or seven years. Nature's voice and wishes are plain, as evidenced by the natural physical activities and the disinclination of the child to mental effort.

There can be no doubt that the modern educational scheme does much toward the development of nervousness in later life. Small children and youth are educated out of their wits. They are now, in most of the large cities, compelled to spend from five to six hours each day, for nine months in the year, in a schoolroom, and to use their eyes and their intellects after school hours in the preparation of lessons for the ensuing day.

In a growing proportion of individuals there is a defective construction of the eye from birth, and unless the defect is remedied by the adjustment of correct glasses,

serious harm is done to the nervous system by the constant strain to which the organ is subjected.

A nearsighted child can not indulge in out-of-door sports, either because his poor vision prevents it entirely, or because it makes him awkward; hence he is fond of reading and studying, and is regarded by fond parents as precocious.

On the other hand, a farsighted child becomes easily fatigued from long use of the eyes; hence he quickly develops a taste for out-of-door life and play, in in which he usually excels, and is often punished for wilful neglect of his studies, when the fault lies with eyes too tired to accomplish the allotted task.

The heating of our houses is an innovation upon the past. Our grandfathers were comfortable in houses warmed to 60°. To-day we are cold unless our houses are heated to 70° or above; we are therefore ten degrees more sensitive to cold than our ancestors. They brought up their families to rely on food and exercise for warmth. The log fire on the hearth was the only way of keeping warm when indoors. Ice would freeze in the corner of the room which was illuminated by the blaze of a roaring fire. The bedrooms were cold. The hostess of olden time was accustomed to have the bed warmed for the guest immediately before retiring. Stoves, furnaces, and steam have superseded the hearth, and not altogether without injury to the family. Most of us are dried and baked by a constant temperature between 70° and 80°.

From these heated rooms we pass out into the air, with our skin circulation active, the pores open, and our bodies lacking the proper amount of fluid, since it has been abstracted by the heat of the house. The extreme cold checks the perspiration, drives the blood from the surface to the lungs and digestive organs, the vessels of which become overfilled with blood, thus causing pneumonia, pleurisy, liver and kidney diseases, and thousands of ills to the nervous organization.

American indigestion is almost as proverbial as American nervousness, and is an important factor in the production of the latter. The prevalent habits of irregular and hasty eating, and the drinking of large quantities of liquids during meals do much to impair the powers of digestion. Undigested foods make impoverished blood, which illy nourishes the tissues of the body and the nervous system. The use of tea, coffee, tobacco, cigarettes, and alcohol is believed to be the most prominent exciting cause of nervousness. A careful observer has made the statement, which we believe to be true, that the boy who smokes at seven will drink whisky at fourteen, take morphine at twenty or twenty-five, and resort to cocaine and the rest of the narcotics at thirty or a little later.

Reliable university statistics have been given showing that students who are habitual users of tobacco are not so tall or so strong and enduring as non-users, and are inferior mentally.

Cases are often cited where men have used tobacco and liquor all their lives without apparent harm. Such cases are exceptional. It is true that many of our ancestors ate salt pork three times a day and nearly every day in the year, and used alcohol and tobacco to excess, without developing in themselves marked evidences of nervousness, yet they doubtless thereby handed down to their posterity less resistant nervous systems. They lived more simply. The lack of modern conveniences and luxuries made them rugged and vigorous.

It is common for nervous patients to say that they have been obliged to discontinue the use of alcohol and tobacco. Some are unusually susceptible to the

effects of coffee and narcotics, and to many of the drugs which they once used with impunity. Bulwer implies the significance of the foregoing facts in the statement that "it requires a very strong constitution to dissipate." Among other causes, many owe their condition of nervousness to unhygienic surroundings, imperfect sewerage, ill-ventilated dwellings, stuffy offices, lack of exercise, mental worry.

"Americanitis" has been suggested as a term synonymous with nervousness, so prevalent is the disease in this country. The same factors accompanying civilization which tend to nervousness are as active in Europe as in America, although perhaps with less intensity. Why, then, are Americans more nervous than other peoples? The answer to this question is found in the dryness of our atmosphere and in the extremes of heat and cold. In these two respects, America differs from all other countries. Extremes in temperature cause nervousness by compelling us to live indoors during the freezing blasts of winter, in an unnaturally dry and overheated atmosphere. On the other hand, the heat of the summer months does not encourage the active out-of-door exercises in which our English cousins indulge. The climate of England is more equable than ours. Its moisture is favorable to the nervous system. Likewise the climate of our Southern States is more moist and uniform than that of the Northern and Western. According to investigations that are variously made, nervous diseases quite steadily diminish in frequency as we go South.

Dryness of the atmosphere conduces to nervous irritability by absorbing the moisture of the body, thus causing us literally to dry up. When the atmosphere is filled with moisture, the perspiration accumulates on the surface of the body because the air is saturated with it, and can not take it up. In a dry air, which is hungry for moisture, the perspiration and fluids of the body are rapidly conducted away; in other words, the body is wasted of its fluids.

Dry air is a poor conductor of electricity, hence the electricity of our bodies is not conducted away. This tends to cause the body to become excessively overcharged with that force, and thus renders the nervous organization abnormally susceptible to any form of external or internal stimulation.

In dry climates the hair becomes stiff and brittle. Sparks of electricity may be elicited under such circumstances by drawing a comb through it, and even from the clothing, in some instances.

Men and the lower animals become fretful and irritable when exposed for any length of time to the dry, cold winds so often encountered in the Northern and Western States.

GOOD-BY! Sweet day, good-by!
I have so loved thee, but can not hold thee;
Departing like a dream, the shadows fold thee;
Slowly thy perfect beauty fades away.
Good-by, sweet day!

Good-by! Sweet day, good-by!
Dear were thy golden hours of tranquil splendor;
Sadly thou yieldest to the evening tender;
Thou wert so fair, from thy first morning ray.
Good-by, sweet day!

Good-by! Sweet day, good-by!
Thy glow and charm, thy smiles and tones and glances,
Vanish at last, and solemn night advances.
O! couldst thou yet a little longer stay!
Good-by, sweet day!

Good-by! Sweet day, good-by!
All thy rich gifts my grateful heart remembers
The while I watch thy sunset's smoldering embers
Die in the west beneath the twilight gray.
Good-by, sweet day!

—*Celia Thaxter.*

THE OLIVE.

BY GEORGE THOMASON, M. D.

THE olive tree, in both the wild and the cultivated state, has been known from earliest times. It is a native of Syria and other Asiatic countries, being later introduced into Italy, France, Spain, South American countries, Mexico, and portions of the United States. In its wild state it is a mere thorny shrub or small tree, but when cultivated, it attains a height of from twenty to thirty or even more feet. The olive is an exceedingly hardy and long-lived tree, being probably the hardiest of fruit trees, withstanding very severe frosts, and also even considerable scorching by fire. If but a small strip of green is left, it will send out fresh new shoots. It survives for centuries, even after the trunk, with the exception of one layer of wood, is rotten and remains a mere shell, which may be split vertically into several distinct stems while the tree still flourishes and produces a profusion of fruit. It shows a marked preference for calcareous soil, and a partiality for sea breezes, flourishing with especial luxuriance on the limestone slopes and crags that form the shores of the Greek peninsula. The steep mountain slopes and narrow terraces rising many hundreds of feet, and covered with evergreen olive trees, form one of the most picturesque features of Italian scenery. The land in Italy occupied by olive orchards is estimated to be one million two hundred and thirty-five thousand acres, producing annually from thirty to forty million gallons of oil.

When designed to be utilized for oil, the olives are gathered as soon as they turn a dark wine color. They are simply pressed, without grinding, for the best quality of oil. Afterward they are ground, and again subjected to pressure, and later, by the addition of water, still more oil of an inferior quality is obtained. From sixty to seventy per cent of oil is yielded by the olive.

Olive-oil for several centuries before the Christian era furnished a substitute for butter and animal fats among the races of the North. The Romans considered it the only natural oleaginous fluid, and in their domestic economy it ranked next to breadstuffs, being used for illumination and for the purpose of anointing their bodies as well as for culinary purposes.

To a Roman a crown of olive twigs was the highest distinction that could be conferred upon him by his country. This was also the highest prize bestowed upon the victor in the Olympic games.

Olive-oil, being a natural fat and readily miscible with water, furnishes the bodily economy with this important food element in a desirable form. It is necessary in using it, however, to secure a pure quality, as it is said that French chemical skill has perfected a process whereby American lard can be so manipulated as to imitate this oil, and that it is reimported from Marseilles to the United States to be consumed as pure French olive-oil.

It is to be regretted that, like many other good things provided by nature, the olive is taken while green and indigestible, before the process of ripening is completed, to be used to renew the sensitiveness of the palate and to cater to the cravings of an appetite no longer satisfied with natural food. The use of green olives is of modern invention. The ancients ate the ripe olive, preserved by salting. When ripe, the olive is brown instead of green. Its pulp is soft and

separates easily from the pit, and when masticated, is quickly converted into a delicious, creamy paste. Unless specially prepared, the flavor is quite bitter, but this commends it to the Oriental taste. To those who live in the Orient the olive is still one of the most important and valuable sources of fat. In the markets of Cairo, Constantinople, Athens, and other Old World cities, and even in the market places of Brindisi, Southern Italy, one may see ripe olives of all kinds exposed for sale in great casks. They are kept moistened with brine to preserve them, and have a somewhat shriveled appearance.

The bitterness may be removed by soaking for some time in a weak alkaline solution, or in salt and water, or by exposing for several weeks to the action of running water. Ripe olives are, at the present time, prepared by this method in California, and may be obtained at moderate prices. Taken in this form, the olive is perfectly wholesome, and is a desirable food.

BEDTIME EXERCISES FOR CHILDREN.[1]

BY R. ANNA MORRIS.

"BETWEEN the dark and the daylight,
When the night is beginning to lower,
Comes a pause in the day's occupation,
That is known as the children's hour."

THE JUMP.

IN every well-regulated home where there are children, a special period of time should be set apart for their home exercise. The most suitable and proper time is after the day's cares are over for the mother, and some little time after the children have been served to an early and light supper. Growing children need plenty of sleep, and should go to bed early, and sleep from nine to ten hours every night.

Exercises regularly and consistently practiced in childhood will often lay the foundation for a strong constitution in after life. Youth is the time to establish personal habits of health, and if it is not

[1] Pictures taken by Julia Morrison.

done then, it is hardly probable that the start will be made after the cares of life begin. Most children come into the world in a fairly normal condition of body, and it is only through outside influences of neglect and pernicious personal habits that ill health and poor physiques originate and develop under the very eyes of parents, who should see and know how to prevent stooping shoulders, hollow chests, weak muscles, and awkwardness. Let me here say that if children were rightly trained, there never need come that painfully awkward time in a child's life when he becomes conscious of an unmanageable body, and feels that he has a superabundance of hands and feet.

A mother who does not play and exercise daily with her children gives up not only one of the sweetest maternal pleasures, but an opportunity to study and help her little ones that she can ill afford to lose. She should not trust them to the care of the nurse at this hour, but should claim the blessed privilege of being with them herself, of coming into close comradeship with them. While in the free manifestations of play, she can see them when they are most truly themselves. By the way they play, jump, or execute a command, she may discern tendencies which will guide her, not only in training their bodies, but in disciplining their characters. Through study her instinct and love will be supplemented by insight and reason, which will insure for the children a wiser nurture.

The comradeship of the "recreation hour" by which the mother enters into the childish practice and pleasure will establish a confidence and sympathy which will prevent the notion that mother's presence destroys pleasure. There is something radically wrong about the home training and companionship of children who regard their parents as opposed to their active amusements.

The secret of success for the bedtime practice hour is to have a regular order of exercise, and to get the spirit of the work. There is no necessity for elaborate apparatus. Chest-weights, elastic exercisers, dumbbells, and wands are attractive and useful, yet much good practice can be taken with free movement and by the use of a chair. In the illustration the little girl is lifting herself by strength of arm and shoulder muscles. In this exercise, the chairs should be held down firmly, while the one exercising grips them well, and steadily lifts the body, and bends the knees. Another exercise taken with the chair is practiced by sitting on the front

To Exercise the Abdominal Muscles.

edge of the seat, and from that position leaning backward until the shoulders touch the upper part of the chair back. In this position inhale, hold the breath, keep the feet on the floor, and rise to erect sitting position before exhaling. At first repeat the exercise only twice, but gradually increase the number, until after a few months' practice, it may be taken eight or ten times.

Free backward bending should be executed with care, always bending the knees as the upper spine curves backward. Do not practice lower spine bending backward without the hand of another as support at the small of the back.

It is not the great variety of exercises, but the few that are well and thoughtfully done, that give the best results. During each evening hour, repeat from time to time certain standard exercises, such as rising ten or twenty times on the toes, with the chest up; bending forward and touching the floor without bending the knees; rising to erect sitting position from a recumbent position on the flat of the back, without lifting the feet from the floor, or without the aid of the hands; and the abdominal movement. (The knitted sleeping suit worn by the little girl in this illustration is a very comfortable garment in which to exercise.) As many as four times lift one leg, then the other, then both, with the hands clasped back of the head.

The apparatus consisting of a "horizontal bar" is simple and easily provided. From a thick board cut two cleats; hollow out the middle, and screw one on each side of the bedroom door, about as high as the average "reach" of the children. Make a pole of hard, strong wood one and a half inches in diameter, square at the ends, and just long enough to drop easily into the top of the cleats. Let the children take turns in springing up and catching the bar. Pull up until the chin

"ALL READY."

rises above the bar, then slowly lower to the floor. At first take one pull, and by degrees, as time goes on, increase the number to three or four.

Not being fixed, the pole can be removed after practice, and the door left unobstructed.

Nothing is more effective in *expanding the chest* than the following simple exercise: —

Stand with the hands placed on the walls shoulder high on each side of a corner, about arm's length from it. The feet, one a little in advance of the other, are about the same distance from the corner as the hands. Lean forward, pushing elbows back and chest forward until the nose touches the corner, then push slowly back to erect position. With practice, this move can be taken ten or more times.

"CATCH THE BALL."

The play impulse in children must be provided for during the recreation hour. The Germans say they play from the cradle to the grave, but in America we almost forget to provide a playtime for the children. Besides the elements of spontaneity and pleasure, play should have a purpose with the physical activities directed toward accomplishing some end.

In the "tug of war," allow two of the children to test their strength by catching hands and trying to see which one can pull the other over a given line on the floor. Call a halt after a certain time.

An occasional pillow fight makes a vigorous exercise that tests the mettle. Let the children in their plays imitate nature by appropriating the action of things and the life of animals. They may run like the wind, fly like the bird, hop like the frog, crawl like the bear, walk high like an ostrich. "Let me do, and I shall know," is the faith of the child, and forms a principle in kindergarten training.

When freely dressed, little children enjoy turning "somersaults." The ball furnishes many pretty exercises. A large tennis ball is best suited to indoor play. It can be bounced, tossed, and caught a certain number of times. Let all sit in a circle on a comforter on the floor, and rapidly pass the ball around the circle in imitation of the "medicine ball game" as played in the gymnasium. For this purpose a large rubber ball or a basket ball is best. A "ball hunt" is great fun. Hide the ball; the one finding it hits some one else, who hides it the next time.

The play of "poor pussy" (doggie, birdie, froggie, donkey) gives opportunity for animal imitation. It is played by forming a circle with one child in the middle, who, in imitation of an animal, for instance a dog, goes to another child, and barks. The other child strokes him three times, saying, "Poor doggie! poor dog-

THE EVENING STORY.

gie, poor doggie ! " If the one stroking laughs, then he in turn goes into the center.

Children exercise with more zest and pleasure when some thought is associated with the action. Therefore an explanation or a story that conveys inspiration for activity is always profitable in connection with exercise. A story with a restful influence makes a good closing feature of the hour.

At least two evenings a week give the children a bath after the exercise period.

As the children are climbing the stairs they must remember three *nevers :* Never touch the heels, never bend over, never open the mouth.

SISTER SAYS "'TIS BEDTIME."

HABITS WHICH DESTROY HEALTH.

BY D. S. REYNOLDS, M. D.

I HAVE thought a great deal upon the subject of the early training of children, and have long since concluded that the greatest of public benefactors, perhaps, is to be the person who will teach teachers how to go by the desks and chairs of children in school and place a stick fourteen inches long between the temporal orbit and the book which the pupil holds. It is a remarkable fact that nearly all the nearsighted people in the world have become so by the unfortunate habit of looking too closely at the object, for when the optical axes of the eyes converge too near the given point, there is a strain at the point of contact of the optic nerve with the eyeball, which develops inflammation and a bulging of the coats of the eyeball, and a receding of the retina from the crystalline lens, causing nearsightedness in a vast majority of instances. Nearsightedness (in some cases leading to total blindness), fortunately, is preventable by instructing the child to hold the book at a proper distance from the eye.

One of the first principles of the new philosophy of hygiene teaches that sleep is an indispensable conservator of health and strength. Sufficient and natural sleep is necessary to all human beings. Procured artificially, it is like pleasures that intoxicate, exhausting the vital energies. Sleep must not be regulated by the timepiece, but rather by the feelings of the individual, who must also bear in mind the danger that unnatural stimulation brings.

Next in importance to health I esteem the matter of breathing,— the character of the atmosphere we breathe, and the

manner in which we conduct ourselves with reference to the function of breathing. There are thousands of people who, from long-continued habit, lose the capacity for long and deep inspiration, and consequently, the opportunity of enriching the blood with oxygen, which brings the vital current itself into every tissue and fiber of the human body. If we have not an adequate blood supply in every part of the system, there can be no such thing as normal functional activity, and if there is not normal functional activity, there can be little chance of longevity, and no prospect of comfortable endurance of life.

You have heard people say, "I have caught a bad cold." Or some doctor who does not wish to take the time to examine deeply into a patient's condition will say, "Oh, you've just caught a cold, that's all." Or, not being able to explain the complicated affection of the respiratory organs, he says, "It is a chronic case of catarrh, due to the grafting of one bad cold upon another." "Catarrh" means "flowing down," that is all; it is not the name of a disease; it is not a disease, but a condition present in hundreds of different forms of disease.

You have all, I dare say, observed, when the sun is low on the horizon, either in the early morning or late in the day, the little glittering particles which appear in the columns of light. This is insoluble dirt, the quantity of which is greatly increased by the use of what I call an infernal machine. The good housewife comes round with one of these infernal machines, and the dirt is whisked up from the carpets, and lodges upon the furniture, window-casings, and elsewhere. It is only the grosser and heavier particles which remain upon the dustpan and are carried away. But presently the feather duster is used to sweep down some of the dirt, and to turn it loose to lodge wherever it may chance to alight. As soon as the door is opened, the air rushes into the house, strikes the opposite wall, the ceiling, and the floor, and sets up eddying whirls of air which rush into the chamber, filling the whole atmosphere with these particles of insoluble dirt, and, it may be, with the seeds of some deadly ferment; even the dread disease tuberculosis may be contracted in this manner.

Tuberculosis invades the system through the air passages, and has been known to attack family after family, because care has not been taken with regard to moving into a house which has been occupied by consumptives. The occasional transition of a family, the sweeping, scrubbing, washing, and brushing of those who are employed to clean the premises, by hoisting the particles of dust into the atmosphere, often even into the very faces of the newcomers, is likely to introduce germs of disease into that family.

The terrible infection called la grippe is another form of disease propagated in a similar manner. Let us see just how. I do not wish to offend the modesty or the dignity of my readers by referring to some of the frailties of humanity,— some of the common practices of thoughtless people,— yet they are so common that they are found in every community and in almost every assembly of people; so I feel obliged to direct your attention to the fact that there are people who *will* blow their noses. And some have been known actually to expectorate upon the floor of a public hall, and upon pavements and sidewalks.

My friend, Dr. James E. Reeves, who has distinguished himself in hygienic work, noticed some expectoration one day in front of his own office in Wheeling. He thought a moment, went into his office, made a small whisk broom with a little straw, pressed the point of his broom to the sputum, and by the aid of a cover-

glass, dried it over a spirit lamp, made a culture, stained it, and found it an almost pure culture of tuberculosis. There were the deadly germs of consumption lying right at the doctor's door, ready to be dried and blown in fragments by the gentle zephyrs into the faces of people in delicate health who might be passing that way while taking what is called their "constitutional," or an evening walk. In this manner consumption is spread. The habit of expectorating upon the pavements and in public places, gives rise to a very widespread infection of humanity.

It is estimated that tuberculosis carries off one in every seven people who die from all causes. This being true, how important it is that we should take every possible precaution against the scattering of the seeds of that dreadful malady over all the streets of our cities, and upon the floors and passage-ways of halls and other public buildings.

In the Walnut St. Theater in the city of Philadelphia, a few years ago, Dr. Morris Longstreth, Dr. E. O. Shakespeare, and Dr. George Webb all set about determining the quality of the air passing through the dome of the theater during the performance of a play. They stuffed the ventilators of the dome with sterilized cotton, the cotton being put in so tightly that only the air could be strained through. After the performance was over, this cotton was taken out of the ventilators and subjected to a critical analysis. Large numbers of "mounts," or specimens, were prepared, and in every one of them were found from three to half a dozen bacilli of the tuberculous type, besides a large number of other bacteriological organisms.

But what are the predisposing causes of tuberculosis, and in which part of the body may they be found? — In the lining of the nose there are little epithelial cells which are invisible to the eye. These are so arranged that if you blow your nose a little, you ruffle their edges a little, and if you blow harder, you tear them off a little. Blow your nose still harder, and you invite a flow of blood through the lining of the nose. Now what is wanted for tuberculosis is this, — an abraded surface in these passages in the nose. These abraded places are moist, and of course there is warmth in any part of the body where an abrasion exists, sufficient for the propagation and development of the bacillus tuberculosis. If some of the seeds of this germ lodge upon that abraded surface and remain there twelve days, you have consumption, for the bacillus of tuberculosis takes twelve days to sprout, under favorable circumstances. This sprouting means multiplication; it means growth. From twelve to fourteen days have been observed to be the necessary time for the complete development of this microorganism. When this bacillus has colonized itself in your nose, the surface is covered with a gray, tenacious lymph, exceedingly difficult to remove. Presently there is an ulceration, which becomes deeper and extends into the narrow crypts and sinuses of the nasal passages. Of course it is impossible to see this process, and a person may go on for a long time with the bacilli of tuberculosis in his nose before they are discovered, but after a while, violent efforts will be made to cough and to expel particles which are filling up the lining of the trachea and the bronchial tubes. This necessarily leads to an abrasion of the surface in these passages, and the colony of bacilli which has been growing in the nose, is easily taken down into the larynx and the trachea or bronchial tubes, and the consequence is that general pulmonary tuberculosis ensues.

A person may have consumption six or eight years before it becomes a serious matter. If contracted upon the abraded

surface in his nose, for instance, it may be months, or even years, before it gets down below, to any considerable extent; and until there is an actual colony set up in the trachea or the bronchi, there is little danger to life.

In 1832, Professor Koch, of Berlin, made his discovery of the bacillus of tuberculosis. The whole world then recognized why and how it is that tuberculosis first invades the air passages.

In view of these facts let us consider whether we ever "catch cold" or not; whether or not we do not really catch dirt instead. Why do workers in iron have consumption?—Little scales of the iron which are broken off are all the time floating in the air, and are breathed into the air passages of the workman; they soon fill the air passages so as to induce such an effort to expel them as to cause an abrasion in the lining membranes, and a favorable condition is thus developed for the colonization of the bacillus tuberculosis. We are all inhaling these insoluble particles of dirt, but if we have sound respiratory organs, we may be able to dislodge them, and if we have no abraded surface upon which these colonies can grow, we may escape the dread disease.

James Parton wrote a little book composed of two parts, the first part being entitled, "Does it Pay to Smoke?" James Parton knew, from personal experience, some of the evils of smoking. He had tried the toxic drug, and found—what?—That it disturbed his sleep; that it frequently gave him headache; that it interfered with his digestion. All these disturbances together were thought to be sufficient to impair his mental activity,—his capacity for mental labor. With all due deference to those who hold opposite views, tobacco has no useful place on the face of the earth, except, it may be, to kill insects. There was a time when tobacco was used as a medicine. There was a time, also, when it was used externally, as a poultice; but even that use is not known to the present generation of medical practitioners; that is to say, the young men who are now entering the profession have not heard at all of the use of tobacco as a medicine, but a majority of them have heard of it in some other way; for in October, 1892, a medical board of examination in the city of Philadelphia was appointed by the surgeon-general of the United States army for the purpose of inquiring into the qualifications of young men desiring to enter the medical department of the United States army, and examined sixty-seven young men who applied for that purpose. Before their professional attainments were inquired into, they had to undergo a rigid physical examination. All these sixty-seven gentlemen who applied for examination were between the ages of twenty-five and twenty-eight years. Of this number forty-three were rejected, having what the doctors call "tobacco heart." Out of sixty-three applicants, forty-three were rejected as having heart disease,—weak hearts, irritable hearts, unsteady hearts,—the result of the intemperate use of tobacco (if there is any such thing as a temperate use of it).

I am in the habit of speaking on this subject, as I feel in duty bound to do, every year to my students at the Hospital College at Louisville. Once when I was speaking on the evil effects of tobacco upon young men,—how it impairs their capacity for intellectual labor, how it renders the muscles unsteady by disturbing the central nervous system,—one young man from Virginia, a very bright fellow, stooped over to whisper something to a student beside him. I stopped speaking and called out his name, saying, "See here, my young friend! I know you don't believe anything that I am

telling you about tobacco. You use it yourself, and you don't believe that anybody who is opposed to it can be really well informed, or, if he is, he is not strictly honest. I know you think I am a fanatic and a crank on this subject, and that I know nothing about it; now I want you to come here a moment. I mean what I say; I want you to come here and sit down beside the young man who is taking notes, and write Louisville, Ky., with the day of the month, the month, and the year, on this paper, and sign your name to it. Here is a chair,—sit right here and write what I have dictated." While he was doing this, I turned from him and went on with my lecture. After closing, I picked up the paper, folded it, and put it in my pocket, after getting his promise not to smoke for three days. I had seen him smoking just before going into the lecture-room, and took this method of testing him. Three days later, when I had the same class before me again, I called this young student's attention to his promise, and said, "Have you used any tobacco since my last lecture?" "No," he said, "I promised that I would not, and I have kept my word. I haven't used any tobacco at all since your last lecture, and I think I am feeling better than I did before." "Now," said I, "come here and write for me again, as before." I took out the same paper that he had written on before, turned it over, and asked him to write the same words as at first, with the difference only of the date. On comparing the two specimens of penmanship, his face turned very red. "What's the matter?" said I. "Well," he said, "I do believe that tobacco makes me a little nervous." The lines which he had first traced were those of a palsied hand, but those of the next writing were graceful and even, and the angles were sharp, the whole forming a very significant object-lesson for the students as well as for himself, and which served a valuable missionary purpose for others.

A number of years ago the surgeon-general of the United States navy appointed a board of visitors to the Anatomists' Academy, at Annapolis, Md., with instructions that observations of a certain character be made. A sphygmograph, or pulse-writer, was placed in the institution, and the cadets were required every morning to undergo an examination of the pulse with a machine tracing upon a piece of paper prepared for the purpose, the paper on which the tracing was made being subsequently filed away with the medical reports. These tracings, or pulse-writings, copies of geometrical and architectural drawings of the students, all reports of class standings, were all preserved; the number of sick-calls, the names of those who reported, and a synopsis of the causes which led them to report, were also kept and filed away. In the meantime, tobacco chewing had been prohibited, although smoking had been permitted until 1875, and that year the physicians decided that smoking should be no longer tolerated in the institution; that tobacco in every form should be inhibited. From that time until 1879, the records, published in a large octavo volume of more than twelve hundred pages, containing hygienic reports of the Bureau of Medicine and Surgery of the United States navy, were distributed gratuitously all through the country, but I venture to say that not one in every five hundred of the medical profession who received that volume ever read the portion of it relating to the evils of tobacco as observed in the young men of the Naval Academy of Annapolis. If you will look at page 832 of the volume referred to, you will find enumerated in the report of the Board of Visitors some of the common complaints made by the young men who

had clandestinely used tobacco between 1875 and 1879, and I am sure that any person who has ever had tobacco in his mouth, and who reads this description, will be obliged to say that the picture is drawn from life, that it is strictly and in every respect true to nature.

What does tobacco do? — Its first effect is to produce nausea. If a person should go to your well or spring or cistern and cast into it some poisonous substance which would simply impart a bad taste to the water, though it might not kill, tend to shorten life, or impair your health otherwise than to disgust you and nauseate you with the bad taste, he would be answerable to the law. The laws of nearly every State in the Union provide penalties for such offenses, and a person convicted of that crime would receive due punishment. But what of the person who contaminates and poisons the atmosphere that you and I must breathe? Is there any punishment for him? If I should get out a warrant for a man who smokes tobacco and puffs it in my face as he walks along the streets, the judge would dismiss it at once. Such a case would never be investigated, and the person bringing such a complaint would be laughed at. Those who smoke tobacco hold in contempt those who are nauseated by its fumes, and they not only hold in contempt one who experiences an inability to indulge in that toxic drug, but they do not hesitate, for instance, to stand upon the entrance of a street car, and blow tobacco smoke into the faces of ladies and gentlemen and children, the old and infirm, — in the face of everybody who comes in. Well and strong men, like myself, can stand a certain amount of it, but it is very disagreeable even to such persons, and I do not permit any smoking on my premises. In consequence of this, I am criticized, and a great many say, "Reynolds is a crank. Why, you can't smoke in his office." I would just as soon have a case of scarlet fever in my office all the time as to have a man there who is constantly smoking.

If we are going to permit our sons to use tobacco, we should permit our daughters to use it, too. I hold that the daughters have the same right to smoke and chew tobacco as have their brothers. The same educational training is suited to both. Who knows but the daughters may enter the medical profession and eclipse the career of the sons? The profession is now open to women, and some of our best practitioners at the present time are women. But if we encourage the use of tobacco among the young men, they can not compete with young ladies who do not use it. We know from experience and observation, and even from actual experiment, that tobacco impairs the capacity for mental labor, and if that is true, how shall young men receive adequate educational training? The vast strides that have been made in progressive achievement in science and its cognate, medicine, during the last ten years indicate very clearly that the coming generation of medical students must have considerable preliminary medical training. They must, at least, know how to manipulate the instruments with precision, take a diagnosis, and understand the treatment of disease. But if they are to have impediments to their intellectual development thrown about them, such as the use of tobacco, we shall indeed return to the good old days of Sydenham, who thought we ought not to inquire too curiously into the causes of disease.

Now let us briefly sum up, and see what ground we have gone over. In the first place, I called attention to the great danger to the eyesight which children experience by being allowed to hold objects too close to the face.

In the second place, I noticed the char-

acter of the atmosphere we breathe, and the consequences which sometimes follow the breathing of a tainted atmosphere. Of course this is easily avoided when once you understand the nature of a contaminated atmosphere. It is like having a foreknowledge of a rattlesnake in the grass: knowing him to be there, you keep away. So with a contaminated atmosphere: knowing the dangers of contamination, you can at least avoid breathing through the mouth, and avoid the creation of abrasions in the nasal passages by not blowing the nose — which it was the design of nature never should be treated in so rude a way.

In the next place we considered the terribly degenerating effect upon the brain which tobacco using produces, leading incidentally to the dreadful heart disease from which many perish. Angina pectoris, a most excruciating pain of the heart, for the relief of which no drug is known to be effective, is caused almost uniformly by tobacco or some other drug having similar effects.

RED BETTY, OR THE SLAUGHTER OF THE DUMB INNOCENTS.

BY MRS. L. D. AVERY-STUTTLE.

CHAPTER IV.

"YES, lady," said Red Betty, "I am quite ready to resume my story, for I feel much better at the sight of you already. Really, I was afraid I should never see your kind face again; I was fearful lest you might not return before the men missed me from the yard where my companions are waiting for their death, and that the dreadful door would open for me, and I should be hurried through the dismal portal, never to return. But you have come, kind lady, and I am glad, for though I can not hope that you may be able to succor me, still I am thankful to give you my history, as it may be a means of benefit to my poor, unhappy race.

"Let me see," she said, reflectively. "I believe I was telling you about the visit made me in my forest home by my wild neighbors, although they did not seem wild to me."

"Yes; Bob O'Link was speaking, I remember," I said, with a blush.

"Well, after he was done talking, another beautiful little creature took his place. I thought it could not be," said Red Betty, "that this tiny fellow could have an enemy under the sun. He was so cunning and sprightly; his wings were the color of sunshine, and his breast and neck were like gold. I truly hoped to hear him speak in favor of mankind, for I was getting tired of hearing about so much cruelty; but I was doomed to disappointment. Finally, after some urging, the little fellow spoke — he was a very timid creature.

"'The discussion seems to have turned upon human beings,' he said in a silvery voice, 'and since they are acknowledged to be our common foe, perhaps it is well, for we may together be able to devise some manner of hiding from them. I, myself, however, being so very small, have thus far escaped that much-to-be-dreaded catch-all — the stomach of man;' and he flirted his shining wings, while his

bright, black eyes twinkled mischievously.

"'But, although I am small, my fate is as deplorable as that of the others. My relatives, many of them, are at this very moment confined in horrid little wire houses not large enough for our friend, Gray Squirrel, to stand in. Here they have been kept so many years that at last they, as well as their little ones, have become quite unable to care for themselves. Still they long for the beautiful woods and fields and to try their shining wings. But this blissful pleasure, their natural birthright, is denied them, and they can only sit in their stupid cage from morning till night, singing, sometimes, it is true, but surely the songs they sing are sad and melancholy. Sometimes, I have heard my grandmother say, the people do not give them anything to eat or drink for a whole day,— I presume they forget them, but at such times the poor things must suffer terribly. Then, sometimes they hang their little prison cages high up in their hot, stuffy houses, where all the bad, poisonous air rises, and my poor relatives quite often die of sheer suffocation. O, it is dreadful!' and the tiny speaker was so overcome with emotion that it was with difficulty that he continued.

"'But this is not all,' said the little speaker. 'There are others of my brethren who have a still more horrible fate. Thousands and thousands are cruelly killed every year for no other purpose than to gratify the silly, senseless vanity of ladies who pose before the world as the most tender-hearted creatures.'"

Then, in my dream, I saw Red Betty glance timidly at my bonnet. Just then there was a loud whistle blown from a factory on the other side of the street, and Red Betty turned her head for a moment in that direction. Then, methought, I snatched my bonnet — which I had prided myself upon as being very pretty — off my head in a moment, and hid it behind me, and my heart beat in guilty fear lest she might have noticed the poor little yellow bird which perched upon it,— and indeed, I think she had noticed it, for its shining wings were well spread, and it was very brilliant and showy indeed; but she was too well bred to comment upon my confusion or to appear to miss my bonnet, though a keen glance shot from her mild eyes. For myself I had never felt so humiliated in my life. More than ever was I convinced that I was a monster. I remembered the disgust and horror I had often felt when reading of the savage Indians, how they take the scalps of their victims to ornament their belts, while they shout and dance, and display their bloody trophies with the greatest pride. How much better was I than they? I could feel my cheeks burning with shame, as the mild eyes of my wonderful companion beamed full upon me, and she, seemingly fearful of having offended me, began excusing herself: —

"Please do not think, dear lady, that I have found no kindness whatever in your race. Far be it from me to say this. My first master and his dear little girls were very kind while I stayed with them, and had it not been for the fact that this same master sold my little brother for human food, and tore me away from my poor mother, I should have nothing but the pleasantest memories of him."

"I am afraid you will forget to tell me about the time you met your mother,— you said you saw her only once more," I interrupted, anxious to change the subject.

"O no, I shall not forget that part,— I only wish I could,— but it is too sad, I can not. You will remember, lady, that at this time I was very young, and I did not meet my mother till a long time afterward; but I will not fail to tell you of the sad circumstance before I have fin-

ished my story. It seems as if we poor animals have scarcely any pleasant memories after a long life spent in the service of man. But I must hasten on with my story.

"When the birds had had a chance to tell their grievances, my old friend, Gray Squirrel, suggested that we listen to a few words from our friend with the beautiful antlers — the deer.

"At this the noble fellow came forward, and begging the pardon of those assembled, asked if they would mind his telling a story.

"'I assure you,' exclaimed Gray Squirrel, 'that I have heard our friend upon many occasions, and I am sure that you will be very interested in what he has to relate, for his history is much more thrilling than mine, and his life more fraught with danger; though indeed I have often felt my own teeth chattering with fright when I have heard the loud explosion of the guns of our enemy.' Saying which, Little Gray took a seat by my side, while with his beautiful head held proudly erect and his mild eyes beaming with intelligence, the speaker began:—

"'Perhaps you are all aware of the fact that my cousins, the Sheep family, live under very different conditions than we do; in fact, they are the servants of man, and in some countries they form almost the entire wealth of the people. Sometimes, to be sure, they suffer a great deal from cold after their warm coats have been taken from them, but in the main they are to be envied beside their poor brothers who are driven away to slaughter, to provide food for the insatiable appetite of man. You have all heard of the quiet and loving disposition of my gentle cousins, and it will always remain a mystery to me how men can be found who are hard and cruel enough to butcher any living thing at once so peaceable, so harmless, and so completely defenseless as a poor lamb. Indeed, I have heard that although visitors may be admitted into those places where other animals are being butchered, they never admit a visitor into the bloody room where my innocent cousins are led to their slaughter.'

"'Do you not think,' questioned the Whip-poor-will, solemnly blinking her eyes to keep out the bright rays of the sun, and hopping a little farther into the shade, 'do you not think that it is because the butchers are afraid lest if many people should see the cruel death of the poor creatures, they might refuse to eat their flesh altogether?'

"'I have no doubt that this is true, replied the speaker, 'for there are many people who are so kind-hearted and gentle that if they could but know the miseries of those poor creatures who daily die to furnish them food, they would utterly refuse such a diet.

"'But it is of my own unhappy race, whose history and sufferings are far better known to me, that I would speak. I, myself, have had many narrow escapes, but I can never, never forget the terrible, tragic death of my poor mother. It is this that I wish to tell you about, if you care to listen.'

"Then we all gathered around him a little closer," said Red Betty, "while he held up his beautiful head proudly, though a tear fell from his expressive eyes.

"'Many seasons have come and gone since that sad day,' he said. 'The chill winds of winter have blown through the forest many a time, and the balmy breezes of summer, sweet with the odor of violets and wild roses, have stirred the branches of the oak and fir and pine in this dear old wood, where I have lived since childhood. Many of my relatives have fallen beneath the too unerring aim of the marksman. How long we may be together, my friends, I know not. I have felt for some time a dull foreboding of im-

pending evil; for you must all have observed that the beautiful autumn is almost here.'

"Then," said Red Betty, "I interrupted my friend, the Deer, and asked why he should so dread the approach of autumn."

"'I will explain myself,' said the speaker, stepping a little nearer to my side. 'You are very young, Red Betty, and could not be expected to know about the customs of hunters. But it is well known that when the leaves of the forest take on the beautiful colors of the rainbow, and our feet make sweet music in the rustling carpet they have spread, and the nuts from the walnut and hickory and oak are falling, that the time is very near when the keen-eyed hunter shoulders his weapon of death, and sallies out upon his mission of destruction. Then we who are fleet footed flee before him as before a pestilence, or hide ourselves in the dim recesses of the forest.

"'It was on a dreary day at the beginning of winter. A light snow had fallen the night before, so that when we placed our feet upon the ground, every imprint of the tiniest foot which pressed it was as distinct as if made in the softest wax. My mother noticed this,' said the speaker, 'and I could see a look of anxiety upon her face. She asked me to keep as quiet as possible, and not to run about more than I was obliged to. I did not understand the reason of this at first, but I soon learned. Mother found a nice place for me to browse from the tender shrubs which grew in abundance, when we were alarmed by a stealthy tread near by. I was well hidden in the bushes, but my mother was some distance away. I looked up quickly; what was my dismay at seeing a gaunt wolf hurrying in the direction of my poor mother. She, however, saw him, and fled before him, with the lightness of the wind.'

"A general shudder passed over the eager listeners," said Red Betty, "but the speaker hastened to assure us that there were undoubtedly no prowling wolves in the forest now, so that the only foe we need fear was the rifle of the hunter.

"'My mother was so fleet footed,' continued the Deer, 'and fear so winged her flight, that perhaps she might have escaped the cruel fangs of the wolf, had she not stumbled into a ditch, laming herself. Still she rushed on. I watched that terrible race with straining eyes, until my poor mother was hidden by the thick leaves of the forest. Then I concealed myself as well as I could, and waited a long, long time. O, what suspense and misery I endured! At last, just as I had given up hope that mother could yet be living, what was my surprise and joy when I again saw her spring, limping, past me. But my joy was of short duration; nearer than ever followed the wolf, when, just as she appeared in the opening, he sprang upon her and fixed his cruel fangs in her trembling body. Then a strange thing happened. We heard a noise like sharp thunder, and saw a little flash of smoke. The gaunt wolf quivered, unlocked his horrible fangs, dropped to the ground in a heap, stretched himself out, and died. I wondered what the noise and roar meant, but I did not care, for I thought surely now my poor mother would escape. It all happened so quickly that I hardly stirred from the place before the hunter came along with his rifle. Then I knew that it was this that had made the roar and smoke, and had killed the wolf, and in spite of all mother had told me about the cruelty of hunters I began to thank him in my heart, for had he not saved my mother's life? But my joy and gratitude were of short duration.

"'The wound which she had received from the wolf, together with her fright,

rendered it quite impossible for her to continue her wild race, and she fell panting to the ground. Never shall I forget the frightened, pleading look in her beautiful eyes, as she turned them full upon the hunter. Surely, thought I, the man can not have the cruelty to kill a poor creature at once so beautiful and so helpless. But I had miscalculated the terrible strength of the passion of mankind for blood.

"'I will not dwell,' said the Deer, with a shudder, 'upon the horror of the few succeeding moments,—moments which, to me who watched, seemed an age, and which are burned in my brain as with a pen of fire. There was another flash, another roar, and my poor mother stretched her delicate limbs in her death agony upon the snowy ground, which was fast becoming crimson with her life blood.'

"Then our friend the Deer sighed deeply," said Red Betty, "and the company broke up, after first promising to protect one another as far as possible from the cunning hunter."

(To be continued.)

DISEASES OF THE SKIN AND THE MUCOUS MEMBRANE.

BY DAVID PAULSON, M. D.

CATARRH in its various forms comprises fifty per cent of all diseases of the skin and the mucous membranes. It is known as eczema when it attacks the skin, and as catarrh when it affects the mucous membrane of the nose or the stomach; but there is no essential difference in the morbid process. In catarrh of the stomach, an excess of mucus is formed. In acute catarrh of the nose, there is poured out with the mucus a serum, or the watery portion of the blood. Germs are being continually drawn into the nose with the air that is inhaled. They flourish there, and soon begin to produce pus and other foul secretions, just as when a blister is formed on the skin as the result of a burn, the serum is first poured out, but if healing does not set in promptly, there is soon a formation of pus over this area.

An important fundamental principle to recognize in the treatment of catarrh is to get rid of the germs. The most universal enemy of germs is absolute cleanliness; and water, with a little soap, is the best agent for producing cleanliness. When catarrh of the nose first appears, cleanse the entire nasal cavity regularly every evening with a weak solution of salt in hot water. For the same reason, when a person has catarrh of the stomach, if the stomach is washed out several times a week before retiring at night, it often gives nature just the chance it needs to restore a healthy condition.

Absolute cleanliness is the very best means for preventing the baby from having eczema, or, as it is sometimes termed, "salt rheum." Originally, man was given dominion over every living thing, but now germs often secure supremacy over man, because the latter has lowered his resisting power until it is often beneath that of the germs. Microbes have probably grown no stronger since the days of Adam, but man has certainly become weaker. Successfully to cure eczema, either man must be made stronger, or microbes must be weakened. People who have catarrh are always more or less sickly. People who are sickly are liable

to have catarrh even in the most favorable climate, while thoroughly sound people will have no catarrh in the most unfavorable climate. This is not saying that we should overlook the fact that there are climates more favorable to its development than others.

By applying vigorous germicidal solutions and salves, we may so far weaken the germs that by and by they and man will be on the same level. But to be cured, man must be above the level of the microbe. So it is necessary to persevere for a long time with antiseptic treatment. We must be sure that the preparations, solutions, and ointments that are used are really antiseptic in their nature. If the baby's head is the part affected, then boracic acid and zinc oxide ointment is a very suitable remedy to apply every night. Prepare it as follows : —

Take an ounce of vaseline, put into it half an ounce of zinc oxide and half an ounce of boracic acid ; or instead of these, use about thirty grains of salicylic acid to an ounce of vaseline, as this also forms a splendid ointment. One disadvantage of all this treatment is that anything powerful enough to kill a germ, will have a tendency to kill a man. It must be weak enough, then, so that it will not injure the tissues. If such an ointment should be irritating to the skin, it may be improved by adding less of the active drug. Peroxide of oxygen is an excellent disinfectant wash. Bismuth powder is often prescribed for catarrh of the stomach. It is certainly an excellent remedy to dust over the irritable surface of the skin. It is best to apply the salve in the evening. During the day it is not so convenient to have such greasy substances on the skin, so it is better to dust on the bismuth powder.

The really rational cure of eczema, however, is to build up the whole man. The skin especially needs gymnastics of such a character that it will become alternately red and pale. This can be done by massage, but hot and cold sprays will do it much more effectually, as well as more quickly. A cold spray contracts all the surface blood vessels; the hot spray relaxes and dilates them. Such gymnastics of the skin is one of the best ways of curing eczema.

To sum up, then, eczema of the skin, catarrh of the nose or of the stomach and bowels, are all cured by essentially the same procedure. They signify a deteriorated condition of either the skin or the mucous membrane, and that is merely a symptom of a similar condition of the entire body. The best way to discourage the germs is by maintaining absolute cleanliness. Seek to kill the germs by the use of disinfectants. Then use hot and cold sprays to build up the bodily resistance. If no spray is available, with the aid of a dipper, pour over the affected area first water as hot as can be borne, then as cold as can be secured. Those who are suffering from such disorders must discard all irritating food substances, as spices and condiments, and strictly avoid fried foods and pastry and an abundance of sweets. The diet must consist largely of well-toasted grain preparations, fruits which are not too acid, and nuts or nut preparations. It is utterly useless to attempt to cure a severe case of eczema without a careful regulation of the diet, for the nerves on the outside of the body have branches which go to the inside; or, in other words, the nerves in one part of the body have a method of transferring their injuries to other parts through what is known as the system of nervous reflexes. When a person has a very severe burn, externally, he frequently suffers from ulceration of the stomach and bowels as a partial after result; so, just as long as a man persists in putting into himself things that will

irritate the mucous membrane, he is likely to have an irritated skin. When one treats himself badly on the inside, he need not be surprised if he sees some result of the treatment on the surface of the body.

FOOD COMBINATIONS.

BY W. A. GEORGE, M. D.

THE question of the proper combination of foods and food stuffs is one of interest both to the one who prepares the food and to the individual consumer. This subject may be discussed under two heads, as follows: Kinds of food to combine, and amounts of food stuffs to combine.

Kinds of Food to Combine.— In discussing this topic, we purposely leave out of the question all animal products, as not belonging to the natural diet of man, and confine ourselves to the plant creation. The edible portions of all plants may, it is believed, be divided into three distinct classes; namely, fruits, grains, and vegetables.

Under the term "fruit" are included the edible ripe fleshy portions containing the seeds, such as apples, bananas, plums, berries, grapes, melons, squash, and tomatoes. Fruits, as a rule, contain varying quantities of grape sugar and organic acids. Accordingly as the amount of sugar and acid varies in the different fruits, they are classed as sweet or sour fruits.

The term "grain" may include all ripe seeds, such as wheat, corn, rice, nuts of all kinds, beans, peas, and any edible seeds. Grains contain varying amounts of albumin, starch, and fat. Those like wheat, containing a large amount of starch (60 to 70 per cent) and of albumin (10 to 15 per cent), are very poor in fats (1 to 4 per cent), while nuts, some of which contain little or no starch, are very rich in fat (40 to 60 per cent), and are also quite rich in albumin (20 to 25 per cent). The legumes (beans, etc.) are richest in albumin (20 to 30 per cent), and have less starch than wheat, but about the same amount of fat. Most grains contain about 15 per cent of water, but some nuts contain only 5 per cent. The solid or nutritive portion of grains is therefore from 85 to 95 per cent, while in fruits we find the reverse, 10 to 15 per cent nutritive, and 85 to 90 per cent water.

All the remaining portions of the plant are classed as vegetables, including edible leaves, stems, roots, tubers, and unripe fruits and grains. This class of foods varies very greatly in nutritive value. As a rule, however, there is very little nutritive matter, the principal composition being water and woody fiber. The amount of water varies from 75 to 95 per cent. Some plants contain in their stems or roots a considerable amount of cane sugar, while others contain quite large amounts of starch, as found in the potato and the artichoke.

A person with a vigorous digestion may for a long time seem to digest any combination of these different foods without apparent trouble, especially if he is working at hard physical labor; but the person who has from some cause an impaired digestion, or who is living a sedentary life, can not with safety be careless about the combinations of these foods. We believe the following rule to be a good one for everybody to follow: "If you wish to enjoy the best of health, do

not eat fruit and vegetables at the same meal. Eat fruit and grains at one meal, and vegetables and grains at the next." We have seen this simple rule carried out with good results in cases where there had been much trouble with digestion.

Three reasons for this rule may be given: First, when fruits, grains, and vegetables are all eaten at the same meal, there is very likely to be too large a variety. Too great variety hinders the digestive juices in their work. Second, the large amount of woody fiber in most vegetables has the tendency to hold the sugar of the fruit for a longer time than it would otherwise be held, and thus it is allowed to remain in the stomach until it ferments. Sour stomach is often produced in this way, and if it is continued, many other evils may follow. Third, but not least in importance, is the temptation to overeat when one combines all kinds of foods. One thing after another is eaten because it tastes good, and we think we must have a little of each dish, and before we are aware of it we have eaten too much. This causes a stretching of the walls of the stomach, which, if the practice of overeating is continued, becomes after a while almost incurable, and causes much suffering. The fact that both fruits and vegetables are composed so largely of water, and that such large amounts must be eaten in order to get enough nourishment, makes it almost necessary to overeat where they are combined, and especially if the vegetables are partaken of very freely. A person may even overeat where only fruit is taken, or a large amount of fruit with well-baked grains, but as the fruit is so quickly absorbed no bad results will follow.

Large quantities of vegetables are a doubtful diet, and it seems much better to restrict one's bill of fare to a great extent simply to fruits and well-baked grains (zwieback, rolls, crackers, granose, bread). By the term "grains" we do not by any means wish it to be understood to mean mush or porridge, but dry baked bread or unleavened bread, which is so thoroughly baked or rebaked that it is browned clear through. Light bread may be sliced and baked in the oven, thus making home-made zwieback.

Amounts of Food Stuffs to Combine.— There are many who are slowly but surely starving themselves and their families by not using a sufficient amount of certain important food stuffs. By food stuffs is meant those food elements which go to make up all foods,—albumin, sugar, starch, fat, salts, and water. By numerous experiments it has been decided that a proper diet should contain about 15 per cent of albumin, 75 per cent of carbohydrates (sugar and starch), and 10 per cent of fat, salts, and cellulose (woody fiber) not counting water. In order to have this proportion of the food stuffs in our daily bill of fare, we must do a little planning. One can not have the proper amounts and live on fine white-flour bread and potatoes. There would be a lack of albumin and fat. One would either have to eat too much starch for the good of the digestive organs, thus overeating, or eat too little albumin, and thus slowly starve for the lack of that material which goes to build up the muscles and nerves. The brain does not have proper food, and the whole system suffers, and that in a land where there is enough and to spare, all because the individual is not getting enough of some one food stuff. He may be paying a good price for his board, but all his food is prepared from material in which there is something lacking.

By a little calculation one may combine nuts and legumes with grains and fruits or with vegetables so that there will be enough of each kind of food stuff; and while these few simple principles are being carried into effect, one will often have

a better relish for his food, and if proper exercise in the open air is combined with the proper food combinations, Heaven is pledged to help him to the best health possible under the circumstances. A perfect combination would be good food well cooked and properly eaten, exercise in the open air and sunshine, with a clear conscience all the time. What better can you ask?

JUNE SPECIALTIES.

BY EVORA BUCKNUM.

LET us put up a generous supply of fruit juices this year, and save doctors' bills with all their accompanying evils. We can begin right away, this month, with strawberries; then will follow red and black raspberries, cherries, currants, both red and black, blueberries, blackberries, crab apples, quinces, and grapes. The Concords or other dark varieties are the most desirable in grapes, but Catawbas are delicate in flavor, and much enjoyed by some.

With plenty of fruit juices, the perplexing question of what to have for dinner, as well as for breakfast and luncheon, is partially settled. We can use them for fruit nectars, salad dressings, pudding sauces, and creams in great variety, and for fruit toasts and grain dressings.

Fruit for juices, as for canning, must be "without spot or blemish." Strawberries, especially, ought to be used the day they are picked. They will require washing, unless they are unusually clean, but do not pour water over them. Have several quarts of cold water in a pan, and throw in not more than one quart of berries at a time. Rinse them up and down quickly, but thoroughly, with the hands. Take them out at once, putting them into a colander to drain. Hull them (the little strawberry hullers which sell for five cents snip the hulls out quickly without crushing the berry, besides saving the stain on the fingers), and throw them into an agate or porcelain kettle, without any water, except possibly two or three tablespoonfuls in the bottom of the kettle.

Let them stand over a low fire, on an asbestos pad, or raised from the stove on an iron ring, heating very slowly, until the juice begins to separate from the berries. Stir them occasionally, and when they are very juicy, increase the heat to just boiling. Then put the fruit into jelly bags, and let it drain, without pressure, until it ceases to drip. It is quite convenient to heat the berries late in the afternoon, and hang them in a cool place to drain overnight.

A friend once told me of having some grape juice without sugar brought to her when she was very ill, and her stomach had rejected everything, even fruit juices with sugar, for days. This she was able to retain, and she never forgot how grateful it was to her.

So it is well to can some without sugar. But in using sugar, measure the juice, and add from one fourth to one half a pint (or pound) to each quart of juice. Heat to the boiling point, put into cans, and seal the same as fruit.

Pint cans are preferable, unless the juice is to be used in large quantities, because it will keep no longer than any canned fruit, after it is opened.

Currants may be left upon the stems for heating, but grapes should be picked off. Both require very slow heating, and at the last thorough stirring to break the skins.

The pulp of all fruits left in the bags

may have water added to it, and after reheating, be drained again (squeezing and kneading it this time); this juice can be put up in large cans to be used for drinking. Or the pulp of most of the fruits may be rubbed through a fine colander, sweetened, heated, and canned for marmalade.

To make a jelly bag, take a square piece of flannel or canton flannel, fold together the two corners, which are diagonally opposite to each other, and sew together firmly the two sides down to the point. Then trim off the corner at the opening, to make the top even, and you have a pointed jelly bag, the most convenient shape for draining.

Fill the bags only about two thirds full. Tie them with a strong cord, and hang them on a bracket, or if you have several, on a line well secured at each end (the necessity of this precaution I learned by experience), with stone or earthenware bowls beneath.

The thinnest juices, such as grape, if canned pure, will bear diluting one third for a drink; others, one half; and black currant, even two thirds.

As June is the time when pineapples are most plentiful, that is the time for canning them. The first step is to give the crown a firm twist with the hand, to remove it. Then, after washing the fruit, set it on a board or an agate tray, if you are so fortunate as to have one of these great conveniences, and with a large sharp knife pare it by cutting slices down from the top all around. Cut the slices thick enough to remove all the woody covering (the fruit in connection with that has very little flavor), leaving only the deepest eyes. After removing the eyes, take the pineapple in the left hand, with the base up, and shred it with a silver fork, by picking up small pieces all around with the tines of the fork. It comes off from the core easily that way, and is in good shape for canning. Do not try to shred it from the end where the crown was. After the outside is removed, wring the core, to get the juice from that.

Put the fruit into a stone jar, in layers with sugar, one-fourth to one-half cup to each pint of pineapple; and after it has stood in a cool place for several hours or overnight, drain off the juice, heat it to boiling, add the fruit, let it just boil up, and can. The delicate flavor of pineapple is lost by long boiling.

The use of pineapple juice in diphtheria is now so well understood that I hardly need to refer to it. I know of a physician in one of our large cities who has quantities of it canned every year for that purpose.

When using the solid part of the fruit for salads or other purposes, the juice may be combined with grape and lemon juice, sugar, and water for "nectar."

Another "drink of the gods" is red raspberry and red currant juice, sugar, and water, the tart of the currant and the flavor of the raspberry combining perfectly.

Cranberry juice, with grape and lemon juice, sugar, and water is also a delicious beverage.

With some of these nectars the sugar is flavored with the oil of orange or lemon by scoring the rind with a fork and scouring it well with the sugar in the hands. The fork should not penetrate to the white part of the rind, to liberate the bitter flavor.

June is also the strawberry month in temperate regions.

A unique way of serving strawberries is in tart shells of nuttol (nut oil). The shells may be tastefully arranged with leaves or flowers, on a dessert tray or upon individual plates. For the latter, make a doily of strawberry leaves around the center of a china plate, and set upon it the shell filled with the berries with the stems on. Serve with a dainty dish of

powdered sugar. The sugar may be molded in small cups or glasses, by pressing it down with a spoon, and allowing it to stand a few hours or overnight, then inverting it upon the dish you wish to serve it in. Or the berries may be hulled, and almond cream and sugar served with them.

To prepare almond cream, add cold water gradually to almond butter until smooth and of the desired consistency. Use a trifle of salt, but be very careful not to get enough to give the taste of salt.

Nuttol Crust for Shells.— For ten or eleven shells, measuring three and one-fourth inches across the top and two and one-half at the bottom (a pretty size and shape), take nine ounces (two and one-third cupfuls, laid in lightly) of pastry flour, two and one-fourth ounces (one-third cup) of nuttol, one-half teaspoonful of salt, and a scant fourth of a cup of ice-water, or just enough to make the ingredients hold together.

Have all materials and utensils cold, as for any pastry. Mix the salt with the flour, add the oil, and rub it into the flour lightly, not thoroughly. Add water, press the particles together, without kneading, and roll out, having the board and rolling-pin well floured. Bake in a quick oven, until of a delicate cream color.

If the shells can stand in the ice box long enough to become thoroughly chilled before baking, it will improve them.

After baking they can be kept for several days in a dry place, and just heated through in a moderate oven a short time before serving.

This crust is also suitable for fruit pies and for nut-meat pies.

LESS SCISSORS AND THREAD.

THE *Gentlewoman* publishes a very sensible and progressive article on this subject, by Anne Throop. The writer says in part:—

"I once knew a lady who said the less of needle and scissors used in clothes, the better the effect, and it is true from an esthetic standpoint; also, I believe, from a utilitarian standpoint.

"Why do we torture our lengths of cloth, cut and shirr and seam them? Do you really believe they fit us better, or is it because we do not stop to consider?

"We might learn much from the Orientals. They can do wonderful things with a big square of cloth, with two of plain lengths. Did any woman in a tea gown, with plaits and fancy sleeves and much lace and ribbons, ever look so well as the Hindu in her softly folded draperies? Very likely many think so, but there is where the artist who has kept uncontaminated his method of appreciation for the majesty of simplicity would always disagree. The Hindu woman can be beautiful; the tea-gown woman at the best pretty, unless she is superlatively majestic, for it takes that to triumph over a tea gown.

"Draperies reveal beauty, fal-fals disguise and hide it. If there are reasons for disguise and hiding of defects, the radical wrong is, then, of course, not clothes, but what our systems of physical culture and practical hygiene are doing all they can to conquer.

"And just here it occurs to me as strange that we do not have more cloths woven in sizes and shapes to require less cutting and fitting. But the trouble is, we do not want to be simple; we are restless and feverish because we do not give our energies to the most important things, which a greater simplicity in material directions would allow us to do, and therefore, to occupy our improperly neg

lected energies, we continually make variety in unimportant matters.

"However, what if we became convinced that simplicity was, after all, the greatest beauty? As it is, have you never noticed that beautiful people, or people of impressive personality, as a rule wear no odds and ends — fripperies and multitudinous trimmings, danglings, and janglings? The first, from some instinct that they need few enhancements; the second, because their attention is given to more momentous things that put at once all petty ones out of accord with their feelings, as also out of their notice.

"The beautiful woman is foolish who wears smart bow ends or aigrettes in her hair or at her throat. A gorgeous feather, worn by the right person, in the right way, is fine, barbaric, and interesting, and if only the right people wore them, and in the right way, there would not be enough birds killed to necessitate an Audubon Society. But when we do that, we may be poetic enough to wear an ornament only for its accord with our personalities, and we would not then kill birds only to wear their plumage, which to my mind is not worse than to eat them, however; but we are still hopelessly savage.

"Of course, all this is arrant reform, but the only way the 'happy mediums' of reform are reached is by each one having his little say on subjects. At present I am only advocating greater simplicity, less worry and fuss. If it can be got also with more beauty, let us women save ourselves. We are healthier, happier, and better looking for dress reform, as far as it has gone; but this temerity will take away the breath of the dress reformers. I do not think it has gone far enough. It has not become simplified enough yet.

"And here comes the utilitarian side of taking Oriental models of garments. It is possible to argue that we could not do business or keep house in draperies. No, we could not, conveniently. But the East has workers. I am not arguing only voluminous draperies, even draperies at all, always, but I am arguing for simpler patterns, and for their superior beauty. The clothes of the Orientals, no matter how scantily made, as in the case of the working people, to be out of the way, fall in graceful folds, of which the whole secret is the simplicity of cut and putting together. If the knowledge of a few simple ways sufficed for the making of all our garments, and of making them so that we looked beautiful in them, — for that is the object, is n't it? that and comfort, not that the clothes alone should be gorgeous, — what a saving of trouble there would be, with no thought about changes of fashion. Some of us enjoy these constant novelties, but to many others they seem only stupid and idle.

"Here is a point to remember, though; there is always more variety, more effective expression of individuality, obtainable from a simple garment than from an elaborate one. Even if all people wore garments of the same style, *provided the garments were simple enough*, the individuality of each person would be more apparent than with any other ordering of fashions. This does not hold good with all kinds of uniforms, though it does with some, as many, especially army and navy uniforms, have too many artificial accessories for making a man seem up to a standard of physical appearance which he may not reach at all. As for the laundering of garments after Oriental modes, it would be simplicity itself. I have often wondered why we are willing to wear heavy skirt-waists, with interlinings, facings, and bindings, perfect catch-alls for dust. Except for outer garments, coats, and wraps, it seems to me we are still an untidy and unhygienic people to wear dark woolens and cloths that 'don't show dust,' and that can not be cleansed as

underclothing is cleansed. Even outer wraps should be cleaned oftener than as a rule they are, and made so that dust lodging between goods and lining could be easily removed. It is strange we are ever willing to wear in our houses gowns we have worn through the dusty or muddy streets.

"I have nothing to say about the disgusting fashion of wearing long and trailing skirts in the streets. It says itself. It seemed women, supposed to be the daintiest of creatures, were coming to their senses, but even their daintiness is in abeyance to the weaver and modiste. Long skirts are beautiful in the house, a matter for the health board outside.

"As to the Oriental laundering, the Japanese have brought it to a perfection of ease. Their clothes — all made in straight pieces — they baste together in the first place, and when washing time comes, simply unbaste them, wash the strips, and stretch them smoothly on boards in the sun to dry, and there they are all ironed of themselves, and ready to be basted together again. All intricate sewing on their garments is put into embroidery, and that seems to me legitimate embellishment of dress — poetic, delicate, and allowing characteristic expression of the wearer; but we can not yet hope to compete with the Japanese in the poetics of simple living.

"There is room for further dress reform. Why not let Paris alone for awhile; also, except for a few kinds of dress, stop imitating our brothers, and see what we can evolve from some Eastern dress models? We can find garments for ease, for exercise, for beauty, for utility, all from a few simple principles, allowing a great variety of use and adjustment. For house use, at least, many beautiful designs can be made, and I know appropriate and elegant street garments could be made from these principles much more simple than those at present worn, and without seeming startling and conspicuous innovations. Indeed, elegance, appropriateness, and beauty are never unpleasant innovations. Also, if we find one pattern beautiful and suited to its use, why change it every year?

"Why not 'less scissors and thread,' and more time and energy?"

WHAT THE SUN'S LONG FINGERS DID.

FROM the *Kindergarten Review* we quote the following pretty allegory by Alice M. Barrett: —

"'Happy!' exclaimed a window, 'I should like to know who could be happy with such a disagreeable family living inside this house.'

"The window was talking to a tree outside. 'You see,' the window went on, 'I never get my face washed, for one thing. Then the family are so gloomy that they nearly always make me keep my eyes shut to everything going on out of doors; and so I see nothing but the dirt and the unhappy faces of the family who live inside the house. As it happened, somebody by mistake left a peep-hole open; so I have a chance to see you and talk with you, which, I am sure, is a pleasure.'

"'Well,' said the tree, 'I 'll see if I can help you.'

"At that moment the wind came along. The tree pointed one of her branches toward the window, and in her own language told the wind what the window had said.

"'Very well,' whispered the wind, 'I am sure I shall be glad to help.' Then he puffed his cheeks out full and round,

and gave such a tremendous blow that the blinds were whisked open as quickly and easily as you can wink.

"A little girl came into the room where the window was. She opened the window and started to close the blinds, when she seemed to hear something say in a soft little whisper: 'Look up! Look up!' She looked up and saw the tree with its leaves pointing to the sky; then she looked up to the sky. How beautiful it was with its deep blue! As she quietly looked into its far-away depths, a voice again seemed to say, 'Be clean! be clean!' 'What is it?' thought the child. Then she saw the sun, and he looked as if he were pointing with long fingers down into the room. She followed with her eyes the direction of the finger rays, and instead of the pure, clean sky, she saw a very dirty floor.

"For a moment the child kept still. Then quickly jumping up, she exclaimed, 'Oh, what fun! I'll make the room look like the sky!' It was not long before a broom and clean water had a chance to share in the fun of making the room look pure and clean.

"'Oh, the window!' The now happy window — how quickly it brightened up, as its face was washed and polished! It was now able to bring to view ever so many beautiful out-of-door things which it could not before show to the people within the room.

"The tree nodded its head, and whispered the glad news to the birds, the flowers, and the sky. The family in the house enjoyed the clean window and the beautiful view from it so much that they grew more careful to keep the window bright, the blinds wide open, and all things clean and fresh about the house, and — would you believe it? — the family itself, once so disagreeable, became bright and cheerful also.

"The sun, too, steadily kept up his part of the work by carefully pointing his finger rays into all the corners and cracks. As he could no longer find anything but clean places and happy people, he gave a bright, glad smile, and sent a blessing of health to all in the house."

THE CUSTOMS OF REINSTERN.

"UNTIL children pass their first birthday, they accompany their mothers daily to the fields, to roll about on the sod, dig in the soil, or sleep in their baskets, while their mothers plant, prune, graft, harvest, or cultivate, according to the season; meanwhile, the applicants are attending to the house and preparing for the noon homecoming; after which they share the yearling duties."

"Who are the applicants?"

"Young men and maidens who desire to marry, after having passed with honor through several departments of education and preparation, and, by the state records, have proved their ability to provide for the material and spiritual needs of a family; and have received from the Board of Public Health their certificate of physical fitness, are granted the applicant's degree.

"This entitles them to assist and relieve fathers and mothers in their home and field duties, until they pass their twenty-fifth birthdays and have selected life partners. If they can then show records of at least one year's satisfactory administration of such duties, the government issues their marriage license.

"This is, in every family, a period of great rejoicing, each licensed child being then honored by visits and gifts from all relatives and friends; and if he or she happens to have merited special recogni-

tion from the city or state, by any act of peculiar heroism or self sacrifice, the officials add a generous tribute.

"In some notable cases, the bride or groom must build a house in which to store the ante-wedding presents."

"You make as much of the license-granting as of the wedding?"

"The public is not expected to take cognizance of the wedding day. It would be regarded in Reinstern as grossly immodest and cruel to call general attention to the exact hour wherein the young couple are legally empowered to exercise the marital privileges. It is the culmination of the most sacred desires of the human heart."

As with curtained eyes they bowed modestly before us, we felt unaccountably ashamed of our crude practices, though but dimly comprehending the mystic purity of which we were thus vouchsafed a brief glimpse.

* * * * * *

"Then even this hygienic régime entails occasional illness?"

"Accidents will always attend immaturity and inexperience; infinite wisdom alone can insure perfect harmony; but our physicians are also a salaried class, who teach as well as heal. Ill health, which incapacitates members of his family for daily usefulness, is recorded against the physician; and a succession of such reports counts to his discredit, even to the extent of depriving him of his diploma. In such cases he, through the advice of the sages, seeks a less responsible vocation, or one for which he is better qualified."

* * * * * *

"How long is this term of punishment?"

"Not punishment — development; we consider it the second childhood. The time varies from one to six months of your counting.

"We have only one bad case on our records," they added proudly.

"Are you allowed to state the facts?"

"It is of public record and history: A father knocked down his own son — because he kicked him."

"Kicked his father?"

"Yes; poor little fellow!"

"Surely the boy should be punished — not the father?"

After a startled glance of indignation, which quickly faded into pity, they continued: —

"Children inherit all physical tendencies from their physical parents. In the case under discussion, the lad received vicious inclinations from the father, who had, however, so controlled his temper as successfully to pass all ante-marriage tests.

"Had he taught that son by example the self-discipline he so well understood, the boy would never have disgraced us." — *Eloise O. Richberg, in "Reinstern."*

TABLE TALK.

The Duke of Wellington, not long before retiring from the office of head of the British Army, issued the famous "General Order 577," in which he declared that "the commander in-chief has been informed that the practice of smoking, by the use of pipes, cigars, or cheroots [cigarettes as yet were not], has become prevalent among the officers of the army, which is not only in itself a species of intoxication occasioned by the fumes of tobacco, but undoubtedly occasions drinking and tippling by those who acquire the habit; and he entreats the officers commanding regiments to prevent smoking in the messrooms of their several regiments

and in the adjoining apartments, and to discourage the practice among the officers of junior rank in their regiments."

Commenting upon this, the *British Medical Journal* says: "One vainly tries to imagine how the Iron Duke's feelings would have been shocked had he lived to see the *matériel* for 'the practice of smoking' figure most prominently among the comforts sent by a grateful and admiring nation to the soldiers fighting its battles among the kopjes of South Africa."

What becomes of the microbes that abound in his body when a person dies of a contagious disease? This question has been investigated in Germany by Dr. Klein, who buried the bodies of infected animals for stated periods, and then examined them for germ life. His results are given in part by the *Literary Digest*, from which we quote:—

"The bacillus of cholera lives nineteen days, but does not preserve its reproductive power after eighteen. The resistance of Eberth's bacillus (that of typhoid) is nearly the same. The germ of the plague is always alive after seventeen days of burial, but not after three weeks. The bacillus of tuberculosis (which, it should be insisted upon, destroys more lives than that of the plague, although it frightens people less) does not survive the animal that it has killed. Klein has found it in the organs, but has never been able to make cultures of it, and (a more important fact) has never succeeded in reproducing tuberculosis by injections of bacilli found in dead bodies."

Recreation as a science has been discussed by Chicago physicians.

"Men ought to work more," is the opinion of Dr. Nicholas Senn. He said:—

"I see it every day. They need hours long enough to keep them out of mischief. Ten hours a day is a short enough time for work."

"Work never hurt any one who was able to get the right kind of rest," said Dr. Frank Billings. "There are men in Chicago who are perfectly well, and who are working sixteen hours a day. However, the question must be dealt with largely as a personal equation."

Dr. Senn advanced the proposition that work is rest. Some part of the brain or body should be employed at all times except during sleep. He does not believe that either the trades unionist or the brain worker requires so short a day as eight hours.

More than two thousand physicians and surgeons of the United Kingdom signed the following declaration in 1847:—

"We are of opinion—

"1. That a very large proportion of human misery, including poverty, disease, and crime, is induced by the use of alcoholic or fermented liquor as beverages.

"2. That the most perfect health is compatible with total abstinence from all sorts of intoxicating beverages, whether in the form of ardent spirits or as wine, beer, porter, or cider.

"3. That persons accustomed to such drinks may with perfect safety discontinue them entirely, either at once or gradually, after a short time.

"4. That total and universal abstinence from alcoholic liquors and beverages of all sorts would greatly contribute to the health, the prosperity, the morality, and the happiness of the human race."

The Reform-Dress Society of Berlin is in earnest in its agitation to do away with the corset and with filth-gathering skirts. Hundreds have signed a pledge which demands the discarding of stays of whatever sort or shape.

Tobacco is to be discussed by an international congress at the Paris Exposition. No fewer than one hundred and six questions relating to this subject are no the program,— questions historical, chemical, physiological, pathological, hygienic, sociological, educational, criminological.

MORNING FACES.

I HEARD a young woman say of her friend, "What I admire in Elizabeth is that she never talks of her misfortunes. The pleasant things in her life are what she tells of, and she always seems happy, and makes other people so." There are so many things to enjoy, let us enjoy them to the full; let us talk about them, and so get other people to enjoy them with us. Of the duty of happiness Dorothy Storrs, in the *Congregationalist*, speaks very earnestly : —

"Make us happy every day, Amen."

Thus the child closed her evening prayer, and her mother drew a breath of satisfaction. "One seed has taken root at last," she said afterward in conversation with a friend. "I have tried so hard to teach her that to be happy and make others happy is the highest duty and privilege in life; that ill-temper is the chief of crimes and misdemeanors."

"You speak extravagantly."

"I feel so. What right has any one to throw away his birthright of gladness, and indulge in a state of mind that makes himself and others miserable? In the last analysis I believe almost all wrong-doing originates in ill-temper."

"Yet we usually mean by ill-temper mere crossness."

"Mere crossness! There lies the trouble. We refuse to call a spade a spade, and treat ill-temper as if it were a misfortune, like bad weather, resigning ourselves dismally to it in ourselves and in others."

"You mean that instead of saying carelessly, 'Harry has gotten out of bed on the wrong side to-day,' we should say, soberly: 'How wicked Harry is this morning!'"

"Exactly. Moreover, ill-temper is contagious, and a person has no more right to go about scattering germs of bad temper than he has to propagate smallpox or the measles."

"On the other hand, an ill-natured person may prove a means of grace to others."

"On the same principle, I suppose, that a worthy divine advances the astonishing theory that the poor are always with us in order to excite the benevolence of the rich."

"But according to modern theories, ill-temper always arises from some physical cause."

"Treat it as a symptom, then. Send the patient to bed, put a mustard plaster on his tongue, and a hot water bottle to his frown. The visit of a mock doctor often works a cure upon my children."

"Seriously, how do you embody this theory of yours in the practical training of your children?"

"Simply by making the pursuit of happiness, in its highest form of right-doing, the central idea of their lives. 'Sunshine from all and for all' is our home motto, and instant quarantine is the penalty for a failure to live up to it. I believe a happy disposition contributes more to success in a life career than any other single element."

"Yet I heard a clever woman say the other day that the world seemed to her to be divided into two classes,— the unamiable people with force, and the amiable people without it."

"That sounds like one of the snap-shot generalities of the 'new woman.' I am not discouraged, but shall boldly divorce these ill-assorted couples, and form an alliance between force and amiability in the persons of my children."

"Unblushing mother conceit! But example is better than precept — do you manage to live up to your own standard?"

"Not at all. On the contrary, I frequently utter admonitions to happiness in most unhappy accents, and need training as much and more than any member of the family."

"Fortunately, your children are still at the uncritical age when mother can do no wrong."

"Or they are quick-witted enough to see that my theory is good if my practice fails, as is the case with my small daughter, who, when baby sleeps, warns her brothers to 'be quiet' in the most piercing tones of her shrill soprano. But when I detect myself in a discouraged mood, I often say over a few lines of Robert Louis Stevenson's which set me to thinking of happiness as a duty. Do you know them?

> "If I have faltered more or less
> In my great task of happiness;
> If I have moved among my race,
> And shown no glorious morning face;
> If beams from happy human eyes
> Have moved me not; if morning skies,
> Books, and my food, and summer rain,
> Knocked on my sullen heart in vain,
> Lord, thy most pointed pleasure take,
> And stab my spirit broad awake."

"No, I never heard them before, but how characteristic they are of his brave, sunny spirit! That phrase, 'morning face,' seems to be a favorite of his. He uses it in the prayer I am so fond of: 'When the day returns, return to us our Sun and Comforter, and call us up with morning faces and with morning hearts.'"

HOW TO MAKE SHORT CHILDREN GROW.

THE *British Medical Journal* has been the theater of a brief discussion upon this subject. One writer emphasizes as the most important causes of stunted growth, "want of sufficient rest, fresh air, and sunlight."

He says: "At boarding schools children have to go to bed early, the time varying at different institutions. On the other hand, children attending day schools are nearly always allowed to sit up till 10 or 11 P. M., thus spending from two to three hours more in artificially lighted, badly ventilated rooms. The result is that children attending day schools do not as a class reach the average height of those who have been at boarding schools. Picking out the tall boys from the day schools, one finds either that they have been the victims of some illness which has necessitated their remaining in bed for a lengthened period, or that they have the reputation of being lazy and 'fond of bed,' or that they have parents who insist on their having plenty of rest.

"Take the boys who have been at boarding schools, divide them into two classes: (1) Those who go into city offices (always more or less badly ventilated), who get little exercise, and, as a rule, keep late hours; (2) those who go into outdoor occupations or to the universities, etc., who are thus more favorably placed as regards rest, fresh air, and sunshine.

"The average height of the latter class undoubtedly exceeds that of the former at the age of twenty-one years. You say, 'The rising generation promises to be well above the older averages in height.' Possibly it is because our houses are better ventilated, and outdoor games are encouraged at schools, and girls also get

out more than formerly, cycling, etc. This does not apply to factory girls who work in badly ventilated rooms. Girls who go to the city young, as clerks, typewriters, etc., are as a rule shorter than those who live always at home. Want of fresh air probably explains why the average miner is short.

"'Adenoma of the respiratory tract is now well known to check growth.' Here the fresh-air supply is interfered with. With regard to M. Springer's observations on the 'habits of parents,' I should like to ask, How many are the subjects of chronic alcoholism, the morphine habit, etc., at the time their children are born? The percentage is undoubtedly small. If chronic alcoholism is a cause of stunted growth, this is to be explained by the fact that the children in such cases are generally neglected, underfed, and allowed to keep late hours, or are kept up night after night to wait upon their drunken parents.

"Savages living in open tropical countries are as a rule tall; they get fresh air and sunlight. Tribes living in colder regions who find it necessary to live in badly ventilated huts are stunted (for example, Lapps). The pygmies of Africa seem an exception, but they live in the semigloom of a tropical forest without sunlight.

"If M. Springer will take one hundred boys aged ten years, let them then be undersized, their parents stunted, syphilitic, alcoholic, or the victims of the morphine habit; put them under ordinary good hygienic conditions, give them wholesome food, plenty of outdoor exercise, and send them to bed from 8 P. M. till 7 A. M., I think he would find that the average height of these boys at the age of seventeen years would be up to the standard without having resort to the local application of electricity."

Can Overeating Produce Cancer?

The theory is advanced by Sir William Banks, in a recent series of lectures delivered before the British Medical Society, that overeating, or even a "high standard of general nutrition," may predispose to cancer, which he believes to be eminently a disease of the healthy and robust. Thus, abundance of food, which is a result of national prosperity, and on the whole a powerful factor in the improvement of public health, is not without its drawbacks. "More than one hygienic prophet," says the *British Medical Journal*, in a note on the subject, "has lately uplifted his voice in warning as to the evils of overfeeding," and Sir William but adds one more reason for deploring and discouraging it. Says the writer of the note just quoted: —

"The theory is not altogether new, but it undoubtedly acquires new strength from the adhesion of a surgeon of his experience and sagacity. He points out that the increase of cancer coincides with an increase of food throughout the country [Great Britain]. Ever since the passing of the Corn Laws, he says, bread has been cheap and plentiful, while during the last twenty years the importation of animal food from other countries has been enormous. The increased wages and emoluments of all classes in this country have enabled them to purchase freely of the best there is to be had in the whole world of things to eat and drink. Our working classes fare admirably. Our better classes eat infinitely too much, especially of animal food partaken of at breakfast, lunch, and dinner. But for the athletic tendency of the age and the general passion for games and exercises which pervades all classes, this overstuffing must have proved very dangerous. Sir

William Banks is pretty well convinced that, when a man is over forty-five, excess in food is perhaps worse for him than excess in drink, and believes one of the results of too much nourishing food is the production of a widely spread, second-rate kind of gout, of a different type from the acute and furious attacks produced in former days by the copious drinking of beer and port wine. Sir William Banks is distinctly of the opinion that it has also to do with the increase of the constitutional tendency to cancer. The theory is supported by the fact that the increase of cancer in males has been more rapid than in females; and it is precisely the male population that eats heavy food in ever-increasing quantities, whereas the female remains much as she was before in this respect." — *Literary Digest.*

Modifying the Mother.

A writer in the Maryland *Medical Journal,* discussing the food problem of infancy, especially with reference to the various modifications of milk now in vogue, finally gives wing to his imagination as follows:—

"Still the ideal is not reached. Many a baby lies awake all night weeping because it was not born a calf! If we could only modify that baby! or, one other possibility, can not we modify the mother into a healthy woman? Our work on the cow's milk having gone round the circle to its original starting place, and the baby remaining obstinate, it really seems possible that the next effort to solve the great food problem of infancy may be along the line of radical modification in our ideas concerning the physical education of those who will preside over the silent meditations of infancy in the coming century.

"The author, having come to the conclusion that the vaunted education of our growing girls has been founded on a fearful mistake, notes with satisfaction the recent tendency toward simplification of studies and promotion of outdoor athletics in the schools of the wealthy. Such bold expressions of opinion as we find in a recent address of the president of the Woman's College of Baltimore, added to the humbler protests of writers like Carisabel, give us hope that our schoolgirls will no longer be given to cutting classes and decoying teachers into unprofitable disquisitions in order to save themselves from excessive brain work. We look forward to the time when these enlightened ideas of education shall be extended to the public school system of our cities, where far more extensive injury is being inflicted on those who will be the mothers of our future community."

Ice-Cream and Dyspepsia.

An English journal, *Health,* shows the actual physiological effect of eating ice-cream. It is explained that cold being a stimulus to unstripped muscle, ice-cream would at once prevent the occurrence of certain necessary gastric processes by contracting the vessels and so shutting out the blood. The secretion of gastric juice would thus be impossible, because the glands now have no material from which to elaborate the peptic fluid. Not only that, but muscular movement of the viscus would also be impeded. Says *Health,* "While cold is a stimulus to non-striated muscle fiber, we must remember that it is not by any means an excito-motor in a therapeutic or physiological sense; on the contrary, it causes contraction of a spasmodic nature, which again assists in effectually shutting out the vital fluid. Until all the cream has melted and been raised to a sufficient temperature, the stomach is tired out by contracting upon a mass of food which, for the above reasons, it has no power to digest."

After explaining the importance of the churning motion of the stomach, calling attention to the fact that peptic digestion is directly proportioned to the amount of surface exposed, the writer continues: "If we recall, now, that the ingestion of ice-cream stops or retards that churning motion, and so prevents thorough trituration of food matters, we can form an estimation as to how much digestion is delayed and made harder. In this way the stomach has not only a good deal more work, but also a good deal less rest and recuperation."

Fresh Air for Consumption.

"The breathing of fresh air, by night and by day, in all seasons and weathers, is now acknowleged by every scientific physician to be the only effectual means of checking the great white plague, as consumption has been aptly called," says a writer in the *Medical Times*. "The patient must sleep with the windows wide open, and spend his days out of doors, guarded only against exposure to storm and draft. Under this treatment it is found that the most delicate sufferers, even in the advanced stages of the disease, gain vigor almost at once, and recover entirely whenever sufficient lung tissue is left to build upon.

"The question naturally arises (though we do not remember having seen it discussed in print), why a mode of living which is so beneficial in the case of subjects reduced to almost the lowest ebb by the most formidable of chronic maladies, should not be equally suitable for defending well people from its attacks. If fresh air is an almost infallible cure for phthisis, when a cure is in the nature of things possible, does it not follow, *a fortiori*, that it must also be the best agent for preventing the development of the disease in the healthy, and finally for abolishing it entirely? The dangers from exposure having proved to be wholly imaginary, so far as the frailest invalids are concerned, is it not simply absurd for people in good general condition and with lungs as yet untainted, to shut themselves up and breathe over and over again their own and each other's bodily emanations, according to the present civilized custom?

"Some years ago there was a wealthy retired confectioner, living on Long Island, who made a 'fad' of fresh air; in fact, his neighbors and acquaintances regarded him as a mild monomaniac on the subject. He insisted on keeping his windows open all the year round, and thought nothing of sitting in his library with snowdrifts piled up on the floor around him. He lived to a good old age, and bequeathed his fortune to the Smithsonian Institution, for the furtherance of scientific investigation into the nature and properties of the atmosphere,—in other words, for propagating 'the gospel of fresh air' among his benighted countrymen. These, perhaps, in another generation or two, will realize that there was method in his madness."

Vanilla Poisoning.

"A certain fearful interest," says the *British Medical Journal*, "attaches to accounts of poisoning by substances in common use, and the interest becomes almost painful when we learn how difficult it is to provide against its occurrence. Vanilla is a case in point. Fortunately, thanks, apparently, more to luck than anything else, cases of poisoning from this cause are rare. Nineteen persons, one of whom subsequently died, suffered severely, Wassermann tells us, from the effects of eating some vanilla 'cream.' This was composed of milk, eggs, sugar, and flavored with vanillin (the commercial article prepared from coniferin). The dish

had been cooked in the evening, and allowed to stand, uncovered, in the dining-room till noon next day. Investigation showed that the eggs and sugar were good, that the milk alone was harmless, and that the vanillin was pure. The fact that the cook and landlady, who had merely tasted the dish, had also become seriously ill, suggested the idea that the poisonous agent might have undergone further development after being swallowed; that is, that it was bacterial. Wassermann boiled three flasks containing respectively plain milk, milk flavored with vanillin, and a solution of vanillin in water, then let them stand eighteen hours at a temperature of 37° C. (98.6° F.). Some of the contents of each flask was injected into mice. The milk flavored with vanillin was poisonous, the other two harmless. . . . Wassermann quotes several other cases of vanilla poisoning in which the vanilla pod, and not vanillin, had been employed."

Strawberries and Gout.

A writer in *Nature* speaks of the cruel medical tyranny which banishes the strawberry from the diet of the gouty, and quotes what Linnæus had to say about the curative properties of this delightful fruit. The great naturalist was persuaded to take strawberries during a severe attack of sciatica, with the result that a sweet sleep ensued, and when he awoke, the pain had sensibly subsided. On the next day he ate as many strawberries as possible, and on the following morning the pain was gone, and he was able to leave his bed. Gouty pains returned at the same date in the next year, but they were dispersed as soon as Linnæus was able to get strawberries. Although strawberries are forbidden to the gouty by some authorities, by others they are permitted, the fruit being regarded as a useful food for such persons on account of its richness in the salts of potash, soda, and lime, and its cooling diuretic and laxative qualities. The analysis of the strawberry shows it to be particularly rich in sodium salts, and in spite of the high percentage of water, this fruit excels all other common fruit in the amount of mineral salts. The chemistry of the strawberry, therefore, would teach that this fruit is likely to be beneficial in gouty states.

Crowded Tenements and Mortality.

The *Revue Scientifique* contains statistics showing the intimate relation between the number of people in a house and the rate of mortality. Thus in London, where the average number of inhabitants to a house is 8, the death rate is 23 per thousand; in Berlin, with 32 persons to a dwelling, the death rate is 25. Paris has 35 persons to a house, and a death rate of 28. St. Petersburg has 52 persons, with a death rate of 41, and Vienna, the most overcrowded city in Europe, with 55 persons in each building, has the largest death rate, 47. These figures are made the basis of an argument in opposition to the building of special tenement houses for the accommodation of the poor in cities. However excellent the sanitary arrangements, life in them is not so healthy as life under less crowded conditions. Instead, it is urged that the dwellers in the tenement districts should be persuaded to make their homes in the suburbs. This policy is meeting the approval of an increasing number of social students.

The Growing Evil of Drink.

The *New Voice* has compiled statistics showing that liquor drinking is by no means on the wane, as many claim. According to these statistics,—

"The year 1898 was marked by a total consumption of liquors never before

equaled, and a total per capita of consumption never equaled save three times.

"The year 1899, while showing a slight decrease in the total per capita in the consumption of beer, shows an increase in the use of spirits and wines.

"The consumption of liquors, so far from being only about one half the consumption of twenty-five years ago, is really much in excess of that period."

This authority claims also that "the consumption of liquor has never steadily increased or decreased, but has constantly fluctuated, with a general upward tendency in the totals; and that the periods of greatest consumption have been the so-called periods of 'prosperity,' the present 'prosperity' period following the rule."

Forgotten Sins.

"If one drinks water to wash down his food, he commits a quadruple mistake," declares *Health*. "In the first place, he does not make use of nature's provisions; secondly, he overdilutes the stomach juice by drinking too much water (although he may not think so himself); thirdly, he leaves the work of mastication — easy for the jaws, but extremely hard for the stomach — to the latter; fourthly, he does not give the saliva time to convert the starch into sugar. Many people are in the habit of drinking largely of water during meals, and boast of perfect health. There is nothing in that whatever. It is a known fact that some people are almost unable to destroy their health, and on the other hand, the results of such imprudences usually come on so slowly that the perpetrator has forgotten his sins. If any one cares for having clinical proof, he only need trace out the history of those slowly and stealthily advancing evils denominated collectively 'dyspepsia.'"

The Best Sterilizer.

In the opinion of a writer in the *Dietetic and Hygienic Gazette*, "one of the simplest, cheapest, and best sterilizers is sunshine, and it is important to allow as much sun in a sickroom as possible. The same rule is applicable to the rooms of healthy people. The good effects of 'sun bathing' in the treatment of convalescents is ample proof of the utility of the rays of the sun for therapeutic purposes.

"Every one knows that the so-called 'morning headache' is chiefly due to breathing an excess of carbonic acid gas in a close room during the night, and many a seidlitz powder or unnecessary dose of bromide is swallowed into a patient stomach, simply because nature craves for oxygen. The most rational point would be out-of-door exercise and inhalation of fresh air. I do not wish to be understood as demanding that a case of pneumonia must be taken into the street and given an air bath."

A Ball and a Sand Pile.

Marion B. B. Langzettel, in the *Kindergarten Magazine*, says: "In Germany one soon comes to believe that a ball and a pile of sand are the natural heritage of every child. One sees on every corner children with a red knit bag suspended from the neck. In this bag is a ball varying in size to meet the age of the owner. Every baby who can toddle has also a little tin pail and a tiny shovel, with which he takes great delight in the many piles of sand along the streets and in the parks. Near by is the mother or nurse, knitting and chatting with a companion similarly employed. Out-of-door life, companionship, and self-activity are found in old and young throughout Germany."

Tiny Gluttons.

Captain Burrows, of the Kongo Free State, in his book, "The Land of the Pigmies," says the *Youth's Companion*, describes the fondness of the little people for bananas, saying, "The pigmy's appetite for bananas is such that he will eat sixty at a meal. Then he will lie and groan throughout the night, but when morning comes he is ready to repeat the meal." If he had eaten sixty sausages, his groans would have had a different ending.

Spades and Potatoes.

Mademoiselle Calvé, the great prima donna, says the *Youth's Companion*, retires every summer to spend her vacation on a farm among the Cevennes, a chain of mountains in southern France. The famous singer was very ill and nervous when she went to the Cevennes, but this free, open-air life and vigorous exercise soon restored her to the most robust health. When friends ask her the secret of her cure, she answers, "Spades and potatoes."

The Public Health.

The necessity for establishing a national department of public health was urged by Dr. Henry Mitchell, of New Jersey, at the last annual meeting of the American Public Health Association. In his opinion its importance has been strengthened by recent events, particularly the accession by the United States of tropical possessions.

Definition of Christian Science.

Prof. J. H. Richardson, of the Toronto University, in a recent paper read before a medical association, defines Christian Science, as presented by Mrs. Eddy in her so-called "Science and Health," "a conglomeration of spiritualism, homeopathy, mesmerism, deceit, and avarice."

Lime in the Eyes.

The *Medical Brief* gives this simple remedy for lime in the eye: Wash the eye with sugar-water. The lime enters into a chemical combination with the sugar-water, which soon takes away its corroding action.

A SCOTCH paper quotes from an Indian newspaper an interesting account of the asylum for aged and infirm beasts and birds that was established some years ago by a society of influential Hindus. It is near the Sodepur station, about ten miles from Calcutta, and is under the control of a manager, with a staff of eighty servants and an experienced veterinary surgeon. In the place at present there are 979 paupers, to wit: 129 bulls, 171 calves, 78 horses, 13 water buffaloes, 69 sheep, 15 goats, 141 pigeons, 44 cocks and hens, 4 cats, 3 monkeys, and 5 dogs. This remarkable asylum is described as being most systematically and mercifully managed.—*The Vegetarian.*

A CURIOUS anecdote of old Kien Long, emperor of China, is told by a writer in *Harper's Round Table*.

He was inquiring of Sir George Staunton the manner in which physicians were paid in England. When, after some difficulty, his Majesty was made to comprehend the system, he exclaimed: —

"Is any man well in England that can afford to be ill? Now I will inform you," said he, "how I manage my physicians. I have four, to whom the care of my health is committed. A certain weekly salary is allowed them, but the moment I am ill, the salary stops till I am well again. I need not inform you that my illnesses are usually short."

MANY people cry out for liking, for recognition, for admiration, and consider

it a cold, unfeeling world that fails to respond; while the truer life would be to seek such achievements of character and service as to be worthy of the love and admiration they crave. The most satisfying thing in life is, indeed, love and sympathy; but these, like fame, must come spontaneously and indirectly, if they come at all, and not be sought as a specific end or direct aim in themselves. —*Lilian Whiting.*

DR. CHARLES H. SHEPARD is responsible for the statement that the enormous use of narcotics in the shape of tea, coffee, tobacco, and alcohol, not to mention the indiscriminate use of other drugs, is responsible for seventy-five per cent of the cases of insanity in this country.

SORROWS are often like clouds, which, though black when they are passing over us, when they are past, become as if they were the garments of God, thrown off in purple and gold along the sky.—*Beecher.*

AN eminent medical authority of France declares: "In the interest of the race we must condemn the corset. If we do not want the French nation to die out, we must put a stop to this article of dress."

SAYS the *Youth's Companion*, "A ruthless commentator of King James's time, remarked that if nature had meant man to smoke, snuff, and chew, she would have built his skull like a chimney, inverted his nose for a dust-basket, and deepened his jaw for a cesspool."

DR. MOXOM, in his lectures to medical students, used to say that they should early learn to create in their patients faith, the greatest of tonics, and hope, the best of stimulants.

AN old writer says: "When men lived in houses of reed, they had constitutions of oak; when they lived in houses of oak, they had constitutions of reeds."

THE care of a garden is the greatest fount of moral education that can be given to a child.—*Pestalozzi.*

THE FAD OF HOME WORK.

I SAW a boy, a little boy
But ten (or scarcely more),
Come staggering home beneath a weight
Of text-books that he bore.
In school from nine to three he toiled,
From seven to nine with tears
He fagged at "home work" sleepily—
This boy of tender years.

"What do you learn, O little boy?"
He answered dolefully:
"Why, histr'y, word analysis,
Advanced geography;
Physiology and language,
And art and music—well,
And physics and arithmetic—
Of course we read and spell."

"When do you play, O little boy,
Of years and text-books ten?"
"'Bout half an hour, because I've got
To do my 'home work' then."
His head was large, his face was pale;
I wondered how the nation
(Whose hope he was) could ever use
This slave of Education!

—*Ella M. Sexton, in the Examiner.*

EDITORIAL.

THE EXTINCTION OF MAN.

THAT the human race is marching rapidly toward extinction is attested by an immense number of facts which no one pretends to dispute. The only surprising thing in connection with the subject is that men and women are not more alarmed.

A study of the records of history and of the unwritten testimony afforded by examination of the remains of human beings and human arts found buried in the crust of the earth, presents indubitable evidence that many nations and places and tribes of men who have at one time flourished upon the earth and to a most remarkable degree, have, through the operation of various causes, fallen into a state of senility and decay, and by and by have been buried so deep in the accumulating rubbish of earth that only a pyramid or a ruined temple or a burial mound remains to testify to their existence.

The death of a nation, even the extinction of a tribe, is an ominous event, but the march of human history is strewn all along the way with catastrophies of this sort. In the United States we have had the opportunity of seeing again and again the extinction of an aboriginal tribe in the obsequies of the sole surviving member. A throb of sorrow went round the world some years ago when it was announced that the last survivor of the Tasmanian race had died. The present time affords many pictures of dying peoples, as in the Sandwich Islands, New Zealand, and numerous other South Sea Islands, to say nothing of the pitiful spectacle afforded at the various Indian agencies of the United States, where each year gather a decreasing number to receive from the government the meager dole which the gunpowder and bullets of civilization have compelled them to accept in return for the sacrifice of their homes, their hunting grounds, their independence, their very existence.

But it is not to these small catastrophies that I desire to call attention, but rather to the greater fact that the same degenerative and destructive agencies which have in ages past wiped out nations and races, and which we see in operation about us at the present day, extinguishing races formerly possessed of enormous vigor, vitality, and endurance, are operating with the same certainty and potency for the destruction not only of small fragments of the human race, but of the entire race of man. It is only necessary to look at a few facts to be convinced that the human race is, taken as a whole, rapidly going down to oblivion, at least the civilized part of it. The statistics of insanity show an increase of three hundred per cent in the United States within the last fifty years. There has been the same increase during the same time in the proportion of idiots, imbeciles, and epileptics. At present the number of defectives in the United States is not less than five thousand, or one half of one per cent. From this it is quite easy to predict that in fifty years, at the present rate of increase, imbeciles alone will constitute one per cent of the entire population. A continued increase at this rate would in the course of 265 years render insanity, imbecility, and idiocy universal among the people of the United States.

Other degenerates are increasing at an equally rapid rate. In the year 1887 there were ten thousand murders in the United States alone, in proportion to the population nearly double the number committed in India, a half-civilized country. This proves that the more civilized we become, the more unhealthy and the more criminal, and that there is unquestionably a distinct relationship between criminality and physical decadence. The increase of immorality in our large cities, and in smaller towns as well, is something frightful. Many evidences of

moral as well as physical decay might be brought forward. A study of the statistics of England and other countries shows the same state of things to be taking place elsewhere than in the United States. The increase in the average length of life within the last half century results from the keeping alive, by means of increased knowledge of disease and improved methods of quarantine, of a vast multitude of feeble individuals, who, by their intermarriage with the healthy, engraft upon the race their shattered constitutions, their feeble nerves, their various morbid tendencies, from which arise the innumerable predispositions to disease recognized at the present day by medical men, such as the neurotic, the rheumatic, the obese, the consumptive, the gouty, the apoplectic, the epileptic, the insane, the inebriate. The average man has in fact wrapped up in his constitution such a tangle of morbid predispositions that it is a matter of no small wonderment that there can be found a single specimen of the civilized human race possessed of any considerable degree of hardihood or vigor. That such individuals are found is simply an evidence that the race is wonderfully enduring and hard to kill. There can scarcely be found an animal race, possibly excepting the reptiles, which could endure and still survive the abuse to which the human race has for centuries been subjected. The man who undertakes to develop a fancy breed of horses, dogs, or even chickens, takes almost infinite care not only of their diet, but of their housing, cleanliness, sanitation, and all that pertains to the physical welfare of the particular animal concerned. The Arabs of the desert, who make their horses members of their families, and treat them with almost the love and affection given their children, have produced the finest race of horses on earth, animals which are not only hardy and enduring to a most extraordinary degree, but equally superior in tractability, amiability, and intelligence. In the old Spartan days, Lycurgus by the same means produced an extraordinarily fine race of men. But while civilization has achieved marvelous things in science, literature, art, invention, discovery, and social and material improvement in various directions, it has certainly failed to improve man as an animal. The civilized man is to-day far inferior as an animal to the average savage. His body is deformed, he is round shouldered, flat chested, spindle shanked, and diminished in stature. The French people, once the gigantic Gauls who carried terror into Rome, are now the smallest people of Continental Europe. The savage pays little attention to sun, rain, or snow; he is independent of wind or weather. He sleeps, and dreams the dreams of childhood; he wakens in the morning with muscles stored full of energy such as only the professional athlete among civilized men possesses.

All savages are athletes. If all civilized men were athletes, a long category of maladies which are undermining the constitution of the race would disappear. The average savage has such a resistance to causes of disease that he can live in the swamps and jungles, the pestilential wildernesses in which the white man inevitably succumbs in a few weeks or months. At the Brussels Peace Conference, the fact was brought out by the British representative that explosive bullets are needed in warfare with savages, because the latter have such marvelous vitality that a wound from an ordinary bullet, such as would completely disable or kill a civilized man, is almost unnoticed by them. An English officer told the story of having put five bullets through the body of a savage at short range, but the forest man kept rushing on until he reached and killed an officer who was the object of his attack, then fell dead. Any one of the five bullets which he received would have been sufficient to stop the career of an ordinary civilized man.

The fact of the matter is that human attention has been so much directed toward improvement in social directions, education, amassing wealth, the devising of labor-saving machinery, and a thousand other directions, that the man himself, the animal man, has been overlooked. At the same time the use of tobacco, alcohol, tea and coffee, and various other unhygienic practices in diet, such as the use of flesh foods and condiments, together with sexual immorality,—these and

other agencies have combined to sap the vitality of the race, and to bring it to its present condition, which, rightly appreciated, ought to arrest the attention, sympathy, and earnest thought of all intelligent people.

The fact that race extinction does not stare us in the face as likely to occur within the next generation, or perhaps even in the next half century, ought not to induce us to view the situation with complacency, and to leave to those who come after us the task of raising up a wall of defense against this tidal wave of destruction which is rolling in upon us. We ought to begin at once to inquire earnestly for the cause of and the remedies for this unhappy state of things.

We might epitomize the causes by saying that they are to be found simply and wholly in the departure from the divine order established by the Creator for man, in the cultivation of habits detrimental to health, physical, mental, and moral, in the use of the body as an instrument of pleasure, instead of looking upon it as the temple of God, his image placed in the earth as his representative, to be a witness of divine wisdom, power, and goodness. The remedy is to be found in the command of the old prophet, "Cease to do evil, and learn to do well."

A recent writer chose as the title of a somewhat sensational work, "The Cause and Cure of Civilization." Whatever may be said about the causes of civilization, the human race is certainly sick with this perverted and abnormal condition which we call civilization, and which we fondly imagine is a state of highest human happiness and well-being. Our conceptions of what constitutes happiness are largely perverted. Many things we call good are really evil, and things that are truly sweet and precious we call mawkish and undesirable. Sacred things we make common, and common and vulgar things we worship and make obeisance to.

With our eyes blindfolded to truth and our ears stopped against warning, we are rushing madly down the hillside of race decay, while all the time persuading ourselves that we are daily climbing taller pinnacles of greatness, and overlooking higher mountain tops of wisdom. It is time that we should sit down to think soberly of the situation. The race is at sea, tossed on a stormy ocean in an unseaworthy bark, and being rapidly drawn into the vortex of a great maelstrom of disease. Unless speedy rescue arrives, it will surely be sucked down into the fathomless depths of oblivion.

The writer earnestly urges the reader to give thoughtful attention to this subject, unattractive though it may be. It is only by means of individual reform and returning to the ways of God and nature that the threatened catastrophe can be averted.

A NEW INDUSTRY FOR FARMERS.

THE question is often asked, If people discard the use of pork and beef, how will the poor farmer get his living? But there is something far more profitable that he might do. Many at the present time find that stock raising does not pay. One way in which the farmer could make a living, I think, would be to raise nuts.

It seems to me that it is a great oversight in the policy of the United States government that it does not require that all the waste lands — for example, the pine and oak forests in the northern part of Michigan, and the great tracts of land which have been laid waste — be planted with a more valuable tree. It is a mistake that it does not require a nut tree to be planted in the place of every tree cut down, for it does not take any more rain or soil or air to produce a crop of most nourishing food than it does to produce a mass of leaves and a few worthless seed cases. We might just as well raise an abundance of walnuts and butternuts and hickory nuts, and other nuts which can be raised in this latitude. We might have a wonderful harvest of nuts. I have been experimenting for fifteen years, trying to discover a way to use nuts. Nuts are quite indigestible when they are old and dry, but it is possible to reduce ordinary nuts to a state in which they can be digested by the very feeblest infants.

At my house I have a little boy with rosy cheeks and bright eyes, quite a vigorous specimen of humanity, who two years ago was nothing but a little skeleton, mere skin and bones, and who had rickets so badly that I thought his case was utterly hopeless. He had a temperature of 101° every day for a year. I have had a trained nurse with that little boy every day for the last two years. When he came to us, he could not take milk or anything else, but was starving to death. For a whole year we kept him on nuts and grains — granose and bromose. He recovered from the rickets, and has gained steadily.

Nuts can be adapted to all conditions of the human stomach, — to all conditions requiring nutrition, — from the very feeblest infant who can use no ordinary food at all to the man or woman who has any kind of disease requiring special foods. So I feel very hopeful for the future of nuts.

I would recommend to farmers that they go to raising nuts. More than three hundred thousand tons of peanuts are being shipped to Germany yearly to be manufactured into olive-oil and shipped back to this country and sold at four dollars a gallon. So there is a great market for peanuts for the manufacture of olive-oil in Germany. Many of them come back from that country to this, manufactured into substitutes for butter. Salad oil is almost entirely composed of peanut oil, — and peanut oil is better than olive-oil. But it would be a great deal cheaper to get the peanuts at home; then one could cook the peanuts and get the nitrogenous as well as the oleaginous element. But there are nuts which grow upon trees, and if you have an opportunity to encourage any one to go into the nut-tree business, by all means do it. Wherever a man cuts down an oak, for instance, urge him to put in a walnut tree. Hickory nuts are one of the most digestible of nuts, and at the present time we can not get enough of them. Hickory nuts and peanuts command a high price, and if a man would plant a hundred acres of hickory nut trees, he would have a splendid market for his nuts, at a good figure. These trees are active and hardy, and if at any time they become too numerous, they can be cut down, and their wood is very valuable. It seems to me that it is a great neglect on the part of the government not to require a man to plant a nut tree in place of every tree cut down. If this could be done, if we could have a million acres of nut trees, we could substitute nuts for meats; for nuts are the vegetable analogue of meat, and we could have meat in a highly digestible form, absolutely free from all infection, and from all the diseases that we find in meats, and, best of all, free from bloodshed of every form, free from cruelty, and without the awful horrors of the abattoirs and slaughterhouses which necessarily go along with flesh eating.

A FRUIT AND NUT DIET.

WITHOUT doubt, fruits, grains, and nuts constituted the diet for primitive man. The human digestive apparatus is not designed for the digestion of hard cereal substances, such as wheat and corn. These substances can be used only after they have been properly prepared by grinding in some way, and the starch which they contain in great abundance is not digested in the stomach at all without a preliminary preparation by cookery, since the saliva does not act at all upon raw starch. Cooked cereals are in part digested in the stomach. However, it is necessary to bear in mind the important fact that while raw starch is neither digestible nor fermentable in the stomach, cooked starch ferments with great readiness, whereas it digests with great difficulty unless the cooking has been carried on at a temperature far above that of the boiling point with ordinary cooking temperature. Boiling only converts the starch into a paste, or amylodextrin, whereas it must be converted into achroödextrin, browned starch, as found in granose, zwieback, granola, granuts, roasted rice, etc., in order that it may be quickly transformed into maltose or malt sugar, the result of the action of the saliva and pancreatic juice upon

starch. Nature feeds the young plant with sugar which is produced by a diastase acting upon the starch of the seed. The growing plants and the old plants are also fed with sugar and dextrin, which are carried up the tree in the sap circulating through its capillary vessels. In unripe grains,—that is, grains in the milk state,—a much larger amount of sugar is found than in the ripe state. Every reader will recall the sweetness of green corn, for example, and the great contrast in flavor of the kernels of a roasting-ear and those of the same variety of corn which have been ripened and dried for seed.

With the exception of the chestnut, nuts, as well as fruits, are practically free from starch. The starch is found in the green fruits, but in the process of ripening it is converted into dextrins and sugar. In the green nut starch is also present, but in the ripened nut the starch has disappeared, leaving in its place a large proportion of extremely wholesome and digestible fat. All the elements of nutrition are then to be found in fruits and nuts. This is easily shown in the following diagram, which represents the essential articles of food: —

Grains { Fats, Albumin } Nuts
Grains { Starch { Dextrin, Sugar } } Fruit

The writer has never been an advocate of an exclusive fruit and nut diet, and does not now believe in the practicability or necessity of confining one's diet to fruits and nuts. Clinical and experimental work in dietetics carried on by the writer during many years has shown that certain persons who have been accustomed to the use of mushes, farinaceous soups, vegetables, and other dishes containing starch which has been cooked only at the boiling temperature are often greatly benefited by the disuse of such a dietary and the adoption of a fruit and nut diet. Cases might be cited, also, in which such persons have been quickly relieved by the adoption of a raw-grain dietary. Several persons with whose cases the writer has been acquainted have, by the adoption of a diet consisting wholly of raw grains, found themselves very quickly relieved of an extremely aggravated and obstinate dyspepsia. A diet of fruits and nuts might have accomplished the same thing, and certainly in a much more agreeable way; but neither restriction is essential. While it is probable that dry grains have become a necessary part of the bill of fare of human beings only in consequence of the growing scarcity of nut trees and of fruits, which are doubtless less well developed at the present time than in the early ages of human history, it is nevertheless true that the art of cookery, when properly brought to bear upon these dried cereals, may bring them into a state so closely resembling that in which starch is found in fruit; namely, in a digested condition through the conversion of the starch into dextrin, that the inconvenience arising from the use of pasty foods, such as mushes, in which the starch is very imperfectly digested, may be altogether avoided.

If necessary, we may go still further, and supply the starch in a completely free digested state, as it is found altogether in such preparations as malted nuts, Trommer's extract of malt, and especially in the latest product of discovery in this line, malt honey, or maltose. In granuts we have also a food in which the starch is very largely converted into maltose. In granola, granose, roasted rice, toasted wheat flakes, and other foods in which the starch is browned, the digestion of starch is carried as far as possible by the action of heat alone, and generally a substitution of these foods for the soft farinaceous preparations previously used, will obviate all the difficulties commonly attributed to the use of starch. A step further in the direction of the establishment of a completely natural dietary substitutes granuts or malt honey for breads of all sorts, combining these delicious food substances with fruits and nuts in such proportions as may be required. Such a bill of fare is sufficiently toothsome and delicate to suit the palate of a prince, while at the same time so comforting and grateful to the stomach as to be capable of causing quickly to disappear gastric disturbances of almost every sort.

The writer is a thorough believer in the fruit and nut diet as a wholesome substitute

for the ordinary bill of fare, but finds a more perfect and practical dietary and one equally well suited to human needs in a dietary consisting of fruits, nuts, and grain preparations in which the starch has been converted into achroödextrin or maltose by the process of free digestion. The insufficiency of a fruit and nut diet is well shown by the fact that some of the most earnest advocates of this dietary have found themselves compelled to fall back upon flesh as a staple article of food. Though a few, influenced by ethical principles, have held fast to the vegetarian practice, the general tendency of the advocacy of an exclusive fruit and nut dietary with complete discarding of cereal foods has been in the direction of the adoption of a flesh dietary connected with the use of fruits and nuts. A tendency of this sort is certainly greatly to be deplored. The writer has no desire to antagonize those who are advocating the fruit and nut dietary as a substitute for meats and sloppy cereal foods. There is no question of the advantage of such a diet over that which is proposed as a substitute, but from a practical as well as from a physiological standpoint, we are obliged to say, after a number of years' careful consideration of this question, that we can not agree with those who are advocating the absolute necessity for discarding cereal foods from the human bill of fare. It is only necessary to cook the foods at a temperature sufficiently high to bring the starch very near to the condition in which it is found in fruits and nuts.

"Cooked in the Sun."

In walking through a market in Mexico, one may often hear the market woman saying to her customer who has called for ripe fruit, "Do you wish them cooked in the sun?" The acute observation of the native Mexican woman has taught her that in the process of ripening, the green fruit undergoes a change similar to that which takes place in the cooking of foods. The green fruit is hard because of the large amount of starch with which its cells are filled. In the process of ripening under the influence of the solar rays, this starch is converted into dextrin and a most delicious and wholesome sugar — levulose. Levulose and dextrin are soluble in water, hence the ripened fruit is mellow and juicy, whereas the green fruit is hard and dry. The cells of the ripe fruit are filled with sweet or acid syrup in the place of the tasteless, insoluble starch of the green fruit.

Grains differ from nuts and fruits in the fact that the process of ripening stops short with the production of starch. Sugars, acids, and delicate flavors of various sorts are not to any extent produced in corn, wheat, rye, and other grains. The same is true of peas, beans, and other farinaceous seeds. In the ordinary processes of cookery, the starch of grains is converted into paste. Mushes of all sorts are pasty and adhesive. Rubbed between the thumb and finger, they adhere as tenaciously as ordinary paste prepared for papering a room, and are removed by washing only with considerable difficulty. When the same starch is exposed to cooking at a temperature 75° or 100° higher, the starch is converted into a higher form of dextrin. This transformation is indicated by a change from white to a brownish color, which is familiar to all in toasted bread. Starch thus prepared is digested almost as quickly as it comes in contact with the saliva in the stomach. It is transformed into maltose, a natural sugar, which is further transformed into levulose, or fruit sugar, as it passes through the intestinal walls into the blood.

Scientific discovery is continually bringing to light new facts concerning the process of digestion, one of the most important of which is that starch cooked in the ordinary way, in a kettle or at the boiling temperature, digests with great difficulty in the stomach; but if the same starch is cooked at a temperature high enough to brown it slightly, it digests almost at once. The reason for this is the fact that in browned starch we have food closely allied to the natural food which man finds in fruits and nuts, and which is best adapted to his digestive organs.

Starch is found in a similar state in unripened grains while still in the milk stage. This fact should be at once put to practical use by housewives. Mushes of all sorts should be discarded from the breakfast table, and instead, well-browned toast served with a little fruit may be added to the bill of fare, as a more complete substitute for the pasty mushes formerly served under the name of oatmeal mush, cracked wheat, cornmeal mush, etc. Browned rice, granola, granose, toasted wheat flakes, and grānuts are also more delicate, delicious, wholesome, and digestible breakfast dishes, which are ready for immediate use upon the breakfast table. They are thoroughly cooked and predigested, like the fruit which has been "cooked in the sun." If not cooked in the sun exactly, they have been cooked at a temperature capable of effecting transformations similar to those produced by the marvelous alchemy of the sun's rays in ripening fruit, and so are prepared for digestion in the stomach in harmony with the natural laws of digestion as exemplified in the primitive man subsisting upon his natural bill of fare.

ANSWERS TO CORRESPONDENTS.

Gargle — Constipation — Rhubarb — Tuberculosis. — E. H. A., Illinois, asks: "1. What do you recommend for gargling the throat and mouth? 2. What is the best treatment for constipation? 3. Is rhubarb a vegetable or a fruit? 4. Some hold that consumption tubercles and glandular swellings are composed of unorganized matter deposited from the blood in the tissues; others claim that tuberculosis is caused by inhaling certain bacteria floating in the air. Which is correct?"

Ans. — 1. Very hot water or a solution of chloride of potash, four grains to the ounce.

2. This condition requires a variety of remedies to suit different cases and conditions. The free use of granose, grānuts, fruit, and nuts is important. The moist abdominal bandage is of value. An abundance of exercise should be taken. Drink one to two glasses of cold water or eat two or three oranges half an hour before breakfast.

3. A vegetable.

4. Tuberculosis is due to the deterioration of the body, as the result of which it becomes a prey to parasitic germs — the so-called tubercle bacilli.

Impure Blood. — A. J. C., New Jersey, has been troubled with impure blood for a long time. It manifests itself in painful eruptions on her face. She is careful as to diet and bathing. She would like a remedy.

Ans. — Bathe the face with very hot water three times a day. The temperature of the water should be sufficiently high to produce momentary pain when applied. A small sponge is most useful for the purpose. Animal fats and meats should be avoided. The diet should consist largely of fruits; granola, granose, and grānuts are especially valuable foods.

Peanuts. — C. M. H., North Carolina: "1. Please explain fully why roasted peanuts are indigestible. The people here use great quantities of them, even between meals, believing them healthful. 2. Why, if they are so indigestible, does one with a weak stomach suffer as little from them as from any other food?"

Ans. — 1. The peanut contains about fifty per cent of oil. When exposed to a very high temperature, this oil is set free in the nut, and continued heating subjects the nut to the same changes which take place when bread, potatoes, meat, eggs, or any other food is fried in fat; in other words, roasted peanuts are as indigestible as doughnuts, fried meats, fried potatoes, or any other fried foods. Experiments made by the German government showed that roasted peanuts when eaten raw were digested only to a very small extent, only the very finest particles being digested, the coarser ones passing through the alimentary canal without any change whatever. This is because the gastric juices can not penetrate the fat-macerated masses, even though they be quite small.

2. Weak stomachs differ. Some weak stomachs seem to tolerate the most indigestible things. The writer remembers the case of a person who could not tolerate even the blandest food, but was led by a clairvoyant doctor to take fried oysters, under the belief that the oyster would act as a poultice upon the ulcerated stomach. The fried oysters were eaten, and apparently agreed perfectly with the stomach, but this does not make fried oysters wholesome. Roasted peanuts are indigestible, and the majority of people who eat them are troubled with eructations, complaining that they taste the nuts for a long time. Many others are made bilious. When the nuts are roasted, some portion of the fat is decomposed into irritating fatty acids. Other reasons might be given, but these are sufficient. The peanut may be easily cooked without

roasting. It may be prepared in the same way in which beans may be prepared, by boiling or by steaming. An excellent plan is to soak them overnight in cold water, then lift them out of the water, and put them into a crock without adding any more water, cover tightly, and bake for several hours. Peanuts cooked in this way may be eaten as beans are eaten, or may be made into a purée by rubbing through a colander, or may be crushed and rubbed into a paste by means of a rolling-pin or pestle.

White Spots on the Hands and Arms.— Mrs. N. B., of Missouri, has small white spots on her hands and arms. They form in clusters, and are preceded by itching. Can stomach trouble cause it? 2. What will cure it?

Ans.— 1. Yes, the cause is probably autointoxication from indigestion.

2. An aseptic diet, consisting of nuts, thoroughly cooked grains, and fruits. An abundance of water-drinking at other than mealtimes, the regulation of the bowels, and daily cold bathing.

Diabetes Insipidus.— P. J. M. L., Georgia, asks for an explanation of diabetes insipidus, and the best method of treatment.

Ans.— The cause of this disease is not very well understood. It is simply an excessive flow of urine without the presence of sugar or other morbid element. The disease is not fatal, and generally does not appear to interfere with the individual's health, even though continued for many years.

Open Fontanel — Muddy Urine — Teeth — Constipation — Sore Throat.— Mrs. C. E. B., Massachusetts: "My baby is twenty-two months old, and otherwise healthy, but the chief fontanel has not closed yet. It is open about the size of a bean. Will it develop into anything serious? 2. What should be done? 3. What should cause muddy urine in her case? 4. What treatment is advisable? 5. What will remove the black sediment from children's teeth? 6. What will relieve constipation in a nursing baby? 7. When a child a few days old vomits its milk and seems hungry all the time, and its bowel discharges are little curds, what should be done? 8. Is there any harm in eating two or three teaspoonfuls of dry sulphur when one has a sore throat?"

Ans.— 1. Probably not.

2. Nothing but to encourage the development by giving the child wholesome food, such as grānuts, Sanitarium infant food, granola, and fruit juices. The child should be rubbed daily with the hand dipped in cold water. The rubbing should be vigorous and continued long enough to redden the whole surface. Care should be taken that the child is not chilled during the operation. The chest should first be rubbed, and then thoroughly dried; then rub one arm and then the other, then the trunk, then the legs and back. The whole body should be warm and red when the treatment is completed. Finally rub the skin with a little oil. This should be repeated twice daily. The effect will be to invigorate the child's constitution.

3. The cause may be urates.

4. A bath at 95° for twenty to thirty minutes, three times a week; the daily cold rubbing as advised above, making the child drink freely of water. Administer the enema at 65° to 70° once a day.

5. Employ a dentist to polish the teeth; then cleanse them daily with a brush and pure soft water.

6. Apply over the abdomen at night a small towel wrung out of cold water. Over this place a flannel bandage extending around the body, and leave it on overnight. In the morning the child should be rubbed with cold water as directed above, giving special attention to the bowels. Administer the enema at 70°, half a pint to a pint, about half an hour after the first morning feeding. It may be necessary to introduce into the rectum an ounce of oil at night. Bromose, grānuts, and granose are excellent foods for such a child, and generally entirely relieve constipation.

7. The diet should be changed. Cream diluted with one to three parts of water may be employed; and the mixture should be sterilized by boiling. Sanitarium Infant Food, mixed with the cream, sterilized, is excellent; also malt honey with granose and grānuts. The bowels should be thoroughly emptied daily by the enema at 70°.

8. It is doubtful if there is any benefit to be derived from such an operation.

Oily Hair.— L. M. G., Vermont, asks the cause and a remedy for too oily hair.

Ans.— Excessive secretion of the oil glands of the scalp. Cleanse the scalp with white of egg or castile soap twice a week. After the shampoo apply a mixture of equal parts of alcohol and water to the scalp.

Catarrh—Soreness of the Stomach.— J. G., Maine, asks a remedy for catarrh of the throat, and for soreness in the stomach.

Ans.— Catarrh of the throat is an indication of constitutional feebleness and inactivity of the skin.

Cold morning bathing and the use of the Magic Pocket Vaporizer are excellent measures. The throat compress may be advantageously added. A description of such a compress will be found in the Midsummer Number of GOOD HEALTH, which will be our next issue. Soreness of the stomach will

often be relieved by a towel wrung out of cold water and applied over the stomach to be worn at night.

Milk.— A subscriber in Ohio asks (1) which is the better to use in cereal coffee — condensed or pure milk; (2) our opinion of the Gail Borden Eagle Brand of condensed milk?

Ans.— 2. Either may be used.

2. It is probably as good as any condensed milk. The objection to most brands of condensed milk is that they contain so much cane sugar, which is likely to ferment, giving rise to sour stomach and biliousness.

Rheumatism.— G. P. S., Wisconsin: "Is an occasional vapor bath beneficial for rheumatism affecting the entire right leg and hip? This person is obliged to use crutches.

Ans.— Yes, but the vapor bath should be followed by rubbing with cold water. The cold friction mitt would be a good thing in such a case. For description of this, see the Midsummer Number of this journal.

Hot Shower Baths for Constipation.— C. H. S., a telegraph operator, Michigan, asks: "1. Would shower baths taken so hot as to cause dizziness produce dull pain in the head? 2. I am despondent, do not sleep well, and my memory is becoming poor. What treatment would you advise? 3. My fifth vertebra sets inward one fourth of an inch, caused by overwork before the age of sixteen. There is always a lame feeling there. What treatment is indicated?"

Ans.— 1. Yes.

2. Two hours' vigorous exercise out of doors daily, swimming, if possible, a daily cold bath, and a diet of fruits, grains, and nuts, avoiding mushes, soft foods, and starchy vegetables.

3. Apply the fomentation at night, and the heating compress, consisting of a cold cloth wrung out of cold water to be retained overnight.

Bronchitis.— E. E. G., Kansas, would like an outline for the treatment of bronchitis.

Ans.— This requires carefully administered cold bathing. At night the cold pack should be applied, covered with mackintosh so as to prevent evaporation. The full description of this treatment will be given in the forthcoming Midsummer Number of this magazine.

Coated Tongue.— Mrs. H. P. J., Illinois, asks the cause of coated tongue in one apparently strong and healthy.

Ans.— Lowered vital resistance. The mouth has lost its power to destroy the germs always found there, but which in a healthy mouth can not grow.

Buckwheat — Diet of Nuts and Apples.— E. I. L., Iowa: "1. What is the food value of buckwheat as compared with whole-wheat flour? 2. Is buckwheat constipating, or the reverse? 3. On a diet of nuts and apples, what quantity is necessary to maintain health?"

Ans.— 1. The nutritive value is essentially the same, but the buckwheat contains a much smaller proportion of albuminoids or nitrogenous products, and hence is heating rather than strengthening.

2. It may be either constipating or relaxing.

3. Send five cents to Modern Medicine (Battle Creek, Mich.) for a copy of "Balanced Bills of Fare" for a complete answer to this question.

Intestinal Indigestion.— A. S. M., Wisconsin: "1. For years I have had intestinal indigestion. Lately I have been troubled with looseness of the bowels. What diet would you prescribe? 2. What further treatment? 3. Do you recommend the sitz bath in such a case? 4. Being weak, should I drink water before taking a cold sponge bath?"

Ans.— 1. An aseptic diet. Avoid meats and vegetables, milk in the ordinary form, and mushes. The diet should consist of thoroughly cooked grain preparations, such as granose, granola, grānuts, browned rice, zwieback, fruit juices, very ripe fruit, avoiding the skins, fruit purées, and such nut products as protose, almond cream, and malted nuts.

2. The heating abdominal compress or wet girdle (see Midsummer Number, our next issue) is a measure of great importance. It should be changed every four hours. The cooling sitz, 80° to 85°, for fifteen minutes, is also useful; likewise the cool enema, 70° to 72°. If pain is present, the fomentation may be applied morning and evening just before the application of the girdle.

3. The ordinary sponge bath is not likely to be beneficial. The cold towel rub, cold mitten friction, or cold wet hand rubbing are much more satisfactory measures. Wet sheet rubbing is very helpful taken just after the cool sitz bath.

4. Cold water should not be taken just before the bath. Half a glass of hot water will assist the reaction.

Congestion of the Kidneys.— W. A. G., Ontario: "1. Would the constant use, for thirty years, of hard well-water in food and drink favor congestion of the kidneys? 2. What foods and drink would you advise in such a case? 3. Would uncooked turnips and tomatoes be beneficial for a dropsical condition of the system? 4. Can one's

weight be permanently reduced while continuing the use of butter, meat, potatoes, white flour bread, and tea?"

Ans.— 1. Yes.

2. Fruits and fruit juices. Dry, thoroughly cooked cereal foods, such as granola, granose, browned rice, avoiding mushes, slops, and mixed dishes. If milk is used at all, it should be in the form of kumyss or buttermilk.

3. No.

4. The weight depends more upon the quantity than the quality. The dietary certainly is not favorable to a reduction of flesh.

The Cool Compress.— L. E. H., Ohio: "1. Is anything better for a bronchial cough than the cool compress at night, covered with flannel? 2. When employing the compress for stomach trouble, is it best to use it every night? If so, for how long?"

Ans.— 1. The bandage should be covered with oiled muslin or mackintosh. It should be made very warm. There is no better remedy than the chest pack when properly applied (see Midsummer Number for directions for these procedures).

2. Yes, or at least until very decided improvement has been secured. If the bandage is cooked systematically every day, it may be continued for months without injury. The boiling prevents irritation of the skin.

Pain in the Kidney.— Mrs. M. B., Vermont: "1. My husband has long been troubled with pain in the small of the back. Sleep is fitful; micturition painful; pain in the stomach; six years ago he had inflammatory rheumatism. Is he a fit subject for stone in the bladder? 2. Please prescribe a diet."

Ans.— 1. The symptoms do not indicate stone in the bladder, but this may readily be acquired, as it is the natural outgrowth of rheumatic conditions.

2. The diet should consist of fruits, thoroughly cooked grains, and nuts. Free water-drinking should be encouraged. Coarse vegetables should be avoided, also soups, mushes, and all indigestible foods.

Urinary Incontinence in Children.— M. E. H. G., New York, asks what can be done for a boy of ten, otherwise healthy, who is troubled with nocturnal incontinence.

Ans.— Meat must be withheld, also mustards, pepper, and all irritating condiments. The child should use an abundance of fruits, and thoroughly cooked grains, eaten dry. No water should be taken within an hour or two of going to bed. The cool sitz bath, 75°, for ten minutes, with rubbing, at bedtime, is a very good measure to increase the tone of the genito-urinary center, to thoroughly empty the bladder, and to improve the patient's general condition.

Cold Baths — Heart — Piles — Filling the Teeth — Oxydonor — Turkish Baths.— L. W. R., Washington: "1. Should the cold morning bath be taken when one feels chilly afterward, and experiences a queer sensation about the heart? 2. Is the cold sponge bath beneficial for thin people? 3. There is difficulty in taking a long breath. Does this indicate weakness of the heart? 4. Is dilatation good for piles? 5. What effect does it have on bleeding piles? 6. Is the instrument called Oxydonor beneficial? 7. Would you advise the use of the Turkish bath at home by means of the many cabinets advertised, and how can one cool off?"

Ans.— 1. The bath should be taken, but the method of administration should be changed. Less water should be applied, and the application should be made to small surfaces in succession, drying each part before proceeding with the next. See directions for giving the wet towel rub in our forthcoming Midsummer Number. The symptoms seem to indicate very clearly that the method of administering the bath is radically wrong. Reaction has been deficient. Rubbing and gentle exercise is one means of preventing the symptoms mentioned.

2. Yes.

3. Yes, possibly.

4. Yes, in some cases.

5. They are generally aggravated.

6. It is simply a species of mind cure, and has no curative properties.

7. These measures are beneficial, but must be used with care. A good method of cooling off afterward, is the wet sheet, with cold wet-sheet rubbing, directions for which will be given in our forthcoming Midsummer Number, together with directions for giving the wet-sheet pack at home.

Morphine Habit.— H. C., Utah, asks how one of limited means can be cured of the morphine habit, of nine months' standing.

Ans.— The prolonged bath at 92° to 95° is an excellent measure in removing the desire for opium. Hot and cold to the spine, cold rubbing, massage, cold bathing, are other excellent measures. Meats and condiments should be avoided, also tea and coffee, and stimulants of all sorts. Such patients usually require a physician. Under rational treatment the appetite is generally conquered in a day or two.

LITERARY NOTICES.

"**Muscle, Brain, and Diet:** A Plea for Simpler Foods," by Eustace H. Miles, M. A. (Camb.), is a book that should by all means be read by every seeker after the most healthful way of living. Mr. Miles is a tennis champion, a winner of prizes in athletics, an author, and a classical honors coach at Cambridge University. The book is based on his personal experience. At the age of twenty-eight, being threatened with Bright's disease, he was ordered to give up alcohol. In his struggle to do this he was led to discontinue temporarily the use of flesh foods. Of the effect of this experiment he says: —

"Before long I grew more learned in such matters, and as time went on, I found that the desire or even the liking for alcohol was departing — a thing I had never imagined possible. I found that I was spending far less on my food and drink; that I was saving a great deal of time in various ways; that much of my superfluous fat had disappeared; that my skin was getting a healthier color; that in exercise and at games my clearness of eye, my skill, my endurance, and — a strange thing, surely, between the ages of twenty-seven and thirty-two — my activity and flexibility were all gradually increasing; that my brain work was far better in respect of range of subjects, of sheer quantity, of quickness, and of quality than it had ever been before; that I was somewhat suddenly developing a most satisfactory memory, especially for history and 'general' subjects; that I was acquiring for the first time a power of 'observation,' and a power of quickly arranging my subjects; that I saw many new analogies between one subject and another; that I could work for long stretches of time without a breakdown. In fact, I may say that brain work has become almost as natural a thing to me as breathing, except at night. Even when I go for a holiday I seldom rest my brain — I usually find it enough rest to change my work.

"All this will sound very like self-illusion. 'You imagine all this,' the skeptic will say, 'but it needs *proof*.' In reply I appeal to statistics: That during the last year I have coached nearer to 150 than to 100 honors pupils, that since last January I have had the schemes of more than ten books accepted by various well-known publishers, and, in the intervals of my coaching, have already written nearly all of them, as well as a good many articles, — all this I can prove.

"It is less easy to prove that I have never felt so happy as I do now, that I feel altogether better in every way than I used to, that my motives in life are higher than they used to be."

Among the most interesting features of his case he gives the following: —

"First of all comes an extraordinary *change of motive*, such as I believe no historian has ever recorded. I began to adopt the flesh foods as an experiment; I soon continued to do so because they were taking away my desire for alcohol (and so were probably saving my life), and because they saved money and time — the motive here would be self-preservation and the desire to save and gain money and time. Then I continued, not only for the above reasons, but also because my games were improving, my work was improving, my feelings were improving, and my enjoyment of life was increasing. Here the added motive was the desire to increase what was positively good.

"Then, while these motives (including self-preservation) still continued to move me, there was added the desire to set an example and to help others; this is a higher motive than the others, and was utterly absent at the start. It is one of the chief of the motives which have led me to write this book.

"Secondly, as to *fatigue*, *depression*, and many other distressing symptoms, I find that they are *almost entirely in proportion to the errors of food*, and not in proportion to the work done. In other words, it is *far* less tiring for me to do twelve hours a day of the most severe brain work, while eating the proper kinds and amounts of fleshless foods, than to do *two* hours a day while eating flesh with my meals.

"Thirdly, and this will astonish many readers, the better the 'condition' I am in, and the better my games and work are, the more I feel errors of diet. I can not help thinking that this must be because my blood is purer, and therefore like a glass of pure water, *i. e.*, more likely to be considerably changed by a little 'mud' than a glass of muddy water would be; or I might say that I am analogous to a man with a pure mind — *he* feels an error more sensitively than a hardened sinner would. But even when I am guilty of some error in diet, I do not think that my state falls *much* below my state three years ago. It is hard to say.

"Fourthly, as to *stimulants*, repeated experiments have given results which at first surprised me, but now seem quite to fit in with all the other results. Tea and alcohol have 'picked me up,' at any rate for the time being, and have left little appreciably bad after effects, when I have been overtired; for instance, after a hard match played on a more or less empty stomach. But when I have been in the pink of condition, when I can take more exercise and do more work without fatigue, than any one else of my acquaintance, *then* tea and alcohol positively *depress* me. So far from improving my condition even at the moment, both the

immediate effects and the after effects are wont to be almost misery.

"Meat, and flesh foods in general, produce depression and tiredness, and pains in one or more of my joints, within a very short time, but more especially so when (*e. g.*, at a dinner party) I have felt perfectly fit to start with.

"This point may be worth noticing. Tea, with me, has usually produced the desire for more tea later on (say after four or five hours). Alcohol, with me, has almost invariably produced the more or less immediate desire for more alcohol or tea. Lastly, the flesh foods, with me, have quite invariably produced, immediately, the desire for one or all of the three,—tea, alcohol, and flesh foods. . . .

"Lastly, whereas it might be thought that I should have to eat huge quantities of food to keep up my strength, I do not eat *nearly* so much as I used to, probably not a quarter, certainly not a half; in fact, so long as I eat the right things (especially proteids), the less I eat and drink, the less I need to eat and drink."

Mr. Miles holds ideals of good health which are thoroughly in accord with the principles of this journal. He says: —

"I insist on good health being not merely an absence of certain more or less definite signs of illness or bad health, but on its being *also* a positive and *active tendency toward whatever is good, the tendency to develop, as God meant man to develop, in every direction, physical, mental, and moral.* . . .

"If a man not only looks healthy and satisfies the doctor's tests, but also is enabled to get out of himself *nearly the most possible good* in whatever noble direction and for whatever noble end he chooses, then and not till then I call him 'healthy;' for such a man is bound to feel a tendency and a desire to bring every one else into a similar state of good health."

These are only samples of the good and sensible suggestions to be found in "Muscle, Brain, and Diet." Swan Sonnenschein & Co., Lim., London; The Macmillan Company, New York.

"The House We Live in, or the Making of the Body," is a book designed for mothers to read to their little folks in teaching them how to care for their bodies, and the evil effects of narcotics and stimulants. The author is Mrs. Vesta J. Farnsworth. An idea of the style of the book can be gained from the following quotation: —

"*Mother:* Another way Smell cares for the body is by giving us warning against bad air. Sometimes a lot of tiny folk called 'germs' get into the air, and make it unfit to wash the blood. These germs are 'seeds of sickness,' and should never be allowed to get inside the body. Sometimes they make the air smell bad, and then Smell sends word to the brain, 'Look out! Don't come here; for this bad air will make you ill.'

"*Amy:* And does that mean that the master should take the body away?

"*Mother:* Yes; or if we go into a room which is close and musty, and the air is full of germs, it means to open the doors and windows, and let the clean, pure air come in. Sometimes Smell gets so used to bad odors that he does not give warning as he should; so we should always heed his counsel at first. Any place or thing which has bad odors should never be near the house.

"*Helen:* I think Smell must find some sleeping-rooms rather unpleasant places for him to stay in.

"*Mother:* He certainly does. Sometimes he gives the one who sleeps in such rooms quite a scolding. After he has been out in the fresh air, and comes back into the room, I imagine I hear him talking something like this: 'Don't you know it is a *dreadful* thing for you to breathe air like this? How would you like to drink the water your face or your clothes had been washed in? But you have done worse than that: you have kept washing your blood in the same air, over and over again, all night. It is no wonder that you have a headache and feel all tired out in the morning. Now open the windows, and give this room a good airing, and if you sleep here another night, see that there are places where the good air can come in and the bad air go out, and I promise you I will not talk like this again.'"

Pacific Press Publishing Co. Price, 75 cents.

Lippincott's for May offers "April Showers," by Alice Brown, and several shorter stories, one dealing with Mormonism, by Mrs. I. K. Hudson. Mrs. Julia Mc Nair Wright has an article on the solar eclipse of May 28, 1900.

"A Plea for Trees and Parks in Cities," in the **Forum** for May, is the special article that appeals to GOOD HEALTH. The writer pleads for more breathing places for the multitudes, showing the great mortality among the poor when they are packed into tenements where every square inch of available space is utilized, and where the air is vitiated by decaying garbage, and no relief is afforded by parks or shade. He says that Central Park in New York has improved the health of the city. Speaking of the indifference to the value of trees, the writer says: "In Manhattan the maltreatment of a dog is punishable; while the destruction of the silver maple, which

may live to shelter our progeny for five hundred years, is not regarded as a serious offense."

Portraits of twelve of the leading officers of the the Ecumenical Conference in New York form the frontispiece to the **Missionary Review of the World** for May, and Dr. Pierson's address before the Conference, on "The Superintending Providence of God in Missions," is appropriately the opening article. This providence is shown especially in the divine preparation, co-operation, and benediction in foreign mission work.

Scribner's Magazine for May opens with a fine illustrated article on "Some Picturesque Sides of the Exposition." "Rapid Transit in New York" is described by Wm. Barclay Parsons. There is a fascinating short story called "Egg Island," by Adèle Marie Shaw. This installment of "Tommy and Grizel" is tragic.

Current Literature, although wearing a new dress, is the same old friend of the busy man or woman. The May frontispiece is a fine picture of Joaquin Miller. An interesting selection is given from his original and vigorous verse.

Barrie, the author, has also found that a prophet is unhonored in his own country, for the plain, simple folks of his own Thrums think the "wee black mon" has held them up to ridicule in his "havers an' nonsense," as they regard his writings. It is a delightful view one gets of Barrie and the scenes of his stories, from "The Real Thrums of Barrie," in the May **Ladies' Home Journal**. Edward Bok writes on the evils of early marriages, and in commendation of the teaching of domestic science in our schools and colleges.

McClure's Magazine for May is notable for an article on "General Lawton's Work in the Philippines," by Dean C. Worcester, a member of the United States Philippine Commission in 1898–99, and author of a book on the Philippines. "The Biggest Steamship Afloat" is described by Earl Mayo.

Trained Motherhood is invaluable to young mothers, who have no excuse in these days if they do not learn and follow the best methods of bringing up their children.

The **Literary Digest** is a weekly visitor that could not possibly be spared.

In **Health Culture** for April Dr. James H. Jackson discusses the hygiene of sleep, showing what conditions are necessary for restful sleep. Dr. Chas. F. Page and the editor both discuss the grippe from a practical hygienic standpoint. Dr. W. R. C. Latson continues his paper on practical dietetics, considering the composition of foods. Edward B. Warman, a well-known authority, discusses the question of exercise; who needs it and how to take it. Dr. Shepard, under the title of "Moderation and Health," pays attention to the question of tea and coffee. Dr. David H. Reeder commences a series of papers on infant feeding. $1.00 a year. Health Culture, 503 Fifth Avenue, New York.

"Reinstern" is the title of an odd booklet by Mrs. Eloise O. Richberg, in which a new and unique conception of the ideal state of society is given. Elsewhere in this number of GOOD HEALTH we have quoted from this work.

Pamphlets Received.

"Studies on Internal Asepsis." Edwin Klebs, M. D., Chicago.

"A Synopsis of Reprints on the Treatment of Stricture, Urethritis, Prostatitis, Cystitis, Impotency, and Spermatorrhea with Electricity, Cataphoresis, and Allied Remedies." G. W. Overall, M. D., St. Louis, Mo.

"Stricture of the Esophagus, and Electrolysis by a new Esophageal Electrode." Charles D. Aaron, M. D., Detroit, Mich.

PUBLISHERS' DEPARTMENT.

GOOD WORDS FOR GOOD HEALTH.

THE following commendations have been taken from a few of the many letters received since the new year:—

"We are more than pleased with GOOD HEALTH in our family, and would not like to do without it."

"With each number of your valuable magazine I am more delighted, and feel assured that it is doing a great work."

"GOOD HEALTH is all right. I like it immensely. It is the best magazine of the kind I have read in many years."

"I appreciate more and more the truths you inculcate in GOOD HEALTH. I get others to read it who are just beginning to realize how important well-selected food and the manner of cooking are to the enjoyment of health. You are doing a vast amount of good which is as necessary as the preaching of the gospel. Yours is certainly the gospel of good health and how best to attain it. I am much interested in your replies to correspondents."

"No magazine or other publication that comes to me do I seize with the pleasure that I do GOOD HEALTH."

"I should not like to be without GOOD HEALTH. I wait anxiously for it every month. I try to get others to subscribe, but they will not: they like drugs and trash better."

"Like wine, GOOD HEALTH improves with age, and is bound to do good wherever it becomes known."

"I can't get along without this noble magazine."

"I have been a constant reader of GOOD HEALTH, and am much interested in it."

"The one article entitled 'Come, Let us Live with our Children,' is worth a year's subscription."

"The teachers who have been reading your GOOD HEALTH magazine speak very highly of it, and we feel that it is full of good, sensible advice and hints that must appeal to the best that is in us."

"In my opinion GOOD HEALTH is the best work published on the subject."

"I am sure I have all praises to give for GOOD HEALTH, for it is worth double the amount charged. I can not mention all the good it has done, for I do not begin to know it all, but I do know that in my family alone it has saved many a doctor bill, not mentioning all the aches and pains, and had we lived true to all its teachings, much more might have been accomplished."

"GOOD HEALTH is meeting my expectations. The American people must be awakened to the fact that as great improvements can be and are being made in foods and their manner of preparation as in any other article of consumption or manufacture. GOOD HEALTH is the voice crying in the wilderness. May it succeed."

"I must admit that I have never read anything that I appreciated more than GOOD HEALTH. I have been benefited a great deal by observing principally what it relates about all meats."

"GOOD HEALTH is the best health magazine that I ever read. Every W. C. T. U. woman ought to subscribe for it."

"I never loved the magazine as I do now. It seems to me that every number is better than the preceding one. I think its principles are slowly but steadily gaining a foothold here."

"I have just read the February, 1898, number of GOOD HEALTH with pleasure and profit. I find it the most instructive health journal which has ever come to my notice. If still published, let me know the price, that I may subscribe at once."

"Your able journal is a great credit to the cause which it represents, and I should not like to be without it."

WE call the attention of subscribers to our advertising columns. We do not knowingly insert anything which will be likely to prove a disappointment to our readers. Any one meeting with dissatisfaction through answering any advertisement found in GOOD HEALTH will confer a favor by so informing us.

THE Chicago Health Food Restaurant, formerly at 178 Wabah Ave., has moved into more favorable and more centrally located quarters at 211 State St.

"A PRETTY BOOKLET."

"THE best of everything" is the keynote of the success of the Chicago & Northwestern Railway. In the equipment and furnishings of its magnificent passenger trains the best of everything is sumptuously used for the pleasure and comfort of the traveling public. The literature of the Northwestern Line is also in keeping with this well-known motto. The Passenger Department has recently issued a little brochure which is an artistic gem, describing scenes along the route of the famous electric lighted Northwestern Limited. This booklet contains a number of elegant half-tone engravings — glimpses of principal cities, nature's freaks, and scenes between Chicago and the Twin Cities. It is the latest and handsomest effort of the printers' and engravers' art in modern bookmaking. Four cents in stamps, sent to W. B. Kniskern, 22 Fifth Ave., Chicago, will secure a copy of this beautiful souvenir.

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.

BATTLE CREEK SANITARIUM, Battle Creek, Mich.
J. H. KELLOGG, M. D., SUPERINTENDENT.

COLORADO SANITARIUM, Boulder, Colo.
W. H. RILEY, M. D., SUPERINTENDENT.

St. HELENA SANITARIUM, or RURAL HEALTH RETREAT, St. Helena, Cal.
A. J. SANDERSON, M. D., SUPERINTENDENT.

NEBRASKA SANITARIUM, College View (Lincoln), Neb.
A. N. LOPER, M. D., SUPERINTENDENT.

PORTLAND SANITARIUM, 1st and Montgomery Sts., Portland, Ore.
W. R. SIMMONS, M. D., SUPERINTENDENT.

NEW ENGLAND SANITARIUM, South Lancaster, Mass.
C. C. NICOLA, M. D., SUPERINTENDENT.

CHICAGO BRANCH SANITARIUM, 28 33d Place, Chicago, Ill.

SANITARIUM TREATMENT ROOMS, 230 Euclid Avenue, Cleveland, Ohio.
A. W. HERR, M. D., SUPERINTENDENT.

HONOLULU SANITARIUM, Hawaiian Islands.

MEDICAL AND SURGICAL SANITARIUM, Apartado 138, Guadalajara, State of Jalisco, Mexico.
D. T. JONES, SUPERINTENDENT

INSTITUT SANITAIRE, Basle, Switzerland.

CLAREMONT SANITARIUM, Cape Town, South Africa.

SKODSBORG SANITARIUM, Skodsborg, Denmark.

FREDRICKSHAVN SANITARIUM, Fredrickshavn, Denmark.

SOUTH SEA ISLANDS SANITARIUM, Apia, Samoa.

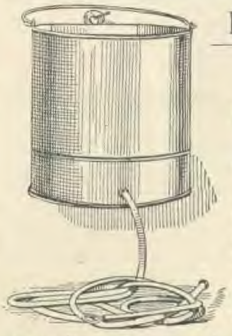
NEW SOUTH WALES MEDICAL AND SURGICAL SANITARIUM. "Meaford," Gower St., Summer Hill, N. S. W., Australia.

COMBINATION WATER BOTTLE AND FOUNTAIN SYRINGE

This is a First-class Fountain Syringe, which may be quickly changed to a Water Bottle by detaching the tubing and substituting the metal Cap.

WE have recently arranged for the manufacture, for our special trade, of this convenient combination in an improved form. It consists of a substantial water bottle with funnel neck, a safe and durable cap, and six feet of fine improved tubing, with suitable attachments for connecting with the bag. An outfit of the usual syringe tubes is supplied with the syringe, and the whole is packed in a neat and substantial wooden box.

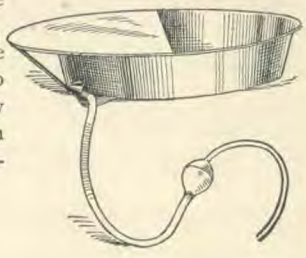
Price, complete, postpaid, - - - - - - - - - - - $2.00
Fountain Syringe only, postpaid, - - - - - - - - - - 1.75



Perfection DOUCHE APPARATUS

THIS apparatus consists of a pail for water, with a long rubber tube, and a convenient bed-pan. It is made of tin, and is light, durable, and easily cleaned and disinfected.

It is especially useful for giving douches in cases of confinement, and to feeble patients who can not be removed from the bed. It can be adjusted under the hips without moving the patient, on any form of bed or mattress.

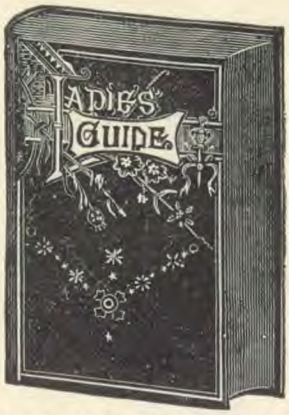


Any amount of water can be used, the water running out as fast as it runs in. To start the water running, close the rubber tube by folding it below the bulb, and then squeeze the bulb, which will at once fill with water when released. Then open the tube, and the stream will continue to flow till the pan is empty.

Price, complete, - - - - - - - - $2.00
Douche Pan, without fountain or tubes, 1.00

Sent by express.

Address **GOOD HEALTH PUB. CO., Battle Creek, Mich.**



....THE....

Ladies' Guide

In Health and Disease

BY J. H. KELLOGG, M. D.

THIS work admirably meets a want that has long been recognized by intelligent women in all parts of the land. Having devoted many years to the study of the diseases to which the sex is peculiarly liable, as physician-in-chief of one of the largest health, medical, and surgical institutions in the United States, and in the treatment of thousands of women suffering from all forms of local disease, the author has brought to his work in the preparation of this volume a thorough education and a rich experience, which have enabled him to produce a volume eminently practical in character, and calculated to fill the place in the practical education of women for which it is intended. It tells mothers *just what they ought to know*, in language they can not fail to understand; and daughters who value their health, and the happiness which follows health, can not afford NOT to know what this book teaches them.

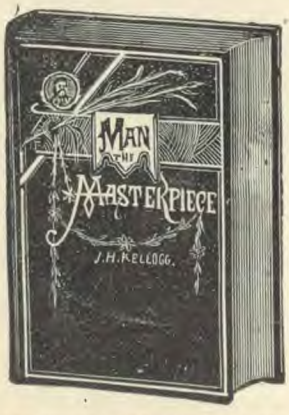
This book is divided into seven parts, or sections. It graphically describes the great mystery of life,—the anatomy and physiology of reproduction. Four of the sections bear respectively the following headings: "*The Little Girl*," "*The Young Lady*," "*The Wife*," and "*The Mother*." A most thorough discussion is given concerning the special dangers incident to puberty in girls, the physical and mental training of young ladies, the evils of improper dress and how to dress healthfully, the education of young ladies, personal beauty, courtship and marriage; the duties, rights, and privileges of the wife, the dangers of health incident to the matrimonial state, the prevention of conception, how to predict and regulate the sex of offspring, criminal abortion, and the *special means* which wives may adopt for the preservation of their health. Due consideration is given to the perils of motherhood and how they may be avoided, including instructions by following which child-bearing may be made painless in most cases, and greatly mitigated in all. The management of pregnancy is also fully treated, and a large amount of new and invaluable instruction given on this important subject, which makes the "Guide" a very valuable book for midwives, nurses, and physicians. One section of the book is devoted to the diseases of women, together with their proper treatment, the latter subject being treated differently than in any other work extant, and embodying the various methods in use by the author, and by the best specialists in this and foreign countries, which bring about such remarkable results when intelligently employed. The directions given are so simple, and the means to be employed in treatment so readily accessible, that the treatment can be carried on successfully in most cases at the home of the patient without the assistance of a physician, thus saving many a doctor's bill. The concluding section of the work is an Appendix, where is found rational home treatment for diseases of childhood, such as croup, diphtheria, whooping cough, convulsions, measles, scarlet fever, etc., etc.; also full instructions for baths of various kinds, Swedish movements, postural treatment, electricity, massage, diet for invalids, many invaluable recipes, medicinal recipes, and *prescriptions* for the various diseases treated in the work. A Glossary and Alphabetical Index follow the Appendix.

Girlhood
Maidenhood
Wifehood
Motherhood

The work contains ***672 octavo pages,*** and is ***illustrated by means of thirty-five chromo-lithographic plates, cuts, and colored plates.*** For the purpose of removing a possible objection which might be raised, a few of the plates are printed on a sheet by themselves, are carefully concealed in a little pocket in the cover of the book, and may be removed at pleasure.

Cloth, embossed in gold and jet, postpaid,		*$3.00*
Half Buffing, marbled edges,	"	*3.50*
Leather (library style),	"	*3.75*
Half Morocco, gilt edges,	"	*4.25*
Full Morocco, gilt edges,	"	*5.50*

60,000 Copies Sold.



Man, the Masterpiece;

By J. H. KELLOGG, M. D.

Or, Plain Truths plainly told about BOYHOOD, YOUTH, and MANHOOD.

A BOOK FOR EVERY MAN.

THIS work is to gentlemen what the "Ladies' Guide" is to ladies, and a good idea may be gained of its contents by reading the above description of the "Guide." It contains about the same number of pages, cuts, etc., having similar bindings, and selling at the same prices. It should be read and studied by every boy and man in the country.

Descriptive circulars and testimonials of the above works furnished upon request. Address—

GOOD HEALTH PUBLISHING CO., Battle Creek, Mich.