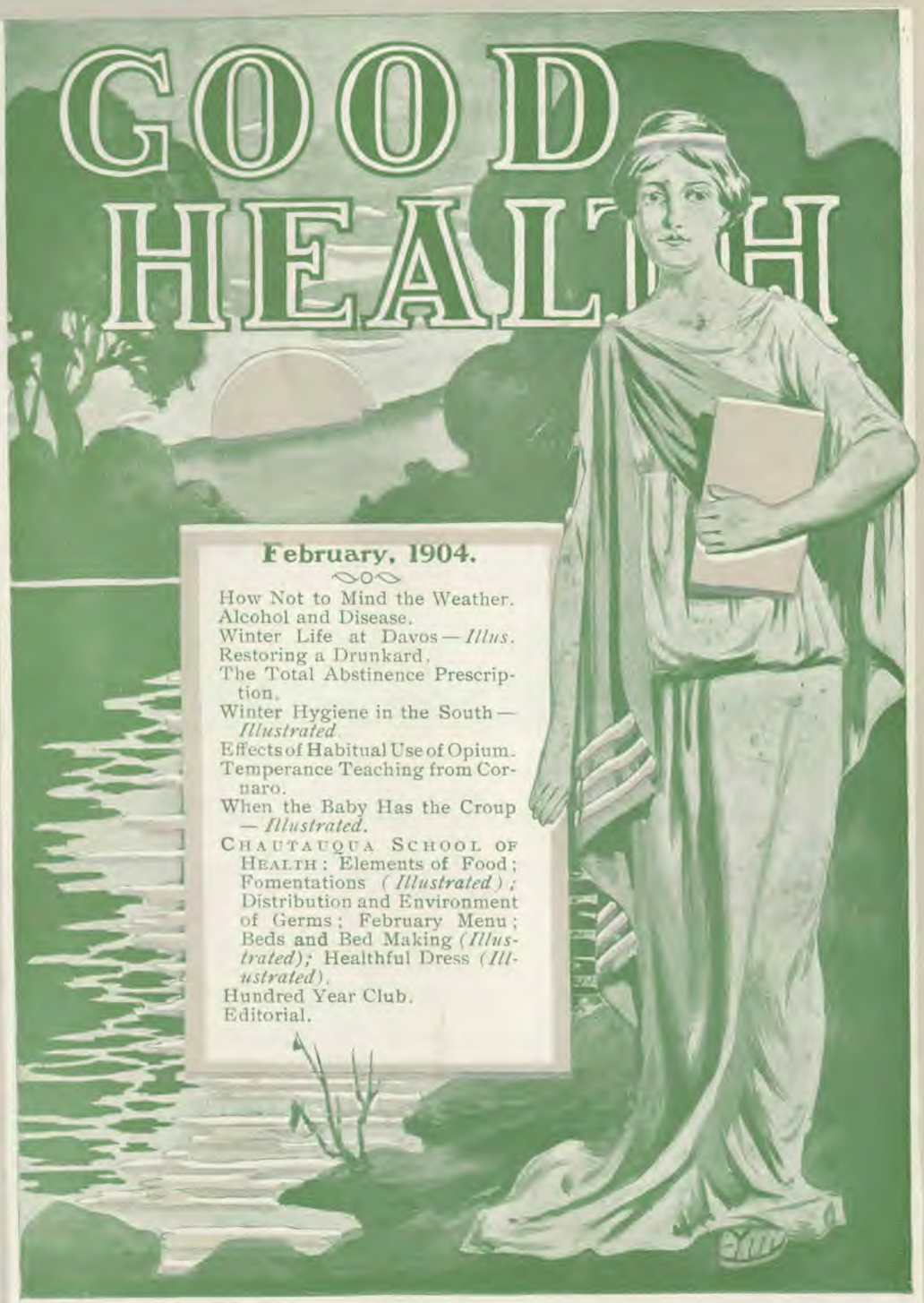
Temperance

VOL. XXXIX. *Edited by J. H. KELLOGG, M. D.* NO. 2

GOOD HEALTH

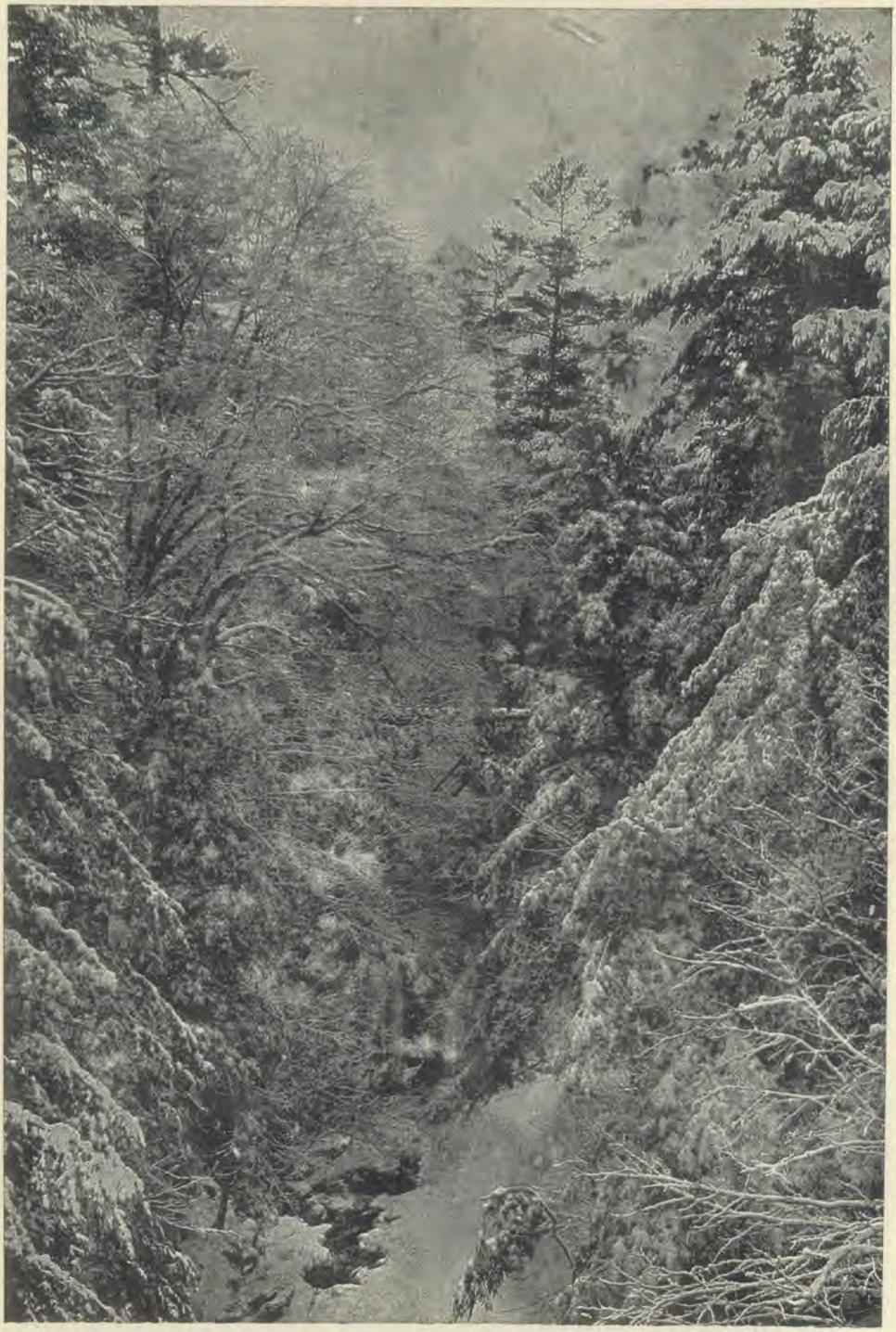


February, 1904.

10 CENTS A COPY. $1.00 A YEAR.

PUBLISHED MONTHLY

Entered at the Post Office in Battle Creek, Mich., as Second-class Matter.



Permission "Country Life"

"Earth receives
Gladly the thickening mantle: and the green
And tender blade, that feared the chilling blast,
Escapes unhurt beneath so warm a veil."

GOOD HEALTH

A Journal of Hygiene

VOL. XXXIX FEBRUARY, 1904 No. 2

HOW NOT TO MIND THE WEATHER

BY J. H. KELLOGG, M. D.

AT a great foot-ball game in Chicago recently, about 30,000 people stood out in the sleet and snow and chilly wind for several hours, watching the fighting. In a week from that time many of those people were dead from pneumonia. The Chicago physicians attributed the rapid increase of cases of pneumonia, and the great harvest of pneumonia victims, to the fact that there had been a great foot-ball game. Foot-ball games have cost many lives this year, besides many sprained ankles and broken shoulders.

Among the 30,000 people who went to this game, many took with them horses and dogs, which were exposed to the same sleet and snow and chilly wind without any overcoats, shoes, stockings or rubbers — and none of these animals died of pneumonia. This is a malady that is common to animals as well as to human beings. How then did it happen that human beings should suffer so much on this occasion, and that horses and dogs should suffer little or nothing except, perhaps, a little chill?

Some time ago a civilized American while out West met a native, aboriginal American, wearing nothing but a small garment about his waist although it was a very cold, snowy day. The newcomer, who was wearing an over-coat, furs, mittens, and felt boots, said to the old inhabitant, "How is it that you seem so comfortable with scarcely any clothing? Are you not cold?" Said the Indian, "Why do you not put clothing on your face? Is your face cold?" "No, my face is not cold." "Well," said the native, "the Indian is all face." He could see no more reason why any other part of his body should be cold, than that his face should be cold.

There is a principle in this; sensibility to cold is largely a matter of education. A neighbor of the writer was accustomed to send his children to school in the winter with nothing on their feet. They would go scampering half a mile through the snow, and their feet never froze, but were rosy and warm, or at least quickly warmed when they got in-doors.

There are thousands of people living in a savage state who wear very little clothing and yet are wonderfully hardy. The natives of Terra del Fuego,— a country as cold as this,— live without fixed habitation, having only the poorest kind of little huts, and the people are exposed to the weather without covering. Travelers report that all the protection from the weather that a native of this bleak country needs in order to make him comfortable, is a board or a bush behind which he can be sheltered from the wind and sleet.

It is a question well worth considering, what it is that makes the savage so hardy. He lives nearer to nature than does the civilized man, and that is the reason he is hardier, tougher and more

enduring. Civilized men have departed far from the natural order of life, and they are suffering the penalty — a shortened and a feeble life.

Unfortunately the majority of civilized human beings subject themselves to a hot-house regimen, apparently thinking that the most important thing in winter is to keep away from cold. A cold day is a dangerous thing to one who is not ready for it. January and February are deadly months to those who are not prepared for them. During these months many people are carried off by pneumonia. After people have reached the age of forty or fifty years, they are particularly susceptible to this disease, because of the lowered power of resistance. Toughness is the result of the body's power of resistance.

Now what can one do to protect himself, to educate and train himself, so as not to suffer from cold? What is the difference between a man inured to cold, and a man who is not accustomed to it — between the Indian and the civilized man? The difference is mainly in the condition of the skin. The skin of the Indian has become by constant exposure so active and vigorous, so sensitive to the slightest changes of temperature, that the moment a cold breeze strikes him the muscles of the skin contract, so that the temperature of the body is not lowered. The skin is so thick, tough, and resisting, so good a non-conductor, that it is an excellent protector of the body.

The muscles of the skin need a gymnastic training that will educate them to contract vigorously on the slightest contact with cold, shutting the blood out of the skin so quickly that the precious body heat will not be lost. You notice that when the skin is cold there is a "goose-flesh" appearance. This is due to the contraction of the little muscles of the skin. The contraction of these muscles compresses the blood-vessels of the skin and shuts out the blood; the skin is hardened and thickened and becomes a better non-conductor, maintaining the body temperature. It is by repeated applications of cold that the skin muscles are educated to contract rapidly upon exposure to cold. For this reason the daily cold bath is an excellent measure for the prevention of colds.

The usual effect of a draft of cold air upon the back of the neck is a cold and a sore throat. Many years ago Dr. Brown Sequard, an eminent French physician, devised a means by which sore throat from this cause might be prevented. By blowing upon the back of the neck with a pair of bellows, increasing the time each day, he trained his patients until they could endure this treatment for half an hour without injury.

It is not necessary to be exposed to a draft of air on the back of the neck in order to obtain this result. By means of the cold bath, the wet-sheet rub, the shower bath, towel friction, etc., the skin may be educated to contract on the slightest increase of cold.

Daily exposure to the contact of cold air is of the utmost importance. It is because of the constant exposure to cold that the Indian's body is "all face" — the skin of his whole body has learned to take care of itself, just as the face takes care of itself. But with some people even the skin of the face does not take care of itself, and they take cold by even a slight exposure of the face or hands to the cold. There is a difference between men and women in this respect. When a man goes out of doors with his hat off he usually takes cold. But it makes but very little difference to a lady whether she has a hat on or not, because her hat is, as a rule,

devised rather for ornament than for protection, and so it is immaterial whether she wears it or not.

Many people sneeze and take cold upon the least exposure to a draft of cold air. The remedy for this is not to try to keep away from drafts, but to make oneself proof against them. It is only necessary to accustom oneself little by little to contact with cold air, in the same way that Dr. Brown Sequard made his patients proof against cold by blowing on the back of their necks with bellows. A person can, by daily exposure of the feet to the cold by blowing upon them in this manner, gradually increasing the time each day, make himself proof against taking cold by having cold feet, until the feet will stand continual exposure to cold and wet.

The man who digs ditches and works with his feet in cold water every day does not take cold. A lumber man told the writer that he went down the river on a lot of logs from the pine woods made into lumber floats. Sometimes he was on the logs and sometimes in the cold ice water. For three weeks he did not have his clothes off. At night he lay down on the bank beside the river with his wet clothes on, covered with a blanket, and the next morning he started on again. He was wet continually, falling several times a day into the icy water, and yet he did not have a cold. He was as proof against cold as is a fish, for he had been trained to contact with cold and wet, wind and rain. One who is thus trained need not fear contact with cold.

We live in our house cages, artificial lives which carry us off prematurely, and the remedy for us is to live in a natural way. Contact with cold air is the means by which we may so harden ourselves that we need not mind the weather; because by this means our bodies will so quickly respond to all indications for readjustment of the functional activities that no matter what the atmospheric changes may be we are ready for them. And these adjustments are automatic; they will take place whether we are asleep or awake.

ALCOHOL AND DISEASE

BY M. A. MORTENSEN, M. D.

THE use of alcoholic liquor has been a fixed custom for centuries. Some of the ancient records say that it was first prepared by accidentally allowing palm-juice or other sweet fruit juice to ferment. Unfortunately people tasted it, and so learned of the peculiar influence that it exerted over them. Then, as now, it created a desire for more, and step by step the present status of the liquor problem has developed. To-day it is one of the greatest problems confronting the human race. For a score or more of years thinking and wide-awake men have seen and predicted the harvest that is being reaped to-day by those who become slaves to the demon, Alcohol. In fact, there are few that are not in one way or another suffering from the direct or indirect results of its use. In its wake it leaves little else than crime, suffering, degradation, degeneration, disease and death.

Alcohol has gained such a firm hold on humanity because of its delusive power. It makes dark things look bright for the time being, but this period of exhilaration soon passes away, and is soon followed by the demand for more drink. Step by step those addicted

to its use lose control of their better judgment.

Because of the exhilaration following its use, alcohol has long been considered to be a stimulant, and has even gained such names as, "water of life," "elixir of life," and others of a similar nature. As a matter of fact, it is not a stimulant, but a narcotic and a poison. The best authorities at the present time classify it as such, and say that its narcotizing power is first manifested by paralyzing some of the higher and most delicate centers of the brain. One of the first centers to suffer is the one that controls the judgment, that tells us when we are acting properly. Next, the center that controls our thoughts becomes benumbed; then the motor centers become involved, and the uncertain and inco-ordinate movements result. Thus, step by step, the nervous system becomes paralyzed, until the drunkard lies helpless. With such a picture before us, is it hard to believe that alcohol is a poison? No, not when we consider its results. Yes, when we see how indiscriminately it is sold. Why should it be sold any more freely than morphia, arsenic, and strychnia? They are poisons; so is alcohol.

Now alcohol has no special affinity for the nervous system, but its effects on the nerves are so apparent to everyone because they control or manage the body, and anything badly directed or managed always attracts attention. Not only is the nervous system acted on by the alcohol, but every cell and fiber suffers just as much. When alcohol is taken into the stomach it is absorbed and finds its way into the blood, and the blood bathes all the tissues of the body. Hence, the alcohol comes just as much in contact with the glands, muscles, bones and tendons as with the nerve cells.

If we could see the cells of the various organs and tissues we should easily be convinced that no good was being done by this alcohol bath. We can get an idea of its action on cellular life by taking some of the lowest forms, such as the amœba, and subjecting them to a weak solution of alcohol. We find that the weakest solution will perceptibly inhibit their activity, both as to motility and reproduction, and shorten length of life. In fact, the life functions are disturbed and shortened in proportion to the strength of the solution. Experiments have repeatedly been performed by various observers on both animal and plant life with this invariable result. Now our bodies are made up of groups of millions of protoplasmic cells that are in every way similar to these unicellular organisms. Observers of those addicted to the use of alcohol present facts that go to prove that similar results are produced in our bodies.

Employers find that those addicted to the use of alcoholic beverages are not to be depended on. Even if they are always at their work the character of it suffers just in proportion to their indulgence. Now this condition is only a sign of disease in certain controlling centers in the nervous system. In this simple condition, as well as in a multitude of other diseases of the nervous system, we may trace the foot-prints of alcohol. Here we have an explanation of the overcrowded insane asylums of to-day, to say nothing of the army of sufferers at large. Statistics from France and other European countries show that the increase of insanity is parallel with the increase in the consumption of alcohol *per capita*.

To the public, this class of cases present the most appalling picture, but to the careful observer they are only a

fraction of the sufferers. How many do we not find with diseases of the stomach, liver, heart and kidneys, because of the use of alcohol. The physician alone knows a little about this army of sufferers. Perhaps a few figures will help us to realize how extensive an influence alcohol exercises on the human race.

Such keen observers as Norman Kerr, Ridge, Morton and Richardson estimate that at least 40,000 people die annually in England and Wales as a direct result of drink. A committee appointed by the Harveian Society to investigate this phase of the question in London, reported that at least fourteen per cent of the deaths were due to drink. Russian observers estimate that at least 100,000 deaths occur annually in that country as a direct result of the use of alcoholic beverages. In France and Germany 45,000 deaths are credited to alcohol in each country. These estimates are the result of careful study and observation, and what is true of these countries is true of every part of the civilized world. With such figures confronting us can any one say that alcohol is not the cause of disease and death? The use of alcohol lowers the general vitality and resistance, so that diseases such as tuberculosis, pneumonia, and typhoid fever are more dangerous to those so addicted. The above figures would be more than doubled if the indirect results of alcohol had been included.

There is still another phase of this terrible evil. It has been well said that we are omnibuses in which ride all our forefathers. What sort of omnibuses have the forefathers who have been addicted to the use of strong drink made for themselves? Demme, a noted statistician, made a special study of the hereditary influence of alcohol on children. He selected two groups of ten families each, living under the same conditions and circumstances, with the exception that one group was addicted to the use of liquor and the other was temperate. He observed them for a period of twelve years, paying especial attention to the health and life of the children. To the intemperate families fifty-seven children were born, and of these twenty-five died within a few weeks of birth, six were idiots, five poorly developed physically and mentally, five epileptics, six deformed, and only ten could be considered healthy. To the other families sixty-one children were born, and of these five died within a few months of birth, two had St. Vitus's dance, two were very backward mentally but not idiotic, two were deformed, and fifty were perfectly normal and healthy. Bourneville studied the cases of 1,000 children in Bicêtre, an institution for epileptic and feeble-minded children, and found that six hundred and twenty of them came from drunken families. Dahl of Norway reports that from fifty to sixty per cent of the children in such institutions come from families where one or both parents are addicted to the use of liquor. Many other observers tell the same story. Do such facts need any comment? Think of the premature funerals, and of the multitude of children who through no fault of their own enter the battle of life handicapped by disease and deformity.

No one can deny these facts; but perhaps some one argues that it is only the excessive drinkers that bring such calamities upon themselves and their offspring. Very well, let this be true; but where do the excessive drinkers come from? Is it not from the multitude of moderate drinkers? But some one says, "Look at Mr. ———. He is an old man now, and he has taken his

toddy every day for fifty years or more, and see how hale and hearty he is." With this many satisfy themselves, and think moderate drinking does no harm. It would be just as logical to prove that war did no harm by pointing out some old veteran who had passed through many battles unscathed, and then feel satisfied that everyone else escaped in the same way.

WINTER LIFE AT DAVOS

BY EDITH E. ADAMS

HIGH up in the Rhaetian Alps, in the extreme east of Switzerland, at an elevation of 5,120 feet above sea level, in a valley of Canton Grisons, lies the district of Davos, the best known winter health resort in Europe. In the midst of the high mountain scenery, framed in by wooded heights and rocky peaks, is a broad, flat valley having an extensive plain of meadowland watered by the mountain torrent known as the Landwasser. The climatological and geological conditions of this Alpine valley have made it the most famous of high mountain resorts for those suffering from lung complaints.

The idea of sending consumptive patients from the cold north to winter in places colder still was at one time considered preposterous. At that time, however, these Alpine valleys in winter were popularly believed to be sunless regions of ice and snow, fog and wind.

Attention was first drawn to the advantages of the Davos climate, in 1865, by Dr. A. Spengler, a German physician practicing in Davos. He noticed that pulmonary consumption was extremely rare in the natives, and that those who came from other parts afflicted with this disease continued to improve in both summer and winter. Dr. Unger, another German physician, who was himself suffering from pulmonary tuberculosis, arrived at Davos in the same year, and these two medical men exerted themselves to make the place more widely known. In the winter of 1865–6 two invalids who had vainly tried other means of cure, wintered in Davos. The favorable effect of the climate was such that in 1890, twenty-five years later, both of them were able to celebrate in the soundest health, the jubilee of their first arrival in the Davos valley. The following winter, 1866-7, twenty-two visitors remained in Davos, and the number has gradually increased to from two to three thousand. For a long time Davos was regarded principally as a summer health resort, and it was only by degrees that its special value as a winter resort came to be recognized and its reputation as such established.

The valley is situated in the midst of an amphitheatre of mountains widely open to the south, which allows free access to the sun while affording complete shelter from the wind. Davos-Platz, the health resort, is situated on the north, which is the sunnier side of the valley, partly on the slope. On the bright winter days the sun is so hot and the air so still that persons can sit out of doors the greater part of the day

THE TOWN OF DAVOS-PLATZ.

and even require protection from the great light and heat.

There is a very great contrast between the cold in the shade and the warmth in the sun, the difference between the mean maximum temperature

In the Dischma Valley.

in the sun, and the mean maximum temperature in the shade being 70° F. for the month of December. When the radiating solar thermometer marks 110° in the sun, the temperature in the shade may be ten degrees below freezing. J. A. Lindsay says: "It may seem almost incredible that with the thermometer below freezing point in the shade, patients should sit for hours upon an exposed balcony with perfect impunity; that they should require sunshades although clothed in furs; and actually suffer from heat while the breath freezes upon the mustache — yet such are the seeming anomalies of Davos."

The remarkably increased power of the sun's rays at this altitude is due to the fact that radiation is facilitated and transmission readily permitted by the pure, thin, clear air, and the solar rays are reflected by the white snow which covers the ground in winter, thus increasing the brightness and warmth of the sunshine.

The splendour of such winter days, when one is glad of a sunshade while sitting out of doors watching the skating, can be known only by being experienced. Precise observations concerning the power of the sunlight in Davos have not been made, but it is estimated by photographers to be about one-third greater than in the lowlands.

The dryness and stillness of the air in winter prevent the low temperature from being felt, even in the shade and after sunset, so much as in the lowlands. On account of this stillness, the windows can be kept wide open during the night, greatly facilitating the carrying out of the open-air treatment.

Davos-Platz is a town of sanatoria, hotels and pensions, the arrangements of which are such as to allow invalid visitors to enjoy the open air in all seasons and weathers. The houses all have open and free situations, and are surrounded by gardens and lawns, so that sun and air may have free entrance. The one principle of treatment in all the sanatoria is the open-air cure. All establishments for the accommodation of invalids are provided with balconies, terraces, and sheltered places in which they may recline. There is accommodation not only for paying patients, but also for poor consumptives needing the treatment.

Dr. Turban's sanatorium, built in 1887, on the slope forty feet above the valley level, was the first establishment of its kind in the Swiss mountains. A sanatorium on the Schatzalp about 1,000 ft. above Davos has recently been insti-

tuted under the direction of Dr. L. Spengler. This situation gets about one hour more possible sunshine than Davos during the shortest days of winter. When the valley still lies in the shadow of the mountains, the Schatzalp is bathed in the rays of the rising sun. In the shade of the tall fir trees are winding paths with here and there a seat inviting the pedestrian to rest. Before him tower the glittering giants of the Grisons Alps and at his feet lies the pleasant Davos valley. The Schatzalp is connected with Davos-Platz by a funicular railway, the journey occupying about twelve minutes.

Davos-Dorf, the more rural part of the Davos valley, is about one and a half miles from Davos-Platz, and hidden from it by a shelving mountain ridge. Its climate is somewhat less sheltered but slightly more sunny than that of Davos-Platz.

Patients intending to winter in Davos usually arrive before November, when the first great snowfalls usually take place. Throughout the winter the ground is covered with snow to a depth of from six to twenty-four inches. This covering helps to keep the air pure and free from dust and is of great value from a sanitary point of view.

Some use is made of hydrotherapy in the form of wet rubbings, douches and frictions, but the basis of treatment is the strict administration of the open-air cure. Patients are given every opportunity of utilizing the curative influence of the fine dry climate of this sunny altitude. The treatment mainly consists in remaining out-of-doors from eight to ten hours every day. Those not able to sit out are provided with wheel beds. With the legs enveloped in fur sacks, warm hoods covering the head and ears, and tucked in with a generous supply of thick rugs or blankets, they recline in the pure, crisp, cold air, breathing in new life and health. Even when the temperature descends to 20° below zero, they may be found curing at their posts, and the cold is not felt unpleasantly because the air is so dry and still.

The value of high mountain resorts in the curing of lung complaints, is largely due to the diminished density of the rarefied air, which necessitates increased activity of the respiratory muscles, promoting their development and the expansion of the lungs and chest. The amount of oxygen in the air is so much less than in the lowlands that one is compelled to breathe deeply, expanding the lungs to their fullest capacity. As a result of residence in high mountain resorts actual increase in the thoracic measurements has often

SKE-ING.

CURLING.

been observed. All the air vesicles of the lungs are thoroughly opened up by this deeper breathing, and the accumulation of secretions is prevented. The increase of the respiratory movements also aids the circulation in the thoracic and abdominal cavities. The increased heat production rendered necessary by the cold air in order to maintain the temperature of the body, results in greatly increased appetite, better digestion, and improvement in general nutrition. The brilliant sunshine, the greater abundance of light, doubtless has a powerful effect on the mental and physical condition of invalids, and also renders the air aseptic by inhibiting the growth of microbes.

The Davos valley has great attractions for others besides invalids. From this center a great variety of mountain and glacier excursions can be undertaken. By means of carriage and sleigh rides one may ascend with little exertion in from three to four hours to a height of 10,000 feet. A large number of winter holiday visitors come every year to enjoy the ice and snow sports for which the place is famous. The Davos valley is recognized as a European skating center. From November to March there is uninterrupted opportunity for the enjoyment of this sport, on the splendid skating rink in the town of Davos-Platz, and many of the finest skaters in Europe are to be found here in the height of the season. Tobogganning is also largely indulged in by the Davos public, being especially popular among the English visitors. There are abundant facilities for curling, ske-ing, ice-hockey, and other fascinating winter sports.

The snow-melting period, which begins in March and extends over some weeks, is damp, chilly, and foggy, and patients have to be carefully guarded against colds, chills, and fevers. The Swiss mountain stations are more shut in, and the climate is on the whole moister and colder than the stations in the Rocky mountains, but there is less wind and dust. At Colorado Springs there is no troublesome snow-melting

period as in the Swiss resorts, for the snow lies for only a few days. According to Solly, there are 188 hours of sunshine at Denver, for every 100 hours at Davos-Platz.

Davos contains an English church, a Catholic church, and several Protestant churches and chapels. It also provides good educational facilities. The town is well-drained and lighted with electricity.

RESTORING A DRUNKARD

BY DAVID PAULSON, M. D.

THE process of unmaking a drunkard represents such a transformation that it can be considered nothing short of a miracle. But this miracle, like the miracle of health, has in it the element of time and likewise demands co-operation on the part of the human agent.

The shattered nerves of a drunkard which have become so accustomed to constant artificial stimulation need physiological stimulation. There is no single thing which will accomplish this more readily and satisfactorily than some daily vigorous application of cold water. It matters little whether it be given in the form of a cold sponge, cold shower, or cool bath. Who has not experienced the remarkably refreshing effects which are produced by simply bathing the face in cold water? Every organ in the body receives a similar natural stimulus from a general application of cold. This only conveys a hint of what might be accomplished by the rational use of remedies such as electricity, massage, and many others.

A proper adjustment of the diet is almost an absolute necessity in the unmaking of a drunkard. The diet of the individual who is seeking to rise above the demon of drink should be simple, nutritious, non-irritating and non-stimulating. Every slice of the soft bread should be toasted so thoroughly that it is browned through. The grains can be browned before they are cooked or the mush may be cut in thin slices, covered with bread crumbs and thoroughly baked. By this process the starch is changed into dextrin, thus rendering it much more digestible.

Fruit should be partaken of in abundance. In fact, our experience has taught us that four meals a day, consisting exclusively of various fruits, strictly adhered to for a couple of days, has often been the means in the hands of God of shattering the shackles of drink from many a poor inebriate, even when his hopes were practically crushed by his long record of previous failures to be emancipated. Fruit juices, buttermilk, non-alcoholic kumiss, cereal coffee, and cold water should be the only beverages allowed.

To the physician who has to deal with these wrecks of humanity, the scriptural admonition to "eat for strength and not for drunkenness," acquires a tremendous significance. The victim of the drink habit should be inspired with the thought that his body is the Temple of the Divine; that the various efforts he is putting forth in taking exercise, submitting to the application of rational remedies, denying an abnormal appetite for unnatural foods, are all so many seeds which he is sowing for a harvest of temperance, and from which he is just as certain to reap as he was to reap intemperance when he so vigorously sowed for the same. "For whatsoever a man soweth, that shall he also reap." — *Union Signal.*

STEPPING IN FATHER'S TRACKS

ALL through night's weary darkness, snowy flakes
In eddying whirls had filled the wintry air;
As noiselessly as Time our blossoms takes,
They drifted here and there.

And when the glowing rosy-hearted morn
Awoke earth's sleeping denizens anew,
Behold! the snow upon the night-winds borne,
Had buried streets and lanes from view.

But yonder farm-house, like a ship at sea,
Becalmed with all sails set, awoke to hear
The low of kine, flocks bleating to be free,
The while the day draws near.

The farmer, anxious for his troubled herd,
With sturdy stride the trackless snow-drifts passed;
By their great need to strong exertion spurred,
He reached the fold at last.

His gladsome son exulting darted on,
Swift as an arrow from an arched bow;
"I 'll go," he shouted, "where my father's gone!
I care not for the snow!"

He stumbled, struggled, fell; yet still he tried;
For pride or courage stayed his turning back,
Until a new thought dawned: "I'll go," he cried;
"I 'll step in father's track!"

How many glorious victories have been won,
How many from temptation have turned back,
Defying evil, just because a son
Would step in father's track.

How should you walk, O fathers! lest too late
You strive to call some erring wanderer back!
For precepts best on those examples wait
That leave the brightest track.

So live that when the deepening snows of age
Shall hold your failing strength in bondage back,
Your children's best and noblest heritage
Shall be your shining track.

And when the household and the hearth are gone,
And tender tones and looks may not come back,
Your mantle may long rest upon the son
Who steps in father's track.

— *Louise S. Upham.*

IS IT TRUE?

BY GEO. C. TENNEY

AS we catch the gracious words of the greatest of Teachers, "Is not the life more than meat, and the body more than raiment?" and contemplate the manner in which men and women live, we are inclined to ask with surprise, "Are they, indeed?" This is to all right-minded people a self-evident truth, and one which is very closely related to spiritual and physical well-being; and yet one which is strangely overlooked, and when presented to the attention of intelligent people is often received with contempt or raillery.

Without speaking harshly, we may say that in all but a few cases the thought of eating and dressing does not extend beyond that of taste. Taste is the criterion. Taste in eating is simply the dictates of the sensual god called Gust. It is the whim of an appetite always more or less perverted and erratic. Taste in dress is almost universally the dicta of an even more whimsical and unreasonable mundane deity of the feminine gender who is supposed to live in Paris or New York, and is frequently seen parading the streets in no very desirable company. The mandates of this fickle goddess are imperious and irrational. But none the less they are to be implicitly obeyed, no matter what the consequences may be.

Under the tyranny of these petty despots the life is nothing, and the body is even less. Under King Gust the whole alimentary apparatus becomes the servant of an unreasoning and insatiable demon, whose claims can never be satisfied although in the attempt to satisfy them the relish for the simple elements of life-giving food is sacrificed; the palate is shocked out of all power to protest; the stomach is tortured, burned, blistered, irritated, jaded, discouraged, and finally put out of commission altogether. The poor liver becomes clogged and succumbs; the kidneys float away in an excited state; the blood boils and festers; the brain and its branches become so terribly excited under the awful treatment to which they are subjected that they order a general strike and lockout at the same time. If this is not enforced, they suddenly close the shop.

The misrule of Miss Fashion is no less calamitous. Under her dominion the human form divine is degraded to the station and office of a walking dummy for the display of the wares of the most artistic dressmakers and milliners. Almost any of our ladies would scorn the occupation of walking the streets with a poster announcing the merits of a patent medicine or even a wholesome breakfast food, before and behind. But with the utmost satisfaction many of the same ladies glory in advertising the merits of Madame de Stunner or Mrs. Latest-thing-out. What about the body? Body? Why, what is that? Is it my waist? Oh, the less there is of that the better! I almost wish I hadn't any at all. Queen Fashion says that I am to do my best to cut it quite in two; and to tell you the truth, I am gaining on it every year. Not only does the ugly thing want cutting in two, but it needs certain crooks, bends, and contortions, which its designer was certainly very thoughtless to overlook. My feet are a terrible annoyance to my goddess, and I am trying my best to abuse them in every possible way. In fact, it is only by torturing my back, and pinching myself almost in two, and squeezing my feet, and compressing

my hands, and making a general fool of my poor head, that I can live in any kind of peace with my high and mighty lady, Dame Fashion. It is really a pity that she couldn't have had the shaping of people.

There really seems to be a great mistake somewhere, that a sensible God should make the body, and a senseless fashion should order its raiment. It is really inconsistent that God should lend us life, and provide the things necessary for its maintenance and development, and then we should permit an irresponsible appetite to ruin it.

Why not relegate fashion to its proper sphere, and hold it strictly answerable to an enlightened conscience? Why not place the body in the fore, and in inventing our raiment let the convenience and welfare of the body be the standard of good dressing?

And while about the work of reform, why not give our precious lives some thought when considering what we shall eat? If our appetite and old King Gust rebel against the dictates of our better judgment, why not have it out with them at once. We should fight that battle, and, like the grand old apostle, keep our bodies at once and forever under the control of an enlightened and sanctified sense that is true to our highest temporal and eternal interests.

THE TOTAL ABSTINENCE PRESCRIPTION

BY MRS L. D. AVERY-STUTTLE

MRS. BRADLY sat in her easy chair in the cosiest corner of the library, thinking. Her hands were folded idly in her lap — a very unusual thing for Mrs. Bradly. Evidently her thoughts were very busy, — too busy just now to chide her hands for being idle. The gray cat purred contentedly at her feet, and the little clock on the mantel noisily struck the hour of nine; but the little woman with the brown eyes and the serious look paid no attention to either. Mr. John Bradly had come into the room a half hour before and quietly stretched his massive frame upon the sofa. Seeing his young wife in a brown study, he had ventured no remarks. Finally she arose, and moving her chair closer to his side, exclaimed: —

"Well, John, Cousin Amanda is coming for a visit. She'll be here Tuesday morning, she writes. I don't mind 'Manda, — but Willie, — O me! how I dread that boy! Amanda is older than I, to be sure, but I hope she isn't too old to learn, and if she isn't, she will learn a few things before she goes home, or I'll miss my guess."

"Coming? is that so? Well, she'll not stay long from her luxurious home, I'm thinking. Heigho! I don't envy her, not one bit. She seems the most unhappy, nervous, irritable creature I ever saw; why, she drinks eight or ten cups of strong tea every day, or used to. If you were like her, Annette, I'd give up, — I'd — "

"Yes, John, dear, I've no doubt you would do something dreadful; but I can't forget the time when I was almost as great a nervous wreck as Cousin Amanda, and I thank God every moment that I was finally shown the cause of my misery. And, John, I'm determined to open 'Manda's eyes, if she'll listen to reason."

"But how are you going to do it? Ugh! that boy of hers! I dread him, for a fact. Glad our Jennie isn't like

him. I am fearful, Annette, that you can't convince her that her bad habits are the cause of her ill health."

"Perhaps not, John; but still, she is very easily influenced, you know, and I'm going to call Dr. Parks over, if she is taken with any of those sick headaches; I think he'll open her eyes. She has read about him in the papers, and tells me she has great confidence in him;" and Mrs Bradly smiled hopefully.

Tuesday morning dawned, bright and clear. The crisp snow sparkled in the sun, and the bells rang merrily, as the sleigh, drawn by Cousin Amanda's sleek black horses, drove up to the gate. A few minutes later, a luxuriously dressed, very sallow-faced woman of forty swayed wearily back and forth in Mrs. Bradly's best easy chair, while a lad of perhaps ten years, played noisily with Jennie, the six-year-old darling of the family.

"How are you feeling after your journey, Cousin 'Manda?" queried Mrs. Bradly, as she drew up a chair, preparatory to a little visit with her guest.

"Most miserably, Annette, most miserably. If it hadn't been for a can of hot tea I was thoughtful enough to bring along, really I don't know what I'd have done; it's not a long drive, you know, and the tea kept hot nicely on the warming stone. I know you don't believe in tea, Annette, but I'm so dreadfully nervous I *have* to have it. My mother used to be just the same."

"Yes, I remember poor Aunt Martha; she was a complete nervous wreck for years before she died."

"Ah, yes; poor dear mother! she was a great hand for tea — and coffee too, for that matter; I don't know, really, I *don't* know what she'd have done without it. Father used to say he paid out more money for tea than for bread. But she said she might as well have her tea as for him to have his tobacco. I've known her to suffer with the most fearful nervous headaches, and she always cured them with tea — nothing in the world but tea, Cousin Annette. By the way, would you mind my making myself a small cup? I brought a quantity of my especial brand along with me. I like to make my own tea. Servants make nothing but slop, I assure you. I always take a cup before dinner."

"Certainly, Amanda; just step into the kitchen; though I'm sure, cousin, you'd be better without it," mildly protested Mrs. Bradly.

In a few moments Cousin Amanda had returned to the sitting room, armed with a huge silver teapot.

"Really, I don't see whatever is getting to ail my complexion, Annette," complained her guest, catching a glimpse of the dull eyes and sallow cheeks in the mirror. "You know well enough that I used to have a complexion that was the envy of all my set, and I'm afraid my Willie boy is getting to take after me. Come here, darling; let Cousin Annette see if she thinks you have liver trouble. What do you do to your Jennie, to keep her cheeks so pink and her eyes so bright?"

"I only give her plenty of pure water to drink, and good wholesome food, cousin, — that's all."

"I declare, Annette, you certainly are the oddest creature!"

It did not take "Willie boy" long to notice that his mother was drinking her accustomed beverage, and he hurried to her side, followed by his little hostess.

"I want my tea; I'm thirsty, awfully thirsty," he cried, rudely grasping his mother's cup in his sallow, scrawny fingers.

"I'll get you a nice glass of hot milk, Willie," protested Mrs. Bradly, rising.

"He won't drink it, Annette, — he won't drink anything at all but tea or coffee."

"O Willie, Cousin Willie," called little Jennie; "you don't want the nasty tea; it's bitter, and it burns. I wouldn't drink it. And, O Willie! the bad Chinamen put dead people in it; mama says so."

"What does the child mean, Annette?"

"I presume she has heard me say that I have read that the Chinese often pack their dead in boxes of tea to send them home for burial when they die in a foreign land."

"O Annette! how can you! you ought to know that I am too nervous to listen to talk of this kind, especially right while I'm taking my tea. Ugh! the very thought of it nauseates me! Think of scraping the tea off human corpses, and selling it to — to me! I hope it isn't true,— do you think it is? Really, Annette, I guess I'll lie right down till dinner's ready. I hope I'm not going to have one of my sick headaches."

"I am so sorry, Cousin 'Manda. I only said I had read the gruesome tale about the tea. I hope it is not well founded."

"Mama," called Willie, "I'm going to have the tea you left in the teapot, if you don't want it."

"I don't care, child, only run away, and don't bother me."

"My! that's good tea!" exclaimed the child, finishing his cup, "mama always buys the best and the strongest. I guess that'll do me all right till dinner's ready, and then I'll have some more," chuckled the young tippler, smacking his pale lips. And, sure enough, by the time dinner was ready, both Cousin Amanda and her young hopeful had apparently forgotten the story of the Chinaman and were quite ready to be served again.

"Can't I have some pepper on this potato?" demanded Willie after several ineffectual attempts to discover where it might be hidden away on the table.

"That's not good manners, Willie," corrected his mother. "However, my Willie *is* quite fond of pepper."

"Yes, and I want some mustard, too,— quick,— hand me the mustard, won't you, Jennie?"

Mrs. Bradly smiled. "We use but few condiments, Cousin, and really you must excuse me."

"I can't eat without mustard and pepper," whined the young hopeful, pushing his plate away sullenly.

"William, William Henry!" protested Cousin Amanda. But William Henry sulked and pouted, and refused anything on the table except a slice of cake, which he nibbled daintily while he sipped his tea.

After dinner, Mrs. Bradly missed the lad, and what was her surprise to find him in the woodshed smoking a cigarette. To her remonstrance and threat to tell his mother, the young hopeful answered victoriously:—

"You needn't tell her, she knows it; she's allowed me two or three every day lately. It don't hurt me, and I like them."

Thus matters went on until on the third day of his visit Master Willie declared himself ill, to which fact his pinched, sallow face and dull eyes bore unimpeachable witness. All this time, Mrs. Bradly appeared to be in blissful ignorance of the fact that her larder contained none of the fiery condiments to which her guests were accustomed.

"William Henry is starving hisself to death!" announced Jennie, when he refused a nice bowl of brown bread and milk which she offered him.

"I guess Jennie is right, Annette," assented Cousin Amanda, and I feel

another of my fearful nervous headaches coming on; so I'll take a cup of tea to steady my nerves, if you will just phone for a doctor. I dislike to go home before I have made my visit, Cousin Annette, and I so worry about Willie."

It was just the opportunity Mrs. Bradly had been waiting for, and Dr. Parks was promptly summoned.

"What's the trouble with this young man?" briskly demanded the doctor. "With what do you feed him, madam?"

"O doctor, Willie hasn't any appetite at all."

"Looks to me as if he never had a square meal in his life, madam. What did he have for his dinner?"

"Nothing that could hurt him, doctor, — just a bit of cake and a cup of tea," declared Cousin Amanda, elevating her eyebrows.

"What! you're not giving that slender, nervous boy tea, are you? why, you're killing your son, — poisoning him by inches, — that's what you're doing, madam."

Cousin Amanda regarded the doctor as though he were some strange animal, and ventured a remonstrance :—

"But he won't drink anything else but tea and coffee, doctor."

"I dare say; and in five or six years he'll add whisky to his list, depend upon it, — that is, if he lives so long."

"You don't really think *good* tea is harmful, do you, doctor?"

"I never saw any good tea in my life; the best contains from three to six per cent of a deadly poison. There are about one billion pounds brought to this country — this unfortunate country — and this amount contains more than six times enough to kill every human being on the globe."

"Well, but, doctor, nothing I ever tried helps my sick headaches like a good strong cup of tea."

"I dare say; but it does not prevent or cure them, — it causes them, madam. If you want to lose your sallow complexion and your nervousness, and bring the roses to the hollow cheeks of your little son, you ought at once to banish tea and coffee, as well as spices and fiery condiments of all kinds. The tannic acid in the tea interferes sadly with digestion."

"I declare, I don't know but you're right, doctor; indeed, I believe you are," assented Cousin Amanda with an air of conviction, "I have *such* a bad stomach, and Willie is getting as bad as I. If I really thought — "

"See here, mama, I've just got to have my tea and coffee. I don't feel good when I don't have them, I tell you, and — "

"William Henry! we must do as the physician says, I suppose, or at least we must try. To tell the truth, doctor, I always thought my cousin a little whimsical, but I am determined to try your total abstinence prescription."

The next year Mrs. Bradly visited her cousin, and instead of a nervous wreck, with sallow cheeks and dull eyes, she found a bright, hearty, cheery woman, and the dearest, rosiest boy imaginable, — so willing is Nature always to do her best to repair damage wrought by poor ignorant human beings, — and Cousin Amanda and her family thank a kind Providence that they were led to follow the TOTAL ABSTINENCE PRESCRIPTION.

WINTER HYGIENE IN THE SOUTH

BY MRS. M. W. KIRKMAN.

LINGERING autumns and early springs make our Southern winters so short that not sufficient consideration is given to preparation of the body or home for the advent of Jack Frost who, sooner or later, will make his unwelcome appearance. The body, as well as the mind and heart and soul, relaxes to the dreamy, hazy, beautiful influence of "Indian Summer," or the "Summer of All Saints" as we love to call it. The blood courses slowly, and we float on, not realizing that we are drifting to a season when we shall need all the vital resistance that thick red blood and muscular activity can give.

Winter is looked upon too much as an accident, which temporarily gives much discomfort, but must be borne as are other trials of life. So when the freeze does come, the pipes burst, the plumbers reap a harvest, and everyone shivers and complains of cold weather as if it were an enemy instead of a glorious opportunity for health culture. It is not realized that discomfort arises, not so much from the weather as from a want of forethought. Because one winter is mild, there is a hope that the next will be also; and "sufficient unto the day is the evil thereof."

This mental attitude is especially disastrous to those who depend upon a daily wage for daily bread. "Why should we spend hardly-earned money to make the house proof against a freeze

GEORGIA TALLYHO.

that may never come? they say; and thus the way is paved for pneumonia, la grippe, rheumatism, loss of wages, and the Relief Society. It is quite likely that the poor suffer more during a sudden cold spell in the South, than the same class in the North, where houses are built with the certainty that winter is coming and will be long and severe.

The mortality among negroes, especially from consumption, has been much greater since the war, owing to their want of knowledge of how to care for themselves during the cold season. We do not need the storm windows and doors necessary in colder climates; but when one is indoors it is desirable to have an even temperature throughout the rooms, and so avoid the discomfort of scorching face and freezing spine, in short, to be able to forget the body while engaged in some desired employment.

Windows should be closely weather-stripped. Our bright, cheery, open fire-places furnish sufficient ventilation, and with some kind of stove for heating the halls, comfort and health is better secured than by the close, stifling atmosphere of furnace-heated houses.

There are advantages as well as disadvantages in a Southern climate; and if we believe, with our most optimistic poet, that "God's in his heaven; all's right with the world," we must feel that it is possible for the normal person, who lives righteously, to develop his body and keep it robust either North or South. The important thing is to adapt one's habits of life to one's environment.

In the South we cannot expect very much of the bracing, tonic weather enjoyed by those dwelling farther north; but the tonic of morning shower-baths or cold plunges can be secured anywhere, and they are just as necessary to health in winter as they are to comfort

Cocoanut Trees, Lake Worth, Fla.

during the warm season. To those whose skin is not educated to these measures, we would suggest that they begin with cold towel rubs or mitten frictions taken vigorously, and gradually work up to a stronger treatment. Exercise is also of vast importance, and in the Southland we have such long stretches of pleasant weather that one can get very much all the year round of "God's out-of-doors," which Henry Vandyke tells us is one of the pathways to peace, as it surely is to health.

With all the suggestions and inventions of modern science and hygiene, we need not allow our bodies, when winter comes, to be taken by surprise with flabby muscles, dead skin, or impure blood. Nature gives to the horse and other animals thicker coats in winter; so our bodies also require warmer clothing, a more concentrated, blood-making diet, and plenty of physical exercise. Almost all our cities now have branches of the Y.M.C.A. and Y.W.C.A., where all sorts of physical training, including swimming baths, may be had. We are happy to say they are well patronized.

In many Southern cities out-of-door life is encouraged by the Country Clubs where the Golf Links attract scores of young people, and in fine weather one sees there as "bloomin' gels" as ever graced Mrs. Poyser's dairy in old England.

Horse-back riding is very popular, and gay parties may be encountered on the country roads all through the winter.

Camping parties are also quite in vogue. One Southern lady is immensely popular, not alone for her many amiable traits of character, but also because of a yearly "Camp" given in the late autumn, when a large num-

ber of guests are entertained most royally. The days are spent in horseback riding, driving, boating or hunting as suits the taste of each individual. At night a huge bonfire attracts everyone and many a good joke and thrilling story is told around its inspiring blaze. Sometimes an unusually cold snap arrives, and it becomes necessary to break the ice to bathe; but no one takes cold, and when the camp breaks up, all leave regretfully, only consoled by the hope that Mrs. E. will remember them in next year's camp.

All these good things of life, however, come only to a limited number. The hope is that as those more fortunate realize the benefits of health culture for themselves, their hearts and purses will open to their less favored brethren.

It is said that "Modern Sanitary Science is a system of fighting germs which propagate in dirt of all kinds, and the only people who can abstain with impunity from bathing are those who live in the fresh air — Esquimaux, Red Indians, Arabs" — and yet New York, with its multi-millionaires and unnumbered charities, is but just beginning to make it possible for the "great unwashed" to feel the luxury and self-respect of a daily bath, and to enjoy the blessed influence and healing of sunlight and fresh air in the tenement districts.

Because of its sparsely settled country and uncrowded cities, the South has not in the past suffered from neglect of public sanitation so much as such neglect might deserve. Conditions are rapidly changing, however. Cities are growing. New England mills, with thousands of operatives, are moving South, so that we shall soon have to deal with new problems in crowded centers.

In every city there are Boards of Health composed, for the most part, of intelligent, progressive physicians who from time to time issue bulletins of sanitary information and directions to the communities in which they live. But this advice, unenforced by law, has little influence. If in every city the Board of Health would institute each year a course of lectures given by competent persons who could make them instructive and impressive, the public might be educated to become associates, as it were, of the Board in promoting public hygiene. It is useless to attempt to make any reform until the demand comes from the people themselves, awakened to a sense of their danger by an intelligent knowledge of the situation. It is most gratifying to see that some of our leading newspapers are using the tremendous educating power of their editorial columns to urge attention to public sanitation.

Unfortunately, in the South, as elsewhere, selfish politics are immense hindrances to reform measures; but the light has entered and we believe can never be quenched.

Electricity has so bound the world together that local blindness cannot hinder progress. All sanitarians are awaiting with keen interest the results of the investigations and experiments of the Boston scientists in their attempts to purify a great city's sewage, and their success would mean very much to some of our Southern cities where typhoid fever has come to be expected as a matter of course.

Some one has said that "God will forgive our sins, but we must pay for our blunders." This is certainly true in respect to neglect of the laws of health, either personal or public. But let us take courage from the Buddhists who tell us that "No seed will die," and have faith to believe that our small beginnings in Hygiene will spring up and bear fruit to the building of beauti-

ful cities wherein shall dwell men and women who, because of abounding health, can truly say with Robert Browning,

"How good is man's life, the mere living! how fit to employ,
All the heart, and the soul, and the senses forever in joy."

LIFE.

LIFE is too brief
Between the budding and the falling leaf,
Between the seed-time and the golden sheaf,
For hate and spite.
We have no time for malice and for greed:
deed;
Therefore with love make beautiful the
Fast speeds the night.

Life is too swift
Between the blossom and the white snow's drift,
Between the silence and the lark's uplift,
For bitter words.
In kindness and in gentleness our speech
Must carry messages of hope, and reach
The sweetest chords.

Life is too great,
Between the infant's and the man's estate,
Between the clashing of earth's strife and fate,
For petty things.
Lo! we shall yet, who creep with cumbered feet,
Walk, glorious, over Heaven's golden street,
Or soar on wings!

Margaret E. Sangster, in Will Carleton's Magazine.

TEMPERANCE TEACHING FROM CORNARO

THAT most of the misery existing in the world is preventable, and the result of causes altogether within man's control, must be conceded by every one who will give the matter more than a passing thought. And that intemperance is the deadly root from which spring most of the ills that flesh erroneously imagines itself heir to, must be equally apparent to every thinking person. By intemperance is meant not merely the taking of intoxicating liquors, but excesses of any kind: the use in any degree of that which is injurious, and overindulgence in that which in itself is good.

Philosophers of all ages have endeavored by precept and practice to point out to men that the remedy for existing evils was largely in their own hands, and that it lay mainly in a temperate and abstemious course of life. Among these the most remarkable was Cornaro, who in his own person demonstrated the efficacy of a temperate life to procure freedom from most of the ills — physical, mental, and moral,— that afflict mankind. Induced to adopt this course as the only means of saving the life he had forfeited by gluttony and intemperance, he found its effects so remarkable, and became so enamored of the beauty and holiness of such a life, that he devoted himself to the task of enlightening his fellow-men and persuading them that the great happiness

he had found was within their reach also.

The burden of Cornaro's message to mankind was that this world would be a delightful and beautiful place, and life here most happy and enjoyable, if all men would but live temperately. As a means to this end he wrote the four discourses which form his famous "Treatise," translated into English under the title, "A Sure and Certain Method of Attaining a Long and Healthy Life."

In this treatise Cornaro tells his own life story, contrasting the bitter and inevitable consequences of intemperance with the sweetness and blessedness of a life spent in conformity with nature and reason. He seems never to have doubted that all rational beings who could be induced to read his treatise with attention, would give earnest heed to his counsels. With the optimism born of his temperate life he hoped that the wail of woe resulting from intemperance would thus be changed into a universal hymn of joy and praise.

The principal point in the system which Cornaro practiced and recommended was the exact regulation of the diet to suit the needs of the body. "The orderly and temperate life," he says, "consists solely in the observance of two rules relative to the quality and quantity of our food. The first, which regards quality, consists in our eating and drinking only such things as agree with the stomach; while the latter, which relates to quantity, consists in our using only such an amount of them as can be easily digested."

In his own case Cornaro proved that taste and appetite were not to be depended upon in determining these two points. That "'whatsoever tastes good will nourish and strengthen,' which is invoked as a first principle by those who are sensually inclined," he found to be false; for the rich foods that exactly suited his palate were most injurious to his constitution. He was also obliged to accustom himself "to the habit of never fully satisfying the appetite,— either with eating or drinking,— always leaving the table well able to eat more." In this matter, however, he strongly insisted that every man must be his own physician and prescribe for himself the quality and quantity of food which he found best suited to his own needs; "since there is not so great a variety of features as there is diversity of temperaments and stomachs among men."

The extreme abstinence which Cornaro himself practiced he did not urge upon others, not deeming it necessary in all cases. It is a fact, however, that the latest scientific experiments relating to diet have proved conclusively that the amount of Cornaro's daily rations —twelve ounces— is the exact amount required by the average human being.

The benefits arising from taking only the right kinds and requisite quantity of food, he thus sums up: "The great virtue of this is that that which I eat and drink—being always such as agrees with my constitution and, in quantity, such as it should be—after it has imparted its invigorating elements to my body, leaves without any difficulty, and without ever generating within it any bad humours. Whence, following this rule, I have constantly been most healthy."

"Whosoever wishes to eat much must eat little,'— which means simply that the eating of little lengthens a man's life, and by living a long time he is enabled to eat a great deal"— was one of Cornaro's favorite proverbs with which he met the arguments of those who would have drawn him away from his abstemious habits. Another to the

same effect was that "The food from which a man abstains after he has eaten heartily is of more value to him than that which he has eaten."

To those who objected that persons taking, when in sound health, only the small quantities of food common to invalids would have nothing to fall back upon in time of sickness, Cornaro replied: "He who leads the temperate life can never fall sick, or at least can do so only rarely; and his indisposition lasts but a very short while. For, by living temperately he removes all the causes of illness; and, having removed these, he thereby removes the effects. So the man who lives the orderly life should have no fear of sickness; for surely he has no reason to fear an effect the cause of which is under his own control."

"Even accidents," he asserted, "have the power to do but little harm, or cause but little pain, to the followers of such a life." This truth he learned by his own experience when, at the age of seventy, he was thrown from his carriage and dragged some distance by the horses. His head and body were painfully bruised, and one arm and one leg suffered severe injuries. When the doctors saw his plight, their opinion was that he would die within three days. They, however, suggested two remedies as the only hope of his recovery — purging and bleeding to prevent fever. Confident that his regular and temperate life had made fever an impossibility, Cornaro refused to be bled or to take any medicine. He merely had his arm and leg straightened and his body rubbed with certain oils. Without suffering any change for the worse, he entirely recovered, fulfilling his own expectations and astounding his physicians, who regarded the case as miraculous.

Not only sickness and accident, but all other disorders and misfortunes, such as anxiety, exposure, and melancholy, were believed by Cornaro, in common with Galen and others, to have very little power to harm those whose lives were governed by the two rules he mentions relative to eating and drinking.

The influence of temperance upon the disposition was strikingly shown in Cornaro's case, and is therefore emphasised in his writings. The irritable temperament which had belonged to him by nature and had been aggravated by intemperance, gave place to a beautiful serenity and mildness in harmony with his changed life. At one time however, he was persuaded by the entreaties of his friends, against his own judgment, to add two ounces to his daily allowance of food. "The disorder of this increase," he says, "had, at the end of ten days, begun to affect me so much, that, instead of being cheerful, as I had ever been, I became melancholy and choleric; everything annoyed me; and my mood was so wayward that I neither knew what to say to others nor what to do with myself." The many with whom this state of things has become chronic, may find the remedy for it, as Cornaro did, in the observance of his two rules.

No less striking is the effect of the temperate life upon the mental and spiritual powers, in freeing the mind from the bondage of sensuality and placing it under the control of reason, subjugating all irrational passions and desires. "As sobriety keeps the humors of the body pure and mild, so likewise does it prevent fumes from arising from the stomach to the head; and the brain of him who lives in this manner is, as a result, constantly in a clear condition, permitting him to maintain entire

the use of reason. Thus, to his own extreme comfort and contentment, he is enabled to rise above the low and mean considerations of this world to the high and beautiful contemplation of things divine. In this manner he considers, knows, and understands, as he never would have otherwise done, how great are the power, wisdom and goodness of God. Descending thence to the realms of nature, he recognizes in her the daughter of the same God; and he sees and touches that which with a less purified mind he could never have seen or touched."

Cornaro confidently asserts that this happy state of mind and body to which he was brought by the temperate life, is attainable by all who really desire it; since "man, being a rational animal, does much as he wills to do." In his day the revolutions of the heavens were supposed to have much to do with determining a man's constitution and fate. "The wise man has power over the stars," was his way of saying that though a man's natural disabilities might influence, they could not compel — that man has as a rule far more to do with determining the length of his own life than has any outside power acting upon him.

Cornaro reasoned that if he, with a naturally weak constitution so broken down that it seemed impossible that he could live to the age of forty, could be restored to full health and strength and live to a remarkable age, there was no man of so bad a constitution that he could not "by the use of reason and the help of the temperate life, enjoy perfect health to a very great age." The possibilities of those born with a good constitution, aided from their earliest years with a temperate life, he considered to be almost unlimited.

Believing that all men may by a rational life prolong their term of years to the full limit and die a natural death, Cornaro looked upon it as a great misfortune that any should by intemperance in eating and drinking cut short their career, or incapacitate themselves for the service they were fitted to render to mankind. The learning, virtue, and experience that come only with years qualify men to render much higher service to the world after they have passed the meridian of life. By a course which takes them away in their prime or cuts ten or twenty years from their natural life, they are robbing the world which they might have made so much the more beautiful. "Both in literature and in the sciences, the majority of the best and most celebrated works were written when their authors had attained ripe age." All of Cornaro's own discourses, which have given him a unique position as a benefactor of mankind, were written after he had passed his eightieth year.

In the following eloquent tribute to Temperance, Cornaro has summed up the virtues springing from this life-giving root, and the dangers from which those are delivered who love and cherish it: —

"Divine Sobriety, pleasing to God, the friend of nature, the daughter of reason, the sister of virtue; modest, agreeable, contented with little, orderly, and refined in all her operations! From her, as from a root, spring life, health, cheerfulness, industry, studiousness, and all those actions which are worthy of a true and noble soul. All laws, both divine and human, favor her. From her presence flee — as so many clouds from the sunshine — revelings, disorders, gluttony, excessive humors, indispositions, fevers, pains, and the dangers of death. . . . Sobriety purifies the senses; lightens the body;

quickens the intellect; cheers the mind; makes the memory tenacious; the motions swift, the actions ready and prompt. Through her, the soul, almost delivered of its earthly burden, enjoys to a great extent its liberty; the vital spirits move softly in the arteries; the blood courses through the veins; the heat of the body being always mild and temperate produces mild and temperate effects; and finally, all our faculties preserve, with most beautiful order, a joyous and pleasing harmony."

E. E. A.

SLIGHT those who say amidst their sickly healths
Thou liv'st by rule. What doth not so but man?
Houses are built by rule, and common wealths.
Entice the trusty sun, if that you can,
From his ecliptic line — beckon the sky.
Who lives by rule, then, keeps good company.

— *George Herbert.*

THE EFFECTS OF THE HABITUAL USE OF OPIUM ON THE BODY

BY W. T. THORNTON, M. D.

OPIUM and its alkaloids are much used to-day, both for medicinal purposes, and, by the laity, for narcotic effects. The remarkable increase in the extended use of this drug, especially for its narcotic effects, is astonishing. This is especially true among classes that best know its results. For example, ten to fifteen per cent of the physicians of our country are said to be habitual users of this drug. The reason that so many are addicted to the use of opium, regardless of its after effects, is that it gives relief from present conditions. They desire its cerebral, stimulating, or pain-easing powers to help them carry their present burdens, instead of seeking a more natural remedy which takes a longer time, but secures far better results in the end. At the same time they forget that, "Whatsoever a man soweth, that shall he also reap."

A man who uses opium to allay his pains and griefs has an account accumulating, which will sometime, unless accident carries him away, appear in the form of a monster, that might in the first place have been easily handled, but now is far too much for him. He must succumb to a miserable end, or, in breaking off the habit, pass through in a few hours pains which he has avoided for years by the use of opium. To do the latter requires more moral strength than most of these drug fiends have in the debilitated condition to which the use of opium has reduced them. If a person commencing the use of opium will stop and picture the darkest specimen of humanity he ever saw, then paint this many times darker, he will have a picture of himself if he persists in the course in which he is starting.

There must be some cause for this increased use of opium. If we single out the class that are becoming drug fiends, we shall invariably find them to be of those that are living farther and

farther from the original plan for man. Few people to-day take proper care of themselves. The present mode of life is producing a generation of neurasthenics. Nine-tenths of the people never eat, sleep, bathe, or exercise correctly. Generation after generation, our physical nature is changing, and in the children of each succeeding generation, we see the preponderance of the nervous element. This increases our pain-feeling powers, and we call for something that will relieve our aches, when we should rather live closer to nature and avoid them. When once we find out an agent that relieves them and is so easily taken, and causes such pleasurable sensations as the one under consideration, there is a tendency to its frequent use. But when the habit is once formed, there is none that is harder to get rid of, and none that will bring its victims to a more miserable end. Everything gives way to this vice; morals, self-respect, business, ambition, happiness, hope, family ties, all must be sacrificed for a habit which in their soul they loathe, but from which they cannot break away.

The effects of this drug upon the body are most deleterious. When it is first taken the mental activity is increased, even when the dose is very small. This is especially true of the imaginative faculty, while judgment and reason are usually depressed. The face has an expression of pleasure, happiness, and comfort, in accordance with the calmness and peaceableness of the mind. Sleep soon follows, often accompanied with pleasant dreams. The sleep often becomes so profound that the person is entirely unconscious, and does not respond to stimulation nor even to pain. As time goes on larger and larger doses are required to produce these same effects, which last a shorter time; the dreams grow less pleasant; the temper of the patient is no longer sweet and even but is irritable and depressed. Pains are felt in various parts of the body; the night hours pass slowly, and are tiresome and weary. The person desires to be left alone; business and family relations are neglected. The life once so pleasant becomes a burden, relieved only for a short time following the taking of the drug. The unstrung nervous system grows more and more susceptible to the smallest disturbances, unless under the influence of opium. Small noises, that in health would not be noticed, disturb the patient very much; he is weak and languid, and may reel when he walks, although just after his usual dose he feels calm and strengthened. When a person first begins the taking of opium his pulse is slow; later, as the habit progresses, it becomes irregular and weak, and there is loss of tone in the smaller blood vessels, so that dropsy may appear.

Opium is a direct poison, decreasing the rate of breathing capacity, so that the user often has a cyanose appearance, especially when large doses are taken. Bronchitis often develops, with a hacking cough. It at first produces perspiration; later, skin rashes may develop with severe itching, and as the patient grows more unhealthy, eruptions and boils may appear. After prolonged use, the skin becomes dry and harsh, and the hair prematurely turns grey and falls out. The action of the kidneys is usually depressed. The chlorides in the urine, which show the amount of tissue wastes, are decreased. The skin is often jaundiced. Bright's disease and other severe kidney lesions may follow later. Its prolonged use may lead to irritation of the urinary tract and thus to diseases of the bladder.

Some of the most marked effects of opium are on the digestive apparatus. Peristalsis is decreased, the desire for food is lessened, constipation is usually very marked, and indigestion of the most difficult types is often present. When the drug is injected into the skin it is secreted in the stomach. It may first cause severe irritation or vomiting, from acid fermentations in the stomach. As the catarrhal condition develops in the digestive tract, the patient may become jaundiced, and the abdomen distended with fluid. Several attacks of diarrhea often develop. Commonly the gastric juice disinfects the food, so that germs that are taken in by the mouth are killed before the fluid leaves the stomach; in the opium fiend the amount of hydrochloric acid in the stomach is gradually decreased, thus allowing toxines to be developed, due to bacterial decomposition. Thus he is gradually poisoned from toxic materials developing in his own body. The kidneys do not excrete the proper amount of waste products and the respiration and action of the skin is imperfect. Thus the body wastes rapidly accumulate and decrease the general vitality of the body, making it a prey to all forms of disease.

When we consider the effects of this drug upon the morals, and also upon the body, we can understand how people of the finest nature and education can become so debased by its use. A miserable death can be the only end of those who persist in this course.

WHEN THE BABY HAS THE CROUP

THERE are few mothers of little children but have an innate dread of this common malady of childhood.

That which is, perhaps, most frequently termed croup is a spasmodic affection of the larynx, most common to children between the ages of one and five, and more common among boys than girls. It is provoked by a variety of causes among which may be enumerated indigestion, catarrhal inflammations, loud and continued screaming, inhalation of irritating vapors or dust, sudden chilling of a portion of the body, or exposure to damp and cold.

As usually happens, the little one retires at night in apparent health, to rouse the household about midnight or the early morning hours with a harsh, hoarse cough, oppressed breathing, with crowing and huskiness of voice, or entire inability to speak. The child, frightened and distressed by the unusual condition in which it finds itself, clutches at its mother's garments and face, struggles, and tries to cry, but his vocal chords refuse to act, his face becomes congested, and there are signs of approaching suffocation.

While the suddenness of the symptoms accompanying this disease makes it appear to the fond parents as most alarming, and particularly so as attacks often recur for several successive nights, it usually yields to very simple measures. A fit of crying and coughing will sometimes bring to the child immediate relief. This fact has suggested that the cause of the spasmodic trouble is dried, tenacious mucus collecting upon the vocal chords during sleep, which is expelled by the effort of crying and coughing.

During the day the little one seems generally well unless, as frequently happens, he has been deluged with drugs to cure the attack of the previous

night; then it may occur, as a noted physician has well said, that "the poor child is often longer in recovering from the treatment than he would be from the disease."

It is important that the child susceptible to attacks of spasmodic, false, or catarrhal croup, as this affection is severally termed, should sleep in a well-ventilated apartment.

As with all other evils, prevention is better than cure, and mothers should carefully guard the little ones against the causes which induce the disease, hardening the skin by the daily cold bath and abundant out-of-door life, and by keeping them properly clothed, particularly the extremities. Special care must be taken to protect the shoulders of croupy children, and to keep the feet warm.

For the speedy relief of the little sufferer during an attack of spasmodic croup, the hot immersion bath (temperature of 98° to 104°), or the hot blanket pack (see Jan. number), are among the very best measures. Copious drinking of hot water, hot weak lemonade, and other hot beverages is also to be recommended. Hot fomentations to the throat, or hot and cold compresses in alternation, often afford almost instant relief from the spasm. After the treatment, a compress should be applied to the throat and the child should be wrapped in warm blankets and kept in a room of equal temperature, not less than 70° F. The compress should consist of a linen or cheese-cloth napkin, wrung out of cold water, quite dry. Apply around the throat (see cut) and cover first with mackintosh, then with flannel, folded to several thicknesses so as to insure warmth. This should be worn at night for a week or two. A dry flannel should be worn about the throat during the day. If in any case suffocation seems imminent, dip the hands or the end of the towel in cold water and rub the throat and chest vigorously, so as to cause strong action of the chest, or coughing. It will be a comfort to the anxious mother to know that uncomplicated spasmodic croup is never fatal.

SHOWING COMPRESS APPLIED TO THROAT.

If the patient is not quickly relieved in the hot bath, prepare a wet sheet pack and taking the child from the hot bath wrap very quickly in the wet sheet, draw the flannel blankets tightly over, and almost before the little patient is snugly tucked in, a lively reaction will occur, the blood which congests the lungs will be drawn to the surface, and the spasm will be relieved. Keep the patient in the pack for half an hour or more, or until vigorous perspiration is induced; then remove the wrappings and rapidly bathe the sur-

face with a towel wrung out of cold water, until well cooled and rub till dry and red.

The symptoms of true or membranous croup, which is an exceedingly fatal and also contagious disease, are very similar to those already described, the distinguishing feature being that the onset is not sudden, as in spasmodic croup, but is preceded during some time by the indications of an ordinary cold with slight sore throat and fever. The symptoms are also more acute, increasing in severity as the disease advances. This malady, while it attacks small children, is also not uncommon in adults. It is a dangerous disease, and the little one suffering with it should be at once isolated, and an experienced physician called as speedily as possible to aid in combating the malady.

The Value of Opposition.

How often do we hear the wailing cry of the unfit? They could easily do so and so if it were not for some slight opposition. The very remark carries its own condemnation with it. No opposition ever yet prevented a righteous cause from achieving its final triumph.

The history of the world gives the lie over and over again to the craven cry, and further shows countless mistakes and failures that might be explained by the words, " Want of oppo sition."

There was never a reform effected, there never was a cause which triumphed, there never was a battle won, but that the final success was fought in the teeth of bitter opposition.

If you have a cause to fight, a battle to win, or a reform to carry out, then you should rejoice in the face of the opposition you will surely meet.

Fight on bravely, win your way inch by inch, and bless the head wind when it comes. It will make the fires of your ambition burn brighter, it will steady your ship, and prevent you from straying from your course.

Keep tight hold of your helm, follow close the course you have mapped out, meet the opposing elements face to face with undaunted courage and an honest purpose, and then, just as sure as right must and will inevitably triumph, you shall safely and in due season reach your haven.

Opposition is the excuse of the craven, but it is the ally of success.—*Selected.*

Physic, not Food.

Charles Lamb once declined to take rhubarb pie because rhubarb is physic. "But it is pleasant and innocent," said his host. "So is a daisy," rejoined Lamb, "but I don't like daisy pie."

Lamb was right. Rhubarb may be good physic, but it is not a good food, even though made palatable by the deceptive magic of the cook. Mustard is valuable as an emetic in case of poisoning, but certainly of no value as a food or condiment. Baking powder is a good laxative under the name of Rochelle salts, but an utterly unfit accompaniment of food.

LITTLE BARBARA, on seeing a dish of quivering lemon jelly placed upon the table, exclaimed, "O, mamma, see how nervous that jelly is!"—*Youth's Companion.*

Chautauqua School of Health

ELEMENTS OF FOOD

BY J. H. KELLOGG, M. D.

(Concluded.)

Fats.— Oils, or fats, abound in certain foods; they are especially abundant in nuts. They are also found in the olive, a fruit, and abound in certain other seeds, as the peanut, and soja bean of Japan. Fats are found only in small quantity in the grains, with the exception of corn, which contains about five per cent of fat, and oats, which contain 7.8 per cent. Fats are almost wholly absent from wheat, rice, barley, and rye. Fats are also found in animal substances, but in a different state from that in which they occur in the vegetable kingdom. In the vegetable, fats occur in the form of very minute particles, or an emulsion. If, for example, nuts are chewed in the mouth, a cream-like substance is produced; this is due to the fat emulsion present in nuts. When a piece of fat meat is chewed in the mouth, an oily substance is produced; this is not an emulsion. Emulsions differ from fat in the ordinary state in the fact that they readily mix with water.

Albumen.— Albumens, like fats, are found abundantly in both vegetable and animal substances; but food albumens proper are chiefly found in vegetables and in eggs. If a portion of wheat flour is mixed with water, and allowed to stand for two or three hours, and then washed upon a sieve under a stream of water, the water which first flows away will be milky, but after a time, when the mass has been considerably reduced in size, there will be left an elastic, rubber-like substance which no longer gives to the water a milky appearance. This is known as gluten. Gluten contains albumen and various allied substances, one of which is vegetable glue, or gelatin, a substance similar to the well-known gelatin or isinglass. Elements practically identical with gluten, although lacking in vegetable glue or gelatin, hence a different product physically, are found in all cereals, very abundantly in nuts, and in large proportion in peas, beans, lentils, and other leguminous seeds. This element is almost entirely lacking, however, in fruits, and is present in only minute proportions in vegetables.

A specimen of almost pure animal albumen is to be found in the white of an egg. The muscles, nerves, brain, glands, and other living structures of the body, consist chiefly of albumen, or proteid substances. But animal albumens, or proteids, with the exception of those found in eggs, differ from those found in vegetables, in the fact that they constitute tissues, or working parts; they are a part of the animal

machine and intended to do work, while the albuminous substances found in seeds, like those found in eggs, are stored albumen especially prepared and intended by nature for food. The albumens of the egg are intended to serve as food for the young, growing animal until it is able to procure food for itself. The albumen found in seeds serves the same purpose for the young plant, or for animals for which the seed may serve as food. The albumen of tissues, meats of all sorts, has been used already by the animal, and is no longer food albumen, but tissue albumen.

It is reasonable to suppose that albumens especially prepared by an all-wise Providence for use as food should be better adapted to this purpose than albumens which have once served as food, and have been constructed into a machine for the use of foodstuffs in various kinds of work. A simple illustration will perhaps make this fact clearer. The man who builds a locomotive employs iron which has been especially prepared for making the different parts of this wonderful machine. A man who builds a sewing machine naturally uses iron which has been especially prepared for the sewing machine. It is evident that the sewing-machine maker could more easily construct his delicate machine from materials especially prepared for his use than from the odds and ends of rusty bars and sheets, bent and broken bolts, nuts, etc., left behind in a worn-out or smashed locomotive. Divine providence supplies to each animal foodstuffs adapted to its use — the natural products of the vegetable kingdom. It is reasonable to suppose that these are best adapted to the use of each individual animal. Every element needed by the animal is provided by the vegetable kingdom.

It must not be forgotten that material deteriorates in use. No carpenter would ever be expected to be able to build as good a house out of the timbers, boards, window frames, doors, etc., collected by tearing down one or several old houses, as if constructed from brand-new material. It is possible that some of the old doors and windows might be of exactly the size needed for the new house, so that if they were incorporated into the building, less work would be required; but the quality would certainly be sacrificed. This principle is of value in determining the relative merits of flesh and vegetable substances as food in a diet for man. Rusted steel is deteriorated steel. A worn and brittle iron rail has lost the value it possessed when fresh from the hand of the foundryman. So the albumen of flesh is used and deteriorated albumen, second-hand foodstuff, at the best. Albumen found in vegetable foods, such as the gluten of wheat and the legumin of peas and beans, is food albumen. It has been especially prepared and stored for use as food, and hence is better prepared for assimilation than is that which has been once used as food, by an ox for example, and converted into tough, sinewy muscle tissue.

Peptogens.— These are remarkable substances the nature of which has not yet been fully determined but which are found in all foods. Peptogens have the wonderful property of causing the stomach to produce gastric juice. Some peptogens stimulate the formation of acids, and others encourage the formation of pepsin. Certain foods are deficient in peptogens. This is especially true of potatoes and other starchy vegetables. Ripe fruits and dextrinized grains contain peptogens in abundance. Peptogens also abound in broths and soups prepared from peas, beans, and lentils, and in meltose, or malt honey.

THE FOMENTATION

BY J. H. KELLOGG, M. D.

THIS very useful procedure consists in the application of cloths wrung out of very hot water. Flannel cloths are best for the purpose. An old flannel under garment, two or three stockings, or a piece of an old shawl may be used if a piece of soft flannel cloth or flannel blanket cannot be readily secured.

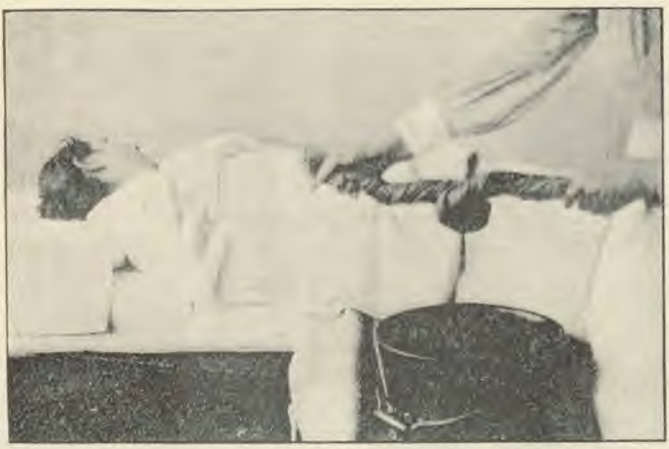


FIG. 1. WRINGING THE FOMENTATION CLOTH.

The fomentation may be prepared in various ways. A convenient method is to employ a cloth somewhat larger than required to cover the part to be treated. Fold this so as to have the proper width, about twice the length required. Grasping it by the ends, dip the center into hot water. By twisting the ends, the hot water can be squeezed out without coming in contact with the hands. A dry flannel cloth should be laid next to the skin and the wet flannel applied over it; then the whole covered with another dry flannel, or the dry ends may befolded over so as to protect the wet portions.

In an emergency, a cloth may be wet in cold water, covered with a newspaper and laid upon or held against the hot surface of a stove or wrapped about a stove-pipe, or if the part to be heated is small, the moistened cloth may be put in a pan or a large dipper and held over a kerosene lamp or a gas-jet until heated.

The duration of a fomentation is not usually more than five to fifteen minutes. When continued longer than five minutes, the flannel should be reheated. Small fomentations may be kept hot by means of one or two rubber bags filled with hot water, or a

FIG. 2. WRINGING THE CLOTH IN A TOWEL.

heated brick or jug or bottle. A rubber bag filled with hot water and covered with a moist flannel is a convenient method of applying a small fomentation. A rubber or a flexible metal coil through which a current of hot water is constantly passed may be used for a continuous application of moist heat by placing under a coil a moist flannel.

The most important service rendered by the fomentation is perhaps in the relief of pain. Aside from opiates, there is no means by which pain may be so promptly and positively relieved as by the application of moist heat.

FIG. 5. APPLYING THE HOT CLOTH.

For this purpose the fomentation should be applied as hot as possible without running the risk of injuring the skin. The fomentation acts both by the diversion of blood from the painful part and through a sedative influence upon the nerves. The area covered by the fomentation must be very much larger than that affected by the pain, at least three or four times as large.

Even when pain is persistent, it is better not to continue the fomentation for more than fifteen to twenty minutes without exchanging it for a short cold application which may be made by dipping the hand in cold water and rubbing the parts, or by applying a towel or a cheesecloth napkin wrung out of cold water, for fifteen to twenty seconds. The cold application serves to restore the tone of the vessels, which is lost by prolonged application of heat, thus maintaining a more active circulation through the parts than can be secured by the fomentation alone.

The fomentation is also useful as a means of producing derivative effects, as when applied to the feet or legs to divert the blood from the pelvis, the chest, or the head, or from the kidneys for relief of congestion of these parts.

When a fomentation is applied over a reflex area, as to the skin over the stomach, for example, the vessels of the related internal organ are dilated as well as those of the skin; hence, a very prolonged fomentation may do mischief by encouraging the accumulation of blood in the related internal parts. By making a cold application at intervals of five minutes, this danger is averted.

The fomentation may be safely employed for the relief of pain from whatever cause, and will generally be successful, even when pain is due to acute inflammation; but certain precautions should be regarded. When applied for the relief of a superficially inflamed part, as a boil, the part itself should be protected by a piece of dry cotton covered with rubber cloth or gutta percha tissue. The fomentation is then applied over

the parts and by dilating the surrounding vessels, serves to relieve the pressure in the part inflamed.

When the pain is due to a deeply-seated inflammation it is possible that suppuration may occur, as, for example, in appendicitis. The beginning of suppuration is sometimes indicated by an increase of pain when the fomentation is applied. This important fact should be borne in mind in the treatment of appendicitis, inflammation about the neck, and pelvic inflammation, also in the treatment of inflamed joints.

A very hot fomentation applied for a few minutes to the back of the neck often renders valuable service as a means of relieving headache.

A very hot fomentation between the shoulders sometimes aids in checking hemorrhage from the lungs.

Most forms of backache are temporarily relieved by fomentations, also neuralgic pains in the side and other parts. The atrocious pains of nervous or sick headache are usually to some degree mitigated, if not entirely relieved, by a hot application, especially when combined with a very hot foot-bath.

Colic pains due to spasm of the intestinal muscles are promptly relieved by the application of a large fomentation over the seat of pain.

A fomentation to the lower part of the back and over the back and outer surface of the knee affords wonderful relief in sciatica.

Painful joints are relieved by a large fomentation applied to the joint; a considerable area of the limb on either side of the joint should be included.

Stiffness of the joints and thickening about joints and other parts are favorably influenced by a fomentation applied two or three times daily, followed by a heating compress during the interval.

FIG. 4. THE FOMENTATION COVERED.

Pain in the eye due to congestion in the eyeball is best relieved by a fomentation just above the eye, as by this means blood is diverted away from the eyeball; whereas the application made below the eye may have the opposite effect.

Pain in the back of the head is relieved by a fomentation to the back of the neck extending down between the shoulders.

The fomentation is exceedingly useful as a means of relieving the pain of pneumonia, pleurisy, gastritis, gallstones and renal calculi. Spasm of the urinary bladder and cramp of the muscles of the limbs generally yield to a thorough hot application.

At the conclusion of the fomentation, immediately after the withdrawal of the last hot cloth, a very short cold application should be made, either by rubbing the parts with the hands dipped in cold water or by applying for fifteen or

twenty seconds a towel wrung out of cold water. By this means the blood is fixed in the skin so that the effect of the fomentation is prolonged.

If the fomentation has been so large or so long continued as to produce general perspiration, some general cold application should be made after the fomentation as a means of toning the skin. A cold mitten friction, a cold towel rub, and in some cases a cold wet sheet rub may be properly used for this purpose. As a general rule, such a cold application as the half bath, cold shower and the cold douche in all forms cannot be safely used in cases of internal inflammation, or when the patient is suffering with or has just been relieved from severe neuralgic pain.

A fomentation should never be allowed to remain on a part until it becomes cool, as this will produce an effect the very opposite of that desired.

Great care must be taken to avoid injury to the skin in the application of fomentations to paralyzed parts; also in applying fomentations to persons who are unconscious from shock, fainting, or other cause, as during unconsciousness the circulation of the blood is often greatly slowed so that burns may be easily made at a temperature which would not injuriously affect a person in a normal condition.

THE BACTERIOLOGY OF COMMON LIFE

Distribution and Environment of Germs

BY F. J. OTIS, M. D.

BACTERIA are microscopic single-celled plants. They belong to the vegetable kingdom and are distributed as universally as are all other plants. They have the property of breaking up organic materials into elementary compounds. For instance, they change starches and sugars into carbon dioxide and water. Whole forests may by them be reduced to a gaseous form. These same gases are utilized in the construction of other forests. Life keeps up a constant cycle or formation, growth, death, dissolution, and gas. In other words, it is the duty of bacteria to decompose organic material, whether of plant or vegetable origin.

There are places where no germs are to be found: where there is no organic matter, as in the air far out at sea and upon the mountain heights, for gravity and rain keep bringing them down into the valleys; down in the earth where the temperature is too great for their existence, or where they cannot get because of the filtration through the soil; also in the normal juices of both plants and animals.

When the gold seekers crossed the plains in '49 some of their cattle died on the way. Many of them were so completely dried that they did not undergo decomposition. Wherever there is moisture and bacteria decomposition will take place. Consequently germs exist in the greatest numbers in the fall, when the dead leaves are distributed everywhere, and their numbers are particularly great when there has been considerable rain to maintain the dampness of the fallen leaves and other organic matter.

Pathogenic germs are associated with disease and sickness and are to be found wherever disease exists. Where there are and have been no animals there are no disease germs, for they live on the excretions and secretions of the animals. Waiting until the animal has become too weak to live, they reduce the body to the gaseous form so that the material

may be utilized by other animals and plants. Germs do not always make a correct diagnosis; sometimes they begin to develop before the animal dies. When they make this mistake, they produce disease.

The germs that give men the greatest difficulty will necessarily be found where there are the most people. Consequently we will find the greatest number of disease germs in the city, always in the down town portions, because all of the inhabitants of the cities frequent the down town portions. Each person brings his contribution and distributes them. These kinds of germs are found in the human body only when the fluids become abnormal in some way, or the body protectors become too weak to keep them out. In the country towns there are few disease bacteria when compared to the number in the city. One often observes the breaking down of the body protectors and the exposure to disease in the following way: A person plans a trip to the city on business. He works very hard all day to complete his work in order to leave it in proper shape. He then goes to the city to spend the balance of the night. Worn out and tired, but spurred on by the duties and sights that are before him, he pursues his plans. At the close of the day, wearied and worn he takes the train home. Late the following morning he awakens to realize that his rest has been disturbed by the soreness of his throat. In a short time he realizes that he has developed a serious attack of influenza or cold. If other germs, such as pneumonia or consumption, associate with these he is fortunate if it ends with only a cold. This individual, had he remained at home, or preserved his strength and energy, would not have caught these germs nor taken this cold. He found some germs in the city that were more accustomed to growing in individuals' throats, so that they produced disease in him more readily than any germ that he could have found about his own home. This is why disease is more prevalent in the cities than in the country.

About the home, germs are the most prevalent in the dark places. This is why all homes should be thoroughly lighted. Perhaps the best place for germs is in the cellar. The next best place is the refrigerator. No refrigerators are so cold but what germs can multiply there. Some of these germs do not produce disease in themselves, but produce materials that cause disease. The germs in and about improperly kept refrigerators will gain access to foods placed there, and produce poisons in them so toxic that they often cause death. Germs about the home are best gotten rid of by dilution. Thorough washing and scrubbing about a home will not only keep it bright and clean, but also free from all dangerous germs because of the diluting and dissolving effect of warm water, and the bactericidal properties of soap.

Bacteria are often mixed with gummy materials so that when they dry down they sometimes stick, and the use of the scrub brush and a little soap assists greatly in dislodging any particles that would not be washed away in the water.

There are some disease germs that prefer to live on the skin of man and animals. These germs never enter the body unless there is an injury to the skin, or unless the body has become so weak from over-work or improper hygiene that the germs do not recognize the tissues as living tissues. A study then of Hygiene and the laws governing bacteria will not be time lost, but may be a "savour of life."

A February Menu

Savory Corn Soup

Baked Potato — Canned Green Peas — Celery

Stuffed Protose

Baked Bean Sandwiches — Whole Wheat Wafers

Toasted Corn Flakes with Cream

Stewed Fruit — Almond Cream Cup Custard

Health Cocoa

Recipes

Savory Corn Soup.— Simmer together for fifteen or twenty minutes, one can of swee corn, two slices of onion and a sprig of parsley in one pint of water. Put all through a colander, to remove the hulls of the corn and separate out the onion and parsley. Add to this pulp two cups of cocoanut or dairy milk, and just before serving, the well beaten yolks of two eggs. The eggs may be omitted if preferred.

Baked Bean Sandwiches.— Spread evenly and thinly cut slices of entire wheat bread, with butter or nut butter. Place between these a dressing prepared by pressing cold baked beans through a colander, to remove the skins, and seasoning the same with finely chopped celery, onion and parsley.

Almond Cream Cup Custard.— Prepare a cream by thoroughly mingling two rounded tablespoonfuls of almond cream with one quart of water. Add one cup of sugar with which has been thoroughly mixed one tablespoonful of cornstarch, and the yolks of four eggs. Beat all together until thoroughly blended. Lastly add the beaten whites of the eggs and one teaspoonful each of lemon and vanilla. Turn into cups, place in the oven in a dripping pan half filled with water, and cook until well done and lightly browned on top.

Baked Potato.— Select potatoes of as nearly the same size as possible; clean well by scrubbing with a vegetable brush and rinsing in clean water. It is also a good plan to dry them with a cloth. Place them together in a dripping pan in the oven, and bake from forty to sixty minutes or until soft. The time will be dependent upon the size of the tubers and the heat of the oven. When the potatoes taken up in a towel feel soft throughout they are done, and should have the skins broken to let out the steam. In baking, the starch is cooked by the water contained inside the potato. If when the baking is complete the steam is not thus allowed to escape, it will condense inside the tuber and the potato will be soggy.

Stuffed Protose.— Remove a pound of protose from the can and scoop out the center, leaving a cavity about the size of a small chocolate cup. Fill this with a stuffing prepared by mixing together, one and one-fourth cups of bread crumbs, one-half cup of minced protose (a portion of that removed from the center), one-half teaspoonful of sage, the same of celery salt, one-fourth of a medium sized onion and two stalks of celery both finely minced, moisten these with one-fourth of a cup of cream or nut cream, beating all together thoroughly, and with this stuff the protose roll. Place the stuffed protose in a baking dish and turn over it the following: one cup of hot water in which two bay leaves have been simmered for a few minutes, and one-fourth cup of thick cream or cocoanut cream, with salt to season. Bake in a moderate oven, basting very frequently for one hour, then add to the basting liquid one cupful of strained, stewed tomato, and bake from one-half to one hour longer. E. E. K.

PRACTICAL NURSING IN THE HOME

Beds and Bed Making

BY LENNA F. COOPER

THE bed is a most important consideration in the sick room. A bed which for one in health who only spends the night hours therein, might be sweet indeed, may be torture to the restless, fevered patient, to whom every trifling discomfort becomes positively distressing. It is therefore of the utmost importance that the bed should be the very best that can be procured, and that it should be properly made and cared for. A single bed of brass or iron with woven wire springs, and somewhat higher than the ordinary bed, is preferable for several reasons. It is possible to move and treat the patient with more ease and convenience both to the patient and the nurse. Such a bed is more easily kept free from dust, and in contagious or infectious diseases can be sponged with a disinfectant solution.

BED SHOWING DRAW-SHEET.

A soft mattress of hair, excelsior or air should be used. By all means avoid the use of a feather bed. If pillows are used they should be of hair, moss, cotton, or air, and should be high enough only to raise the head on a level with the rest of the body.

Cotton sheets and pillow cases are preferable to linen for the reason that linen is a good conductor of heat and readily absorbs moisture, and therefore has a tendency to chill the surface of the body. To cover the patient, use soft, fleecy blankets which will be light in weight and at the same time warm and of such a texture as will allow the air to pass through readily. There should be covering enough for warmth, but no more. Too much warmth is enervating, and heavy quilts and counterpanes are burdensome and fatiguing. A pretty dimity counterpane makes a dainty covering and protection for the blankets.

To make the bed, spread the lower sheet over the mattress, smoothly and tightly, tucking it well under on all sides. If there is any likelihood of the bed being soiled from discharges, place next to the mattress in the middle of the bed, a rubber or oil cloth about two and a half by three feet square, and cover it with a cotton pad a little larger than the oil-cloth. This may be placed just below the draw-sheet where necessity seems to require it, though if left there any great length of time it becomes wrinkled and uncomfortable to the patient and also becomes heating.

Over the sheet place a second or "draw-sheet" which may be an ordinary sheet, folded and stretched tightly across the middle of the bed. Tuck well in at the bottom a third sheet for the upper sheet, leaving it long enough to turn down over the blanket about nine inches, so that the patient will not be annoyed by the blankets coming in contact with the face. Place the blankets with the folded portion at the foot, then the counterpane, and tuck all in. Place the pillows in position and the bed is ready for occupancy.

The matter of changing the bedding when the patient is too ill to leave the bed is not always easy to an untrained hand, but by following these suggestions, it can be easily done. Loosen the bedding on all sides, turn the patient as far as possible on her side, remove all of the upper covering but a blanket and sheet, which should be turned back over the patient. Roll or fold the soiled sheet in small lengthwise folds from the edge of the bed to the patient until it quite touches her. (See illustration). Place the clean sheet, which has been previously rolled or folded, over the space that was occupied by the soiled sheet, bringing it up to the soiled sheet, and roll the patient back over this onto the other side. From the opposite side of the bed, remove the soiled sheet, and unroll the rest of the clean one, tucking it in well on all sides. If the draw-sheet is used, it may be changed at the same time by placing it across the sheet and rolling it in with it. The upper covers are easily changed without in the least exposing the patient. Spread the clean sheet and blanket over the one already covering the patient. If the patient is able, let her hold the fresh covers at the neck. If not, the nurse may hold them with one hand while she slips the others down underneath over the foot of the bed with the other hand. Tuck the fresh covers in, and put on the counterpane.

CHANGING BED-LINEN.

1. Clean draw-sheet. 2. Clean under sheet. 3. Draw sheet and under sheet folded together. 4. Soiled sheets rolled together. 5. Covering folded back over patient.

If the patient is confined to the bed all the time, the sheets, especially the lower ones, and the pillow cases should be changed daily. But if there is not a generous supply of these on hand, the bed can be kept quite clean and sweet by having two sets of bed linen, one for the day and one for the night each being aired during the time not in use. The blankets ought also to be aired frequently. It is well to have a day and a night set of these also. There should likewise be a special gown for night wear. It is not only refreshing to have the clothing changed, but the patient will feel more like sleeping if

she is "gotten ready for bed." All changes should be made with as little fatigue to the patient as possible; hence, it is necessary to have everything in readiness before disturbing the patient.

To change the night-dress, lift off both sleeves of the soiled garment, gather the clean gown up in such a way that it forms a circle, slip over the patient's head, and put on the sleeves. With one arm raise the head and shoulders, and with the other slip down, first the soiled gown and then the clean one as far as the hips. Turn the patient on her side while you draw down the garments on that side, then turn her back on the other side, and likewise draw them down on this side also, removing the soiled one over the feet. The night-dress is the only garment needed except an eider-down or woolen jacket, to keep warm the arms and upper part of the body which are likely to be exposed, especially if the patient is at all restless.

(To be continued.)

HEALTHFUL DRESS

BY CAROLYN GEISEL, M. D.

WITH the winter weather we are reminded of the convenience of the tailor-made gown, than which we will all agree there is nothing more serviceable, and if properly arranged, it may be made as healthful as it is serviceable.

A rather heavy-weight material is usually selected for these gowns, and (especially when the skirt is made a little long) this is one of the reasons the tailor-made gown will bear watching, lest it become a menace to the health of the wearer. If this heavy skirt be just buttoned around the waist and its whole weight be hung unsupported from the hips of the wearer, there will frequently be found, upon removing the garment, a red line around the body, and a fold or wrinkle in the delicate flesh, telling all too plainly that there has been undue constriction and pressure, though the wearer — in some cases, at least — may be quite unconscious of its discomfort. This unconsciousness of discomfort is caused, by the way, from being too long accustomed to the abnormal, but nature will demand sooner or later a reckoning, and we shall pay, in the pains and tortures of displaced viscera, dearly enough for our fashionable folly.

The skirt might be united by buttons or pins to the shirtwaist, which is a part of the tailor-made gown, but very frequently the waist we are pleased to wear is of such light material that the weight of the skirt drags upon the waist in the back, giving an uncomfortable sensation to the neck of the wearer and an ungainly displacement at the point of union of the skirt and waist, which frequently reveals a most inartistic row of safetypins, which is quite enough to spoil the beauty of the most expensive gown.

The waist is soon utterly spoiled by the placing and replacing of pins or the tearing of the buttons from their place by the weight of the skirt. The whole plan is brought into condemnation because of the torn, untidy appearance of the garment at the juncture of the waist and skirt. But let us see if the plan ilustrated does not help us out of this difficulty.

FIG. 1. SHOWING BUTTONHOLES THROUGH SHIRT WAIST.

The accompanying illustration shows an effective plan by which the skirt may be well supported from the waist, allowing its weight to hang from the shoulder of the wearer and at once obviating any possibility of separation at the belt line.

By putting buttonholes through the shirtwaist and adding three extra buttons to the back of the freedom waist or the waist support of the jennetts, the shirtwaist and skirt may be attached to the foundation garment, and the weight of the skirt made to hang easily and freely from the shoulder. These three buttons should be placed, the one upon the center seam of the freedom waist, about one-half inch higher than the row of buttons which support the one long skirt, as shown in September (1903) number, and the two remaining buttons, each upon the first seam at the side of the center; the

FIG. 2. SHOWING SHIRT WAIST BUTTONED TO FREEDOM WAIST.

button at the side of the center should be a trifle lower than the center one. Now by putting buttonholes — from five to seven in number are necessary — in the shirtwaist (these buttonholes, of course, in such a position in the shirtwaist as to bring them in direct apposition to the row of buttons on the freedom waist), the two garments may be united in such a way as to make the freedom waist a sort of lining for the shirtwaist, so giving to it the needed strength and firmness to permit of its being a support to the skirt.

The question of fastening the skirt to the united waists has taken a little thought; for if we require ourselves to make still another row of buttonholes in the skirt of this gown, I fear we may grow tired of the plan before we have really tried it. Besides, if we allow the buttonholes to perforate the belt, we shall have some difficulty in keeping the buttons out of sight with the narrow belt which fashion now requires us to wear. To meet these objections we have found that by sewing firmly to the lower edge of the under side of the belt of the skirt a flat cord (a strong shoelace answers this purpose well) and leaving this cord loose for about the length of the buttonhole just where the buttonhole is needed, we are in possession of a good row of button holes entirely out of sight, and yet quite sufficient for the purpose. In addition to these suggestions for buttons and buttonholes it will be well, of course, to have the band of the skirt a little looser than we have been in the habit of wearing it when the skirt was held in place by just one button in the back. By doing this you will see how easily the whole gown may be lifted from the waist when the arms are extended upward.

We firmly believe that if the skirt be made not too long, and this plan followed for suspending its weight from the shoulders, the objections to the tailor-made gown from the standpoint

FIG. 3. SHOWING TAILOR-MADE SKIRT BUTTONED TO WAIST.

of health will be entirely removed, and we may wear for health as well as utility this natty garment that was always designed to be ultra-serviceable.

SCHOOL OF HEALTH SEARCH QUESTIONS

ELEMENTS OF FOOD

1. In what foods are oils or fats especially abundant ?
2. Which grains are the richest in fats ?
3. Describe the difference between the fats as they occur in vegetable and in animal foods.
4. Where is albumen chiefly found ?
5. Why are vegetable albumens to be preferred to those found in animal foods ?
6. What is one of the properties of peptogens ?
7. What class of foods is deficient in this element?

FOMENTATIONS

1. What is a fomentation, and with what may it best be given?
2. How may the hands be protected when wringing the fomentation ?
3. Describe two ways in which a fomentation may be prepared in an emergency.
4. What is the usual time for the application of a fomentation?
5. If continued longer, how may the tone of the blood vessels be preserved?
6. For what purposes is the fomentation useful ?
7. How may inflamed parts be protected during the application ?
8. What should, as a general rule, follow the fomentation ?

GERMS

1. What is the office of bacteria ?
2. What is necessary in order for them to thrive ?
3. At what time of year do they exist in the greatest numbers ?
4. What places are entirely free from germs ?
5. In respect to disease germs, how do the cities compare with the country?
6. In the home, where are germs most abundant?
7. How may they best be gotten rid of?

BEDS AND BED MAKING

1. What kind of bed is most suitable for the sick room, and why?
2. Of what should the mattress and pillows be composed?
3. Why are cotton sheets and pillow cases preferable to linen for the invalid ?
4. What is meant by a "draw-sheet," and how should it be arranged ?
5. If the supply of bed linen is limited, how may it be kept clean and sweet ?
6. For what reasons should the patient's gown be changed at night ?

HEALTHFUL DRESS

1. Why is the tailor-made gown, as usually worn, objectionable from the health standpoint?
2. What effect does the wearing of heavy, unsupported skirts have upon the body?
3. How may the skirt be made to hang easily and freely from the shoulders ?
4. What convenient device obviates the necessity of making buttonholes in the skirt belt ?

Hundred Year Club

THE OLDEST DAUGHTER OF THE REVOLUTION.

Mrs. Hannah Newell Barrett, who last May celebrated her 103d birthday, is probably the oldest person in Boston, where she has spent the most of her life. Although she has been for the past sixteen years confined to her room, through a misplacement of the hip joint, she has enjoyed excellent health during the whole of her life.

MRS. HANNAH NEWELL BARRETT.

Mrs. Barrett's birthday celebrations are very interesting occasions, though of late years necessarily quietly observed, owing to her increasing feebleness. Her sister, Mrs. Louisa Barbour, a bright old lady of ninety-two years of age, who bids fair to attain to Mrs. Barrett's happy old age, always assists and receives with her on these occasions.

Although they are quite informal, a large number of guests, sure of a welcome, come annually to pay their respects to their aged friend. Among them are always many members of the Boston Tea Party Chapter, D. A. R., of which both Mrs. Barrett and Mrs.

Barbour are members. They are real "daughters" of the American Revolution, their father, Noah Harrod, who was born in the middle of the eighteenth century, having run away from home when a lad of eighteen, joined Washington's army, and served through the terrible winter of Valley Forge.

Mrs. Barrett is blessed with a particularly happy disposition, the merry twinkle in her brown eyes defying age. Although unable to leave her pleasant room, she has always taken an active interest in all the affairs of the day. Her hearing and eyesight are both somewhat impaired, but she is able to read with the aid of spectacles, and has always been a great reader. She has written a weekly letter in her own hand to her grandson in Iowa.

With her sweet, gentle face in its framework of silvery curls set off by her soft tulle neckerchief and lace cap, Mrs. Barrett is a study worthy of a Rembrandt.

Dr. John Stafford.

A recent number of the *Rochester Post Express* gives the following statistics of the life of a remarkable man, Dr. John Stafford, who has nearly completed a century.

Dr. Stafford was born on Stafford Street, in the town of Manchester, on March 15, 1805.

After reaching manhood, he concluded to acquire an education, and entered the Palmyra Academy, walking three miles going and coming each day, over rough country roads. Later, he attended Hobart College, at Geneva, and then completed his medical course in the office of Dr. Alexander McIntyre, of Palmyra, receiving a diploma from the State censors, which was considered a high honor.

In spite of the fact that he is in his ninety-ninth year, Dr. Stafford is still an energetic, well-preserved man, bent and bowed, but able to get about with amazing agility. Always an enthusiastic gardener, he has, to-day, an extensive plot of ground under cultivation, which he has spaded and cared for without the assistance of anyone.

His boyhood was spent in the same neighborhood with Joseph Smith, of Mormon fame, and Dr. Stafford is perhaps the best living authority on that subject. He was present at the first Mormon baptism.

Dr. Stafford has been a life-long temperance and antitobacco enthusiast, and attributes his longevity, in part, to his temperate mode of living.

Simple Living and Longevity of the Brazilians.

According to a writer in a contemporary magazine, "the Brazilians, when first discovered, lived the most natural original lives of all mankind, so frequently described in ancient countries, before laws, or property, or arts made entrance among them. They lived without business or labor, further than for their necessary food, by gathering fruits, herbs, and plants; they knew no drink but water; were not tempted to drink or eat beyond common thirst or appetite; were not troubled with either public or domestic cares; nor knew any pleasures but the most simple and natural.

"Many of these were said, at the time that the country was discovered by the Europeans, to have lived two hundred, some three hundred, years."

This was without doubt an exaggeration, but that they were very long lived is evidenced by the fact that within the last quarter of a century there was an old woman living in Rio Janeiro at the remarkable age of one hundred and forty-one years.

. . By the Editor . .

THE MODERN LUST FOR SLAUGHTER

Sir Lewis Morris contributes to the recent public press an article under the above title, in which he says that the race lust for slaughter which leads intelligent, cultivated men "to go on inflicting death and pain incessantly on weak little frugivorous birds and beasts is an amusement not fit for an intelligent Christian gentleman, of whatever rank in the social scale." Sir L. Morris longs "for the time when the modern lust for slaughter as such, without any redeeming features, shall be a thing of the past." He insists that "it is the duty of every one at this season to take up his parable against killing for killing's sake, and none the less that the streets are made hideous by the fat beeves and sheep of the butchers' shops, or by the festoons of dead turkeys at the poulterer's."

It is encouraging to see a man of such pre-eminence as Sir. Lewis Morris speaking out so earnestly against this hideous practice which is so easily tolerated by our so-called Christian civilization. Slaughter of any sort is unchristian. The ruthless taking of life must be condemned by any code of morals which recognizes God as the Source and the Giver of life. The heathen poet who wrote,

> "Take not away the life you can not give,
> For all things have an equal right to live."

certainly had a more sensitive conscience than the modern clergyman who goes out on a killing expedition for sport or recreation. The man who, finding on the street a beautiful watch, would proceed to smash it with a cobblestone, would be regarded as lacking in sense, and having a low moral standing. A disposition to destroy everything they lay their hands upon is one of the special characteristics of imbeciles. The mechanism of the most delicately constructed time keeper, the wisdom and skill required to devise and produce the most delicate and costly machine ever invented, is nothing compared with the marvelous skill and ingenuity required to produce the infinitely delicate mechanism of a living animal. All the wisdom of all men combined could not possibly produce the smallest part of a living creature,— the wonderful properties and qualities of the animal eye, and of that mysterious and marvelous organ which looks out through the eye, the brain, to say nothing of the living engine, the heart, that most marvelous of laboratories, the liver, those wonderful filters, the kidneys, and perhaps most wonderful of all, the blood. There is a kinship among all creatures possessed of red blood. A common life pervades all living things. To kill, to take life, requires the taking away of some divinely created being, the joy of activity, the pleasure of existence vouchsafed to it by the God-given life which it possesses. The wholesale slaughter of these innocent creatures in the name of so-called sport is a heinous crime which must be as great an offense to the Giver of all life as many of those crimes upon the statute book which are visited by dire punishment. The public conscience needs education upon this point.

MEAT EATING AND APPENDICITIS

One of the leading papers of Paris, *Le Matin*, recently published an article by a French physician showing very conclusively a causative relation between meat eating and appendicitis. Dr. Chauvel of the French Army by a study of the statistics of appendicitis among the soldiers of the Army in different parts of the world, has shown that appendicitis is more than twice as frequent in parts of the world where meat is freely used, as in France, than in other regions where meat is used more sparingly, as in Algeria. Dr. Chauvel also points out the fact that in the same climate meat eaters are much more subject to disease than those who eat little or no meat. The disease is increasing in England so rapidly that insurance companies have been organized to insure people against appendicitis. Among the Arabs of Algeria who live largely on dates, figs, and wheat, appendicitis is almost entirely unknown, only thirteen cases having occurred among seventeen hundred natives during a period in which 137 cases occurred among fourteen thousand European soldiers. The rarity of appendicitis among the Chinese is another fact to which Dr. Chauvel calls attention.

"Dr. Matignon, who for five years was physician at the French embassy at Pekin, has not met a single case of appendicitis, either in the mission or in the hospital of Nan-Tang, during the whole of his sojourn in the north of China. Now the Chinese according to Matignon, eat but very little meat. The European alone eats beef. Meat is a luxury which only people in easy circumstances can indulge, and its consumption is very limited. The great majority of the Pekin population are nourished mainly by millet simply boiled in water, rice, cabbage, sweet potatoes, pickled turnips. The Chinese eat also much Indian meal and wheat, of which they make cakes with dough not leavened and cooked by steam. Thanks to this régime the Chinese enjoy an admirable *liberte du ventre*, and that undoubtedly is the cause of their appendicular immunity.

"The carnal régime, then, the abuse of meat, appears to be the true cause of this evil. No meat, no appendicitis. And the vegetarians triumph. If appendicitis is less frequent in our rural districts than in cities it is because our peasants are nourished more upon farinaceous food. Dr. Championniere knew a physician practicing in Britanny, where little meat is consumed, who for a number of years has seen but three cases of appendicitis. In the religious communities, where the use of meat is forbidden, appendicitis is unknown."

THE FRUIT CURE OF INTESTINAL INDIGESTION

Raw fruit is a wholesome remedy in cases of intestinal indigestion, provided the fruit is ripe, and the right kind is taken. Peaches and strawberries and such soft fruit, when thoroughly ripe, are excellent for use in this disease. During the war the soldiers on both sides found this out for themselves. When they were suffering from camp diarrhea and dysentery, they discovered that peaches were better than all the doctors. If they could get into a peach orchard, where they could eat all the fruit they wanted, they were soon cured. It was known many, many years ago that peaches and this class of fruits are excellent for indigestion, especially intestinal. The "grape cure" has been practiced in Switzerland for hundreds of years, and has more recently been introduced into this country in California, Ohio, and New Mexico. Not only the grape cure, but the apple cure, the peach cure, the apricot cure, the pear cure, the cherry cure,— all these

different methods have been used, and they are all wholesome.

Several years ago we set out to discover, if possible, by the examination of stomach fluids, why these fruits cure this disease. We have now examined the fluids from some 16,000 stomachs for the purpose of investigating the relation of foods to indigestion. We took the different kinds of stomach germs, planted them in different kinds of foods, put them into tubes, and watched the effects. Two interesting facts were at once discovered: (1) that the germs that infest the stomach could not be made to grow in fruit juice; (2) that fruit juice would not support germ life. No germs could be found alive in the fruit juices after a few hours. They would grow in the extract of grains, though not very vigorously; but in beef tea the most deadly and virulent germs flourished luxuriantly.

When a bacteriologist wants to cultivate germs in order to study them, he always uses beef tea in which to grow them. Liebig's Extract of Beef is used in laboratories to raise germs, and in nurseries to raise babies! Now you cannot successfully raise both germs and children on the same kind of diet. This extract is also used in the sick room to raise invalids; but such a thing is naturally impossible, for a thing that is wholesome for the germs, cannot be wholesome for the invalid. Many years ago Dr. Austin Flint demonstrated that extract of meat, or beef tea, has exactly the same composition as the extract of the tissues that is eliminated by the kidneys.

Cholera and typhoid fever germs grow in beef tea, and also in milk; but they will not grow in fruit juices. That is the reason that fruit juices are good for intestinal indigestion. But care must be exercised in selecting the fruit, to use only that which is soft and can be easily broken up. Apples have hard, brittle flesh, and are usually swallowed without being thoroughly crushed and masticated. They then produce intestinal indigestion, because they cannot be digested quickly enough to avoid undergoing fermentation. The fruit chosen must be of such a consistency that it can be crushed to a soft, mealy or pasty pulp, with no hard particles, and then it can be readily digested. Cooked fruits are best for most persons having this disease; but the pulp of such fruits as strawberries, grapes, peaches, etc., is really the best, because it does not require any action of the digestive organs to reduce it to a fluid condition.

FOOTBALL FATALITIES

SEVENTEEN deaths have already been reported as the result of football during the last season. In addition to these fatalities, must be considered the far greater number of fractures, dislocations, sprains, bruises, heart strains, and other injuries more or less permanent in character. Professional football players seem to be rather proud of their broken noses, limping legs, and black eyes received in battle, and exhibit them with as much pride as French and German duelists parade their abbreviated ears, plasters, and scars.

Quite a number of college faculties and presidents have pronounced themselves in favor of football, commending it as a means of developing character and encouraging physical development, etc. It has been well suggested by a sagacious editor that college advertising may be one of the special reasons why football is encouraged by certain faculties, if, indeed, it may not be the principal excuse for maintaining this barbarous game. No representative medical authority has ever spoken favorably of football as a means of physical training and development. Men who are elected to football teams are not those who need physical training, but those who are already strong and vigorous; those who espec

ially need muscular development are excluded from the sacred ranks of the elect, and allowed only to sit by and shout at the powers of their robust and bellicose comrades.

The Chicago School Board has recently taken a decided stand against football, and in this regard has set a worthy example for other school and college boards. Football encourages strife, contention, brutality, disregard for life, recklessness in relation to the rights and interests of others, gambling, and other evil propensities and tendencies. It is high time that this brutal game was ruled out of civilized society.

AN INSTITUTE OF PHYSICAL CULTURE

FOR a dozen years the country has been overrun with physical culture quacks who have proclaimed to the public in most eloquent phrases their ability to cure almost all the ills to which human flesh is heir, each by some special system of gymnastics invented by himself and vouched for as the only one worth consideration. We have never thought it worth while to attack or denounce this special class of fakirs, for the reason that we have not regarded them as particularly dangerous. The average American is so much in need of the advantages of physical exercise that he is not likely to suffer any particular harm, even though required by an inappropriate prescription to perform unnecessary capers, genuflexions, twistings and turnings in his bed-chamber two or three times a day; but this new method of money-catching is being worked so adroitly and industriously, and to such an increasing extent, it seems proper that we should, at least, congratulate the public that provision has now been made whereby those who may be especially benefited by the systematic employment of gymnastics may have an opportunity to receive advice from an expert and reliable source.

This opportunity is provided through the organization of the American Institute of Physical Culture, under the superintendence of Dr. J. W. Seaver, of Yale University, New Haven, Conn. Dr. Seaver has been for twenty years the Director of the Yale Gymnasium, and is well known in Europe as well as in this country as an expert in all that pertains to physical training. Dr. Seaver is also President of the Chautauqua School of Physical Culture. He is ably supported in his work by a large advisory committee of well-known physicians, most of whom are experts in matters pertaining to this specialty.

The field of opportunity before this new enterprise is almost unlimited, and it is perfectly safe to predict that under the wise direction of its able superintendent, this project will prove in the highest degree successful.

New Facts about Radium.

Sir William Ramsay has discovered that radium contains a gas,—helium,—which has twice the density of hydrogen. This gas is given off on heating radium. Radium thus seems to consist of helium combined with "something else." Dr. le Bon has found that all metals when pure, give off rays as does radium. The radio-activity of the different substances varies, of course. A certain compound of lead is found to have almost as much activity in this direction as radium itself. Dr. le Bon has also shown that many of the substances which compose the human body are radio-active.

Here is a great body of new truth coming forward for consideration which will demand much attention from scientists before its full bearing upon human life and activity is understood.

. . . Question Box . . .

10,006. Bright's Disease — Hardening of Liver — Insanity.— H. C. N., Illinois: "1. Would drinking strong coffee for a period of years be likely to induce Bright's disease? 2. What is the cause of a dull pain in the region of the liver? This has been present for some years. Local physician has said liver is growing hard. 3. Would the Sanitarium health foods prove beneficial? 4. What else could be done? 5. How much foundation is there for the theory that a vegetarian diet in many cases has brought about insanity, and how do vegetarians controvert it?"

Ans.— 1. Yes.

2. Chronic indigestion resulting in cirrhosis may be the cause.

3. Yes.

4. A fomentation over the liver for fifteen minutes, night and morning, and a heating compress at night. The heating compress consists of a towel wrung dry out of cold water, and applied over the liver, covered with mackintosh or oiled muslin, then covered warmly with flannel wrapped around the body.

5. None whatever. No facts have ever been produced to prove any such assertion. It has been shown that alcohol and tobacco produce insanity, but no person has ever presented any statistics to show that vegetarianism produces insanity. On the other hand, it can easily be shown that flesh-eating does tend in this direction. Professor Davy, an eminent authority on diet, quotes a description by a traveler who saw a company of Tartars become maniacal under the influence of blood drinking and raw-meat eating at a great feast at which he was present. The whole company acted as if they were frenzied with intoxicating liquors.

10,007. Pain in Arm and Shoulder.— A. C. C., Missouri: "1. For six months have had pain in right arm and shoulder, and the pain and soreness are quite severe just back of shoulder blade. It is accompanied by a tingling sensation which extends to the finger tips. It is always worse in rainy or cloudy weather. Would you call it rheumatism? 2. What treatment would you suggest?"

Ans.— 1. Probably neuritis, or inflammation of the nerve.

2. Apply fomentations in the morning, and at night wrap the shoulder in a towel wrung dry out of cold water. Cover this with mackintosh or oiled muslin, then wrap the whole with flannel bandage so as to prevent chilling. The moist cloth will be quickly warmed by the heat of the body, and the dry flannel will keep it warm.

10,008. Skin Disease.— D. F. J., British Columbia, fifty-five years old, has been troubled for twenty years with skin disease, variously called eczema, ringworm, psoriasis. It appeared first on the head, but afterward on any portion of the body, starting as a mere speck and gradually enlarging. It has a dry scale that accumulates until it falls off, when another is formed.

Ans.— Your disease is probably psoriasis, a very obstinate malady. It may be successfully treated, however, by the physiologic method. Phototherapy is especially indicated. An out-of-door life, daily cold bathing, sun baths for the whole surface until it is well tanned, will be found of great benefit.

10,009. Facial Massage — Flesh Food.— L. V. S., Iowa: "1. Are the effects of facial massage permanent, or must one keep it up after once beginning, if pimples are to be kept away? 2. Can you tell me if flesh food, to be used in massaging the face, is non-injurious?"

Ans.— 1. The skin of the face must be kept healthy by daily bathing the face with cold water and by vigorous rubbing.

2. There is no such thing as a flesh food which can be absorbed through the skin.

10,010. Carbonic Acid Gas — Lithia Water.— E. D., Maryland: "1. Does carbonic acid gas in water improve one's health? 2.

Is lithia water beneficial? 3. Is it any better than natural water?"

Ans.—1. Carbonated water is wholesome.

2. There is no evidence that the lithia contained in so-called lithia waters is in any degree beneficial. The water itself is often useful as water.

3. No.

10,011. A Substitute for Leather.—M. S., Nebraska: "In your August magazine you wrote of shoes made of a material called wolft. Will you kindly tell me where I can learn more about these shoes, and if they are for sale at any place in the United States or Canada?"

Ans.—Wolft shoes were made in England. They are not now manufactured, the company having gone out of business, but we understand it is being re-organized. They are not on sale in this country.

10,012. Headache—Heart Disease—Diabetes.—Mrs. H. S. S., Washington: "1. What is the cause of severe headaches, particularly in back of head, lasting from three days to a week? While the attack lasts I am very nervous and weak. 2. I have pain in right side, in region of liver, and my stomach troubles me a good deal after eating. What treatment would you recommend? 3. I also have dull pains in the region of heart and under left shoulder blade, and wake at night with my heart palpitating, but very weak. Is it disease of the heart? 4. A boy eight years old has kidney trouble, and cannot control the urine, day or night. He passes from two to four quarts daily. His appetite is irregular, and he drinks a good deal. Has he diabetes? 5. What treatment and diet would you recommend?"

Ans.—1. Indigestion.

2. Simple dietary, avoiding meats or animal fats, condiments, and all unwholesome articles of food; masticating the food with very great thoroughness, chewing every morsel four or five times as long as usual. Apply fomentations over the stomach at night, a moist bandage to be worn during the night.

3. It is probably indigestion.

4. The boy very likely has some form of diabetes. A physician should be consulted.

5. Such a case requires the personal attention of an experienced physician. If sugar is present in the urine, sugar of all kinds should be avoided in diet; also bread must be avoided, and other starchy food with the exception of potatoes. Potatoes may be freely used; also buttermilk, eggs, spinach, and nuts with the exception of chestnuts.

10,013. Do Tomatoes Cause Cancer?—J. A. W., Rhode Island, asks if tomatoes are liable to cause cancer.

Ans.—No. The tomato is a very wholesome fruit. There is not the slightest foundation for the absurd theory that this excellent fruit is a cause of cancer. Some years ago the State Board of Health of Michigan took up the matter and made a thorough investigation, and found there was not the slightest foundation for the belief that the tomato is in any way connected with cancer.

10,014. Petroleum.—J. O., Massachusetts: "How much of the crude petroleum and alcohol, mentioned on page 335 of the July issue, should be applied; also how often?"

Ans.—Enough to moisten the surface once a day.

10,015. Boils — Diabetes — Dryness of Mouth.—Mrs. L. A. S., Iowa: Correspondent has had large boils which her physician says are due to diabetes insipidus. The scars are angry and cause intolerable itching, which frequently extends over the whole body.

Ans.—The boils are due to the lowered vital resistance which may or may not be the result of the disease referred to. Diabetes insipidus is an incurable malady, but it is not necessarily fatal. Patients suffering from this disease often live for many years. The patient should eat hygienic food. The food should be well flavored so as to encourage the flow of saliva in chewing. Great pains should be taken to masticate the food very thoroughly, at least four or five times the usual length of time. Malt honey, sweet, acid fruits, and all flavors encourage the flow of saliva. Cold baths should be taken every morning. The patient should live in the open air and sunshine as much as possible. Sweating baths should be avoided. A prolonged neutral bath at night at a temperature of 92° to 94° will have a tendency to relieve thirst. All kinds of wholesome foods are permissible. Meats, condiments, and all irritating, indigestible foods should be avoided.

10,016. Dysentery—Cold Bathing—Varicocele.—D. H. H., Ohio: "1. After an attack of dysentery, attended with continuous inward fever for two weeks, the fever has abated, but I gain scarcely any strength. The discharges are black and very offensive. Will you advise treatment? 2. In what way should one bathe in cold water one or two minutes for a tonic?

3. Would it be well to bathe only part of the body at a time, rub dry, and so continue until the completion of the bath? 4. In a severe case of double varicocele, would you recommend a surgical operation for one sixty years of age, with average vitality?"

Ans.—1. Wash out the bowels daily with hot water containing a little soap. Follow the hot enema by a cold enema at a temperature of 75° to 80°.

2. Cold towel bath every morning.

3. This is the best plan when the reaction is slow or imperfect.

4. Yes, if there is any pain or inconvenience.

10,017. Shaking Palsy.— H. H. M., Indiana: "I am seventy-seven, and forty-eight years have been a dentist. Collapsed suddenly and for nearly two years have had shaking palsy in the right side, hand, and foot. Am very emaciated. Is there any cure for me?"

Ans.— Probably not. All that can be done is to maintain the general health so far as possible by careful cold towel baths applied with rubbing once or twice daily. Live in the open air as much as possible, and make the diet thoroughly hygienic.

10,018. Substitute for Lard — Castile Soap. S. K., Michigan: "1. What do you use or recommend to take the place of lard in cooking? 2. Why is the mottled castile soap better than the white, as you state?"

Ans.—1. Nuts, cream, olive oil.

2. The mottled color of castile soap is due to certain harmless impurities which result from the crude manner in which this product is made in Spain. White castile soap when made from olive oil is just as good as the mottled soap, but it can be imitated, whereas the mottled castile soap cannot be, or at any rate, it is believed that it has not as yet been successfully imitated.

10,019. Rheumatism — Food Combinations.— E. G. M., Michigan: "1. What should one troubled with rheumatism avoid in diet? 2. Do you condemn the use of potatoes and fruit at the same meal? 3. Is it not as bad to combine tomatoes and potatoes? 4. Does the tomato acid increase the rheumatism?"

Ans.—1. Meats and all foods which produce indigestion.

2. In cases of hyperpepsia, or in which starch is not well digested.

3. Not necessarily if both are freely masticated. In certain cases, however, acid fruits cannot be taken with starchy foods.

4. No.

10,020. Inflammation of Joints.— L. H. L., Minnesota, is troubled with pain, stiffness, and crepitus in right shoulder. The joint seems to be drawn forward about an inch, and there is a place in the front, toward the lung, about the size of a dollar, that is always painful. The doctor attributes the trouble to inflammation of the joint. It is becoming worse in spite of treatment, and the other shoulder is getting painful. Suggest treatment.

Ans.— The difficulty may be rheumatism. It is possibly a nervous affection called neuritis. The treatment should be the same as recommended for A. C. C. for pain in arm and shoulder. See 10,007.

10,021. Fruit for Infants — Solid Food — Granose Flakes— G. W. N., Iowa: "1. At what age may children first be given fruit, and what kinds? 2. What fruits may be given children under five years old, and at what age may they begin to take them? 3. At what age should a child first be given solid food? 4. Are granose flakes good for a child a little over a year old? 5. If the bowels are already too loose, will harm be done?"

Ans.— 1. Fruit juice or even fruit pulp in small quantities may be given to a child at any age; even the youngest infant may take without injury a little pulp of baked sweet apple, prune puree, or puree of raisins, or any other sweet fruit is also unobjectionable. Sweet fruits, also acid fruits, have a laxative tendency which is often beneficial for children.

2. The pulp of any ripe fruit may be given to children under five years as well as older children. Great care must be taken that the fruit is thoroughly ripe. In case of very young children who have no teeth, and who have not yet learned to masticate their food thoroughly, only the pulp should be given. Older children who have teeth may take fruit as freely as adults without injury.

3. When it acquires teeth sufficiently to masticate the food thoroughly.

4. Yes.

5. Not infrequently looseness of the bowels is due to intestinal indigestion. Granose is a good remedy for this, especially when combined with fruit juice. If there is considerable and persistent looseness of the bowels, boiled rice may be used with advantage. If granose is employed in such cases, it should be administered in the form of well boiled gruel.

LITERARY NOTES

The **Scientific American** has issued another special number, this time devoted to the Iron and Steel industry of the United States. Technically considered, the number is one of the best of the special issues which have so far been prepared by this journal. Each article bears the stamp of absolute certainty of fact—a certainty gained by a personal examination of each of the plants described. Instead of giving a condensed account of a large number of less important works, the editors have wisely adopted the plan of selecting a certain number of large industrial establishments, and of giving them a very thorough description. Among the more notable articles of the issue may be mentioned those on armor plate and gun steel, structural shapes, tube making, chain making, steel and wire making, and rail making. The number is dressed in a handsome colored cover.

An optimistic view of that insistent problem, The Cost of Living, is taken by Commissioner Carroll D. Wright of the United States labor bureau and other writers who discuss it in the January **Good Housekeeping.**

In his article, in the January-March **Forum** on "Applied Science," Mr. Henry Harrison Suplee notes various signs of progress in electric railways, workshop methods, electric smelting, space telegraphy, aeronautics, Alpine traveling, etc.

Judge Shute, the author of "The Real Diary of a Real Boy," begins, in the January number of the **New England Magazine** his series of "Neighborhood Sketches," which are replete with a sly, but kindly humor. He points the shaft of his good natured satire at the foibles and affectations of modern society and education, and at such manifestations of the emancipation of woman as women's clubs.

A. W. Rolker has another of his most interesting articles on "Zoo" animals, in the January **McClure's.** He writes this time of "The Wild-Animal Surgeon and His Patients." The "patients" of which Mr. Rolker tells comprise a monkey, an antelope, an elephant, a tiger, a lioness, a camel and a crocodile. The silent sufferings of the poor beasts enlist our sympathies, and the wonderful skill of the Wild-Animal Surgeon in relieving them arouse our admiration, and altogether the article is a charming one.

"Some Grave Missionary Problems," form the fitting subject for the opening article in the January number of **The Missionary Review of the World.** Dr. Pierson points out the lions in the way, but is by no means discouraged by them. A striking article is contributed by Dr. Walter Laidlaw, on "The Redemption of the City," which shows the great work to be done and the need for co-operation among Christian churches. The story of the work of the great British Bible Society is impressively told and illustrated. This number also contains Dr. Leonard's valuable statistical tables for 1904.

"The Bible Temperance Educator" Vol. XXIII. edited by Rev. John Pyper, Belfast, Ireland, Advocate of the Bible Temperance Asso., is exceedingly helpful to the temperance advocate, and ought to be purchased by all temperance teachers. As its name indicates, it deals primarily with the Bible aspect of temperance, but it is nevertheless full of reliable information and arguments bearing on its social, physiological and other phases. This volume has an able and exhaustive series of articles by the editor proving the non-alcoholic character of the wine sanctioned by the Scriptures, showing the Bible to be a Total Abstinence Book. It also contains the latest utterances of British physicians, theologians and statesmen on the Drink Problem, and reports of the progress of the temperance cause in the United Kingdom. Price 25 cents.

"Homophonic Conversations" in English, German, French and Italian, by C. B. and C. V. Waite, is a natural aid to the memory in learning these languages, based on the similarity in sound and signification of the principal words used in the sentences. It is a clever application of the principle of association as an aid in the acquirement of languages.

The conversations, arranged under different headings, cover the various situations and emergencies of travel, and it will be found an invaluable traveling companion. The work is highly commended by prominent linguists. It is published by C. V. Waite & Co., 479 Jackson Boulevard, Chicago. Price $1.00.

GOOD HEALTH

A Journal of Hygiene

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

Subscription Price, $1.00 a year
Single Copies 10 cents : : : :
PUBLISHED MONTHLY BY

GOOD HEALTH PUB. CO.

115 WASHINGTON AVE, N.

BATTLE CREEK. · · · · · MICHIGAN

A PRIZE OF $10, EACH, IS OFFERED FOR THE BEST ANSWERS TO THESE THREE WANTS.

Want No. 1.

Short articles by professional women or other women whose occupation is sedentary, describing means and plans by which the necessary out-of-door life and exercise has been secured and health thus maintained.

Wanted by April 20.

Want No. 2

A vegetarian menu, with recipes, consisting of new and wholesome dishes.

Wanted by April 20.

Want No. 3

Illustrated articles showing how children may spend a summer vacation in the most profitable manner.

Wanted by May 20.

Wanted for Good Health for 1904
100 Photographs

Of boys and girls, youth, young men and women who have been reared in harmony with the natural method advocated by this journal.

Send with the photographs a brief description of the diet, habits, disposition, mental and moral traits, and characteristics of each.

These photographs should be received by March 1 or sooner, and if so desired will be returned to the sender.

HEALTH STORIES WANTED.

THE publishers offer a prize of $25 for the *best* health story, $15 for the second best, and $5 each for the three next in merit, upon any of the following subjects :—

Foundation Stones of Hygiene,
The Alphabet of Health,
A Girl's Experience in Healthful Cooking,
Housekeeping Without a Kitchen,
Diet and Character,
The School of Health,
In Vacation Time,
House Nerves,
The Pie Question,
How the Other Half Live,
The House Healthful,
Kitchen Sunshine,
Out of Doors, M. D.,
A Good Dinner,
The Wage Earning Woman's Health Problem,
The Health Settlement Association,
Good Dinners for Slim Purses,
Nature Cures.

The stories need not be limited to these topics, but each must exemplify the principles of health and hygiene taught by this magazine.

All contributions must be received not later than June 1.

GOOD HEALTH CLUBS

WE are just beginning a campaign for the organization of good health clubs. The purpose of these clubs will be the study of health, and the improvement of the health of the members.

The advantages offered to the members of this club are unparalleled, and include the following :

1. Monthly instruction in the care of the health, by experts who have made the question of hygiene a subject of life-long study and observation.

2. The privilege of asking questions and receiving authoritative answers to any question which may arise on any topic pertaining to the maintenance or recovery of health.

3. The privilege of sending specimens of food or drink for expert microscopical, bacteriological, and chemical analyses.

4. The privilege of obtaining a personal prescription and special instruction in relation to diet by sending a description of symptoms.

5. Annual membership in the Good Health Association of America. Further particulars of this Association will be given later, and we shall be glad to hear from all who are interested.

CHAUTAUQUA SCHOOL OF HEALTH

FOR a dozen years or more the managers of the Battle Creek Sanitarium, and the publishers of GOOD HEALTH have co-operated in conducting schools of health in connection with Chautauquas in various parts of the United States. Physicians and nurses who have been trained in connection with the Battle Creek Sanitarium have been kept in the field during the Chautauqua season, giving instruction in rational dietetics, hygienic dress, home gymnastics, and kindred topics of live and practical interest. The cordial welcome which has always been accorded these gospel of health evangelists has encouraged the publishers to organize a Chautauqua school of health department for this journal. This will be conducted in connection with the field work which is being energetically pushed under the able supervision of Dr. John F. Morse, and Dr. Carolyn Geisel, of the Battle Creek Sanitarium staff.

Each month a series of search questions will be published on the topics discussed. These are specially intended for use by Chautauqua Circles after the usual Chautauqua method. Good health circles for the study of health principles will be organized in connection with the field work wherever schools of health are conducted. We shall have more to say on this subject in future numbers.

THE LIFE BOAT

A Monthly Illustrated, 24-page Magazine Devoted to the Interests of City Mission Work

EDITOR : DAVID PAULSON, M. D.

All who are interested in missions will be, and all who ought to be interested in missions should be, interested in this little magazine. The phenomenal growth of its subscription list attests its success as a live, up-to-date magazine. Workers are disposing of hundreds each month. Cannot you help ?

Any quantity supplied at 2 cts. each. Yearly subscription, 35 cts. Single copies, 5 cts. Address : Life Boat Pub. Co., 28 Thirty-third Place, Chicago, Ill.

MOTHERS

Have you got any active, live boys or girls who would like to earn good wages by working spare hours. If so send us their names and we will send them free sample copies of GOOD HEALTH with terms. The boy or girl selling the largest number during the next three months, will be suitably rewarded in addition, and we will be glad to insert in GOOD HEALTH the photograph, also a short sketch of the boy or girl entitled to the reward.

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

The January number of the **Four-Track News,** which is No. 1 of Vol. VI, starts the new year with an especially interesting Table of Contents.

Every article is profusely illustrated and, taken collectively, the initial number of the new volume of this popular magazine ranks among the best that have yet been issued.

The *Four-Track News* is fifty cents a year, or five cents a copy, and can be had of George H. Daniels, publisher, 7 East 42d Street, New York.

AT the recent meeting of the American Public Health Association held at Washington the committee on vital statistics reported that effective co-operation had been instituted between that association, the Conference of State Boards of Health, the American Medical Association, the United States Census Bureau, and the United States Public Health and Marine-Hospital Service for the improvement of the vital statistics of this country. Among the objects sought are the extension of adequate methods of registration, the use of uniform and comparable tables and rates in bulletins and reports, and the improvement of the international classification of causes of death. A pamphlet on "Statistical Treatment of Causes of Death" has been issued by the United States Census Bureau, requests for which should be addressed to Mr. W. A. King, Chief Statistician for Vital Statistics, Census Bureau.

It has special reference to the difficulties encountered in compiling deaths returned from several causes, and asks for the co-operation of the profession in framing a thoroughly satisfactory method of procedure in such cases.

DIRECTORY

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 diseases are recognized at these institutions as at the Battle Creek Sanitarium. Both medical and surgical cases are received at all of them.

BATTLE CREEK SANITARIUM, Battle Creek, Mich.
J. H. KELLOGG, M. D., Superintendent.
COLORADO SANITARIUM, Boulder, Colo.
ST. HELENA SANITARIUM, Sanitarium, Napa Co., Cal.
NEBRASKA SANITARIUM, College View, Lincoln, Neb.
PORTLAND SANITARIUM, Mt. Tabor, Ore.
W. R. SIMMONS, M. D., Superintendent.
NEW ENGLAND SANITARIUM, Melrose, Mass.
C. C. NICOLA, M. D., Superintendent.
CHICAGO BRANCH SANITARIUM, 28 33d Place, Chicago, Ill.
DAVID PAULSON, M. D., Superintendent.
IOWA SANITARIUM, 603 E. 12th St., Des Moines, Iowa.
J. D. SHIVELY, M. D., Superintendent.
TRI-CITY SANITARIUM, 1213 15th St., Moline, Ill.

GARDEN CITY SANITARIUM, San Jose, Cal.
LEWIS J. BELKNAP, M. D., Superintendent.
GUADALAJARA SANITARIUM, Apartado 138, Guadalajara, State of Jalisco, Mexico.
J. W. ERKENBECK, M. D., Superintendent.
INSTITUT SANITAIRE, Basle, Switzerland.
P. DE FOREST, M. D., Superintendent.
SKODSBORG SANITARIUM, Skodsborg, Denmark.
CARL OTTOSON, M. D., Superintendent.
NEWFOUNDLAND HEALTH INSTITUTE, 282 Duckworth St., St. Johns, Newfoundland.
A. E. LEMON, M. D., Superintendent.
SYDNEY SANITARIUM, Wahroonga, N. S. W., Australia.
D. H. KRESS, M. D., Superintendent.
FRIEDENSAU SANITARIUM, Post Grabow, Bez. Magdeburg, Germany.
A. J. HOENES, M. D. Superintendent.
MADISON SANITARIUM, Madison, Wis.
C. P. FARNSWORTH, M. D. Superintendent.
MOUNT VIEW SANITARIUM, Spokane, Wash.
SILAS YARNELL, M. D., Superintendent.
DETROIT BRANCH SANITARIUM, 54 Farrar St., Detroit, Mich.
H. B. FARNSWORTH, M. D., Superintendent.
KEENE SANITARIUM, Keene, Texas.
P. F. HASKELL, M. D., Superintendent.
LOS ANGELES SANITARIUM, 315 W. 3d St., Los Angeles, Cal.
INSTITUTE OF PHYSIOLOGICAL THERAPEUTICS, 1809 Wallace St., Philadelphia, Pa.
A. J. READ, M. D. Superintendent.
SURREY HILLS HYDROPATHIC INSTITUTE, Caterham, Surrey, England.
A. B. OLSEN, M. D., Superintendent.
CALCUTTA SANITARIUM, 51 Park St., Calcutta, India.
CHRISTCHURCH SANITARIUM, Papanui, Christchurch, New Zealand.
TREATMENT ROOMS, Suite 219 Meriam Block, Council Bluffs, Iowa.
TREATMENT PARLORS, 164 Wisconsin St., Milwaukee, Wis.
TREATMENT ROOMS, 320 North Tejon St., Colorado Springs, Colo.
TREATMENT ROOMS, 201-4, Granby Block, Cedar Rapids, Iowa.
R. L. MANTZ, M. D., Superintendent.
BUFFALO BRANCH SANITARIUM, 922 Niagara St., Buffalo, N. Y.
A. R. SATTERLEE, M. D., Superintendent.
NASHVILLE SANITARIUM, corner Church and Vine Sts., Nashville, Tenn.
INSTITUTE OF PHYSIOLOGICAL THERAPEUTICS, Rooms 230-232 Temple Court Building, Denver, Colo.
H. C. MENKEL, Superintendent.
KOBE SANITARIUM, 42 Yamanoto-dori, Nichome, Kobe, Japan
S. A. LOCKWOOD, M. D., Superintendent.

Vegetarian Cafes and Restaurants

EATING-HOUSES where food prepared in accordance with the principles of rational dietetics and scientific cookery may be obtained, are now open in the following places.

The Laurel, 11 W. 18th St., New York City.
J. B. Stow, 105 E. 3d St., Jamestown, N. Y.
W. L. Winner, 1017 Walnut St., Philadelphia, Pa.
Sanitarium Rooms, 1809 Wallace St., Philadelphia, Pa.
Hygienic Company, 1209 G St., N. W., Washington, D. C.
Sanitarium Rooms, 224 E. Broadway, Louisville, Ky.
Sanitarium Dining Room, corner Church and Vine Sts., Nashville, Tenn.
Restaurant, 305 St. Charles St., New Orleans, La.
Ellen V. Vance, 307 Madison St., Fairmount, W. Va.
Hygeia Dining Room, 54 Farrar St., Detroit, Mich.
North Mich. Tract Society Rooms, Petoskey, Mich.
Hygeia Dining Rooms, 5759 Drexel Ave., Chicago, Ill.
Hygienic Cafe, 426 State St., Madison, Wis.
Hygienic Cafe, 164 Wisconsin St., Milwaukee, Wis.
Pure Food Cafe, 607 Locust Street, Des Moines, Iowa.
Pure Food Cafe, 410 E. 12th St., Kansas City, Mo.
Good Health Cafe, 145 S. 13th St., Lincoln, Neb.
Nebraska Sanitarium Food Co., College View Neb.
Pure Food Store, 2129 Farnum St., Omaha, Neb.
Vegetarian Cafe, 322½ N. Tejon St., Colo. Springs, Colo.
Vegetarian Cafe, 1543 Glenarm St., Denver, Colo.
Hygienic Restaurant, Sheridan, Wyoming.
Vegetarian Cafe, 4th and C Sts., San Diego, Cal.
The Vegetarian, 1482 Market St., San Francisco, Cal.
Vegetarian Dining Rooms, 317 W. 3d St., Los Angeles, Cal.
Portland Sanitarium Rooms, Mt. Tabor, Ore.
Good Health Restaurant, 616 3d St., Seattle, Wash.
White Rose Restaurant, W. H. Nelson, Proprietor, 36 W. 18th St., New York City.
Health Restaurant, Alexander Martin, 555 Boylston St. Boston, Mass.
VEGETARIAN CAFE, S. 170 Howard St., Spokane, Wash.

OUR NEW MAGAZINE

CLUBBING OFFERS

For the Season of 1903='04

Our offers for the season of 1903-'04 are the best, in many respects, which we have ever been able to make. There is associated with us this year a most brilliant galaxy of magazines, all of which are offered *without restriction as to new or renewed subscriptions.*

Read This List

	Regular Price
Good Health	$1 00
Success	1 00
CLASS A	
Frank Leslie's Popular Monthly	1 00
The Cosmopolitan	1 00
Woman's Home Companion	1 00
Good Housekeeping	1 00
Pearson's Magazine	1 00

CLASS B	Regular Price
The Review of Reviews	$2 50
The World's Work	3 00
Outing	3 00
Country Life in America	3 00
Lippincott's Magazine	2 50
The Independent	2 00
Current Literature	3 00

Our Prices

	Regular Price	Price to the Public
Good Health with Success	$2 00	$1 50
Any 1 Magazine in Class A with Good Health and Success	3 00	2 10
" 2 Magazines " A " " " " "	4 00	2 60
" 3 " " A " " " " "	5 00	3 10
" 1 Magazine " B " " " " "	5 00	3 10
" 2 Magazines " B " " " " "	8 00	4 60
" 3 " " B " " " " "	11 00	6 10
" 1 Magazine " A and 1 of Class B with Good Health and Success	6 00	3 60
" 2 Magazines " A " 1 " B " " " "	7 00	4 10
" 3 " " A " 1 " B " " " "	8 00	4 60
" 1 Magazine " A " 2 " B " " " "	9 00	5 10
" 2 Magazines " A " 2 " B " " " "	10 00	5 60
" 3 " " A " 2 " B " " " "	11 00	6 10
" 1 Magazine " A " 3 " B " " " "	12 00	6 60
" 2 Magazines " A " 3 " B " " " "	13 00	7 10
" 3 " " A " 3 " B " " " "	14 00	7 60

Magazines ordered by subscribers may be sent to different addresses. Subscriptions will commence with issues requested whenever possible to furnish copies; otherwise, with issues of the month following the date on which the subscription is received.

Order at Once

GOOD HEALTH PUB. CO.,

115 Washington Ave., N. - Battle Creek, Michigan

Health Cocoa

Another Scientific Discovery
Quarter Pound Box FREE

The cocoa bean from which chocolate and cocoa are prepared contains a poison known as theo-bromin.

Physicians condemn ordinary cocoa and chocolate because their use tends to cause rheumatism, nervousness, and other disorders.

Haven't you found it hard to do without it? Don't deny yourself any longer.

Our chemists have recently discovered a way of removing the theo-bromin, so that you can now get cocoa that is perfectly healthful.

Health Cocoa is packed in two sizes:—

Half Pounds, 35 cents
Quarter Pounds, 20 cents

CUT ALONG THIS LINE

Battle Creek Sanitarium Co.
LTD.
Battle Creek, Mich.

Gentlemen:—
You will find my order enclosed for Five Dollar's worth (or more) of your foods. As I live in the United States, north of Tennessee and east of Nebraska, you agree to send me a quarter-pound box of Sanitas Health Cocoa **Free,** *and to* **Prepay Express** *on the shipment*

I understand that this coupon is void if it reaches you after Feb. 29, 1904.

Name .....

Street .....

City and State .....

Dept. 58

TO OUR MAIL ORDER CUSTOMERS

We will send a quarter-pound box of cocoa free to every one whose order for five dollars worth of foods reaches us before March 1, 1904, if order is accompanied by the adjoining coupon.

We always pay express on consumers orders shipped to states north of Tennessee and east of Nebraska.

A BIG COMBI= NATION OFFER

$2.20 SAVED

Ten dollar's worth of Battle Creek Sanitarium foods and a Rapid Steam Cooker worth $5.70 ($15.70 worth in all) will be shipped Freight Paid to any point in the United States east of Colorado for $13.50 until March 1, 1904. This means a saving to you of $2.20 besides what freight on the cooker would amount to if it were shipped alone as it regularly sells f. o. b. Battle Creek.

Description of Cooker.—Diameter, 11 inches; height, 16 inches; capacity, 5 gallons; seamless nickel-plated copper boiler; aluminum cap and shelves.

The material used is the very best and absolutely rust proof.

TESTIMONIALS.

Battle Creek, Mich., Jan. 9, 1903.

ROTARY STEAM COOKER CO.,
Battle Creek, Mich.

Gentlemen:—The Steam Cooker was received and has been given a fair trial. I am pleased to say that I think it is the most convenient Steam Cooker I have ever used, and I can recommend it to any one who is desirous of purchasing any article of this sort.

Thanking you for your courtesy, I remain,

Very truly yours,
MRS. E. E. KELLOGG.

Battle Creek, Mich., Dec. 12, 1903.

ROTARY STEAM COOKER CO.,
Battle Creek, Mich.

Gentlemen:—I am pleased to say the Rapid Steam Cooker is more than the manufacturers, claim for it. I have used it in my kitchen and find it does the work satisfactory

Yours very truly.
H. BROADY.
Chef. B. C. Sanitarium.

If you are unacquainted with Battle Creek Sanitarium Foods write Dept. 59 for Descriptive printed matter.

CUT ALONG THIS LINE

Battle Creek Sanitarium Co.
LTD.
Battle Creek, Mich.

Gentlemen:—
I enclose $13.50 for the Rapid Steam Cooker advertised in January Good Health, also for $10 worth (or more) of Battle Creek Sanitarium Foods. I have deducted $2.20 from the list price of the goods ordered, according to the terms of your offer. As I live east of Colorado you agree to pre pay the freight.

I understand this price is conditional on my order reaching you before March 1, 1904.

Name .....
Street .....
City and State .....

SHORT WAIST

GOOD HEALTH

Adjustable . . . Waist

For Health, Comfort, Grace, and Economy outrivals its competitors

OUR prices may seem high when compared with the old style corset which of course can be purchased cheaper together with all the ills to which flesh is heir, but we sell an article that benefits and restores health, which if gained and retained is cheap at any cost. The waist is adjustable and can be made larger or smaller by adjusting the shoulder straps and oval elastic in either side. By making the former longer or shorter the length of the skirt may be regulated. We sell two qualities, a light weight jean twilled material and a heavier weight sateen. Drab and white jean, bust measure 30 to 38, price $1.25. White and drab sateen, bust measure 30 to 38, price $1.75; 40, $2; 42, $2.25. Black sateen 25c additional. No odd numbered sizes in either quality.

When sending in orders for waists take the bust, hip, and waist measures snugly over the undergarments. We have long and short waists. The latter ends at the waist-line and the former five inches below as per cut. When ordering state which is desired.

For a limited time we will combine one year's subscription to GOOD HEALTH with the jean waists for $1.60 and with the white and drab sateen, sizes 30 to 38, $2; 40, $2.25; 42, $2.50. Add 25c extra for black sateen.

DRESS DEPARTMENT

Good Health Pub. Company

BATTLE CREEK, - MICH.

LONG WAIST

THESE OFFERS

CAN NOT BE EXCELLED

	Publisher's Price	Our Price
Good Health and Vick's Magazine	$1 50	$1 00
" " " " " and Housekeeper	2 10	1 15
" " " Inter Ocean (weekly)	2 00	1 00
" " " Save the Boys	1 30	1 00
" " " Farm and Fireside	1 50	1 00
" " " Green's Fruit Grower	1 50	1 00
" " " Farm, Field, and Fireside	2 00	1 25
" " " Womans' Home Companion	2 00	1 25
" " " Bookkeeper	2 00	1 50
" " " Physical Culture	2 00	1 50
" " " Beauty and Health	1 50	1 00
" " " Health Culture	2 00	1 50
" " " Pearson's Magazine	2 00	1 50
" " " Pilgrim	2 00	1 50
" " Housekeeper and Leslie's Monthly	2 50	1 75
" " Woman's Home Companion, and Cosmopolitan	3 00	1 75
" " Harper's Bazaar, and Cosmopolitan	3 00	1 75
" " and New Voice	2 00	1 50
" " " Modern Medicine	2 00	1 25
" " " American Boy	2 00	1 25
" " " Country Gentleman	2 50	1 75
All of the above may be new or renewed and the following as noted.		
Good Health, Housekeeper and Little Folks (New Subscriptions only to Little Folks)	3 00	1 75
Good Health and Youth's Companion (New Subscription only to Youth Companion. We will forward renewed Subscription for above for $2.35)	2 75	1 75
Good Health and Ram's Horn. (Eight Months $1 25 Four Months $0.75. Please add 15c if the subscription to Ram's Horn is a renewal)	2 50	1 75

We will also combine GOOD HEALTH with any other magazine not mentioned in our various offers, with Bibles, books, health literature, invalid supplies, rubber goods, Good Health Adjustable Waists and Bath Cabinets, and other supplies that we may handle. Name the article you wish to obtain and we will give you our price thereof.

Good Health Pub. Co.,

BATTLE CREEK, MICH.

Battle Creek Sanitarium

GOLD INTEREST-BEARING BONDS

Better than Bank Securities or Government Bonds

DENOMINATIONS of $100, $200, $500, & $1,000. CAN BE BOUGHT NOW AT PAR. ARE LIKELY TO SELL AT A PREMIUM SOON. SPECIAL CONCESSIONS TO EARLY INVESTORS.

A Gilt Edge Investment

Central Trust Company of Illinois,

Trustees

($5,000,000 Capital)

For further particulars, address

BATTLE CREEK SANITARIUM

OR

HON. JESSE ARTHUR,

Care Review and Herald,

Battle Creek, Mich.

This magnificent, fire-proof structure, which has been in process of erection during the past year, was dedicated and opened May 31, 1903. There are accommodations in the main building for 350 guests, and accomodations in other buildings for 400 more patients. One hundred and seventy-five rooms have private baths. The new building is equipped with five hydraulic elevators, electric lights, a private telephone in each room, and all modern conveniences. For full information concerning the facilities afforded, terms, etc., address,

THE SANITARIUM, Battle Creek, Mich.

THE COLORADO SANITARIUM

Twenty miles northwest of the city of Denver is a well-equipped and well-regulated institution for the treatment of all chronic disorders. Buildings with all modern conveniences, including steam heating, electric lights, elevators, gymnasium.

Baths of every description, including the Electric-light Bath.

Massage and Manual Swedish Movements.

Electricity in every form.

Medicated-Air Rooms for the treatment of diseases of the lungs.

Special accommodations and separate building for tubercular patients.

Classified Dietary.

Laboratory of Hygiene, for bacteriological, chemical, and microscopical investigations.

Experienced Physicians and well-trained nurses.

COLORADO SANITARIUM, BOULDER, COLORADO