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GOOD HEALTH

CONDUCTED BY

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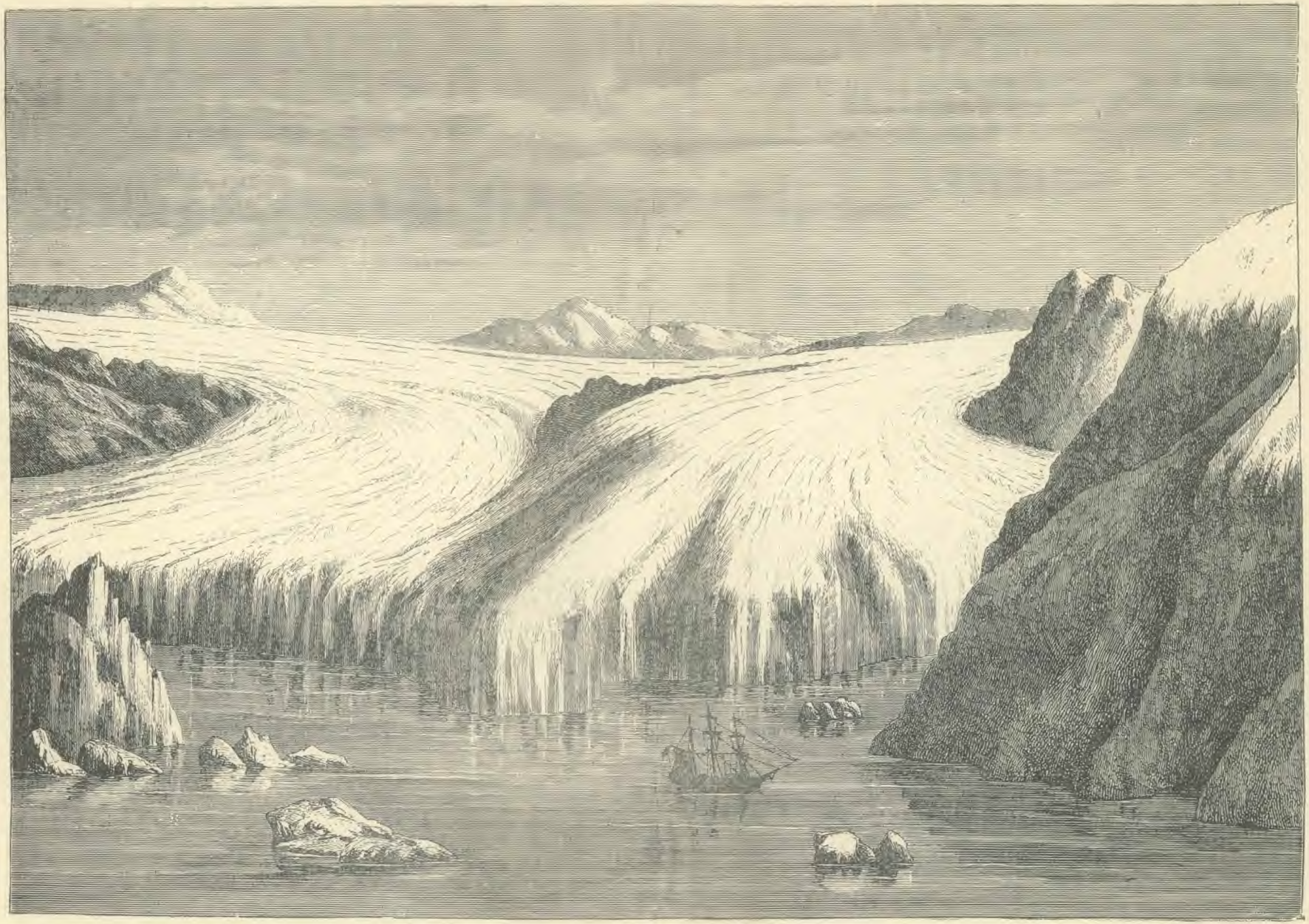

LABRADOR GLACIER.

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INTERNATIONAL HEALTH STUDIES.

BY FELIX L. OSWALD, M. D.
Author of "Physical Education," "The Bible of Nature," Etc

46.—Labrador.

IN the course of the last twenty centuries the centers of civilization have advanced about a thousand miles north. The hives of industry have been transferred from the Nile to the Elbe, from Southern Spain to England and Belgium, from the lakes of Mexico to the lakes of the Canadian border. For the last thousand years nearly every great international war has ended with a victory of Northern nations over their Southern neighbors. The tide of enterprising emigrants continues to set toward the poles, and it might be interesting to ascertain the limit of that tendency in the Western Hemisphere.

A few months ago a British American patriot published statistics intended to prove that the valley of the Skeena River, five hundred miles north of Vancouver Island, enjoys the winter climate of the Isle of Wight, and is quite as available for agriculture as any part of Old England. Alaska, too, contains numerous fertile coast plains, blest with an abundance of fuel; but east of the Rocky Mountains the fifty-fifth degree of northern latitude appears to mark the line dividing the climate of possible civilization from a climate unsuited to the perfect physical and mental development of our species. Frost, indeed, is an antidote, partly counteracting the effects of numerous sins against the health plans of nature, but that stimulant can be administered in overdoses, and the climate of the vast peninsula inclosed between Hudson's Bay and the North Atlantic, appears to stunt the stoutest tribes of the human race in the second or third generation.

The Spaniards called the country *Labrador* ("laborer's land," *i. e.*, a region fit for husbandry) to distinguish it from the utterly sterile coast of Baffin's Bay; but a few years' sojourn among the Indians of Webeck Harbor would have inclined them to modify that appellation. The harbor is near the southeastern extremity of the peninsula, and, seen from the sea, the coast does present a deceptive appearance of vegetable productiveness, at least in June, when the afternoon sun, following a brisk shower, feels rather warm for an hour or two. But near at hand, the apparently exuberant vegetation is seen to consist of mosses and rank seaweeds, and the slopes of the hills are clothed only with stunted shrubs, growing in patches between long stretches of barren rock piles. A few miles farther inland the scenery improves in sheltered valleys with a southward slope; there are copses of birch and fir trees, with an undergrowth of juniper bushes, and there are districts where these copses become extensive enough to deserve the name of forest. The herbage is scant, but abundance of peace to some degree compensates for the scarcity of food; and in regions rarely visited by white hunters, deer have multiplied as amazingly as in the southern Alleghanies before the advent of Daniel Boone. Herds of fifty and sixty can be seen browsing the grass of a small dell, and but for the corresponding increase of their carnivorous enemies, they would have no reason to envy the lot of their relatives in the British game parks of the same latitude. But bears and wolves, too, are numerous, and bold to a degree indicating their conscious superiority to the spear-armed natives of the neighboring fishers' hamlets. Since the establishment of permanent Caucasian settlements, enterpris-

ing individuals have tried their luck with all sorts of vegetables, but the summer is too short to ripen cereals, and even barley is planted only to be cut green for sheep fodder. Cows need too much care in winter to leave stock raisers much chance of profit, and even sheep get dwarfed in a climate where furious snowstorms often cover the sprouting grass in the middle of May.

In October the navigation of the inland rivers closes, but there are thaws in November and March, and the profits of the spring fisheries, together with the perils of ocean voyages, have induced numerous Canadian and Newfoundland fishermen to bring

SAWING A CHANNEL.

their families to Labrador and make themselves as comfortable as circumstances will permit. There are canning factories at Cape Charles and Webeck Harbor, and much farther north the Moravian missionaries have established a string of stations: Nain, Hopedale, Hebron, Mugford Bay, etc., altogether some twenty permanent settlements along a coast line of 3000 miles, including the western, or Hudson's Bay, side of the peninsula. These settlers rarely suffer from want of food; but with few exceptions their progeny can be distinguished from the young natives of the milder latitudes as readily as the languid Creoles of the West Indies from the sturdy European immigrants. The Snow Creoles, as we might call them, are from three to five inches below the average stature of their Canadian kinsmen. Their digestive organs are as well developed as those of the Esquimaux, but they also share the torpor of the aborigines and their strange capacity for enduring, or even enjoying, absolute idleness. In special emergencies they are capable of great exertions; but after the impending danger is past, are apt to relapse into a frost-numbed *dolce far niente*. Their mental faculties appear to labor under a similar burden of apathy, but they are as fond of music as the Laplanders, who, in default of musical instruments, will recite long national epics in a sort of sing-song voice. As a curious analogy we find the poetic instinct of the Scotch highlanders developed far beyond that of their Southern neighbors, and the Iceland descendants of the Scandinavian sea rovers elaborate Edda-myths and rhymed ballads. The principle of these phenomena may be found in the fact that the torpor of the intellectual faculties permits the imagination to run riot at the borders of the Arctic Circle as much as in Hindustan, where the enervation of the reasoning powers has not prevented the growth of monster epics, some of them aggregating 24,000 stanzas, and abounding with spooks and chimeras as often as with truly poetic passages.

"For a year or two," says the Rev. H. E. Becker, "a new colonist tries to fight the winter with fire, *i. e.*, he will load the chimney with driftwood, and wear out his shoes running in and out to feed the conflagration. As a result he may succeed in thawing the icicles in his beard, and partly thawing the frozen cape of his mantle. In the third year he will complain of a fuel-famine, but still stick to his theory of being able to make a fire hot enough to get comfortable. The next winter he will cease to hope against hope, and end by doing like the rest of us, *i. e.*, just go to bed whenever the weather gets extra cold."

Frozen beef acquires a disagreeable taste that cannot be quite removed by cooking, but that inconvenience has been removed by the invention of *pem-*

mican: dried meat chopped very fine and mixed with particles of fat, and sometines with fat-impregnated crumbs of biscuit. With ordinary precautions and a modicum of salt, that compound can be preserved for years, and is always ready for use. It may freeze about the surface strata, but nine tenths of a compressed mass of twelve pounds will remain in good condition, and can always be readily masticated. Deer meat pemmican, with deer fat and powdered pulse, has been kept in cans for six years, and must be quite as digestible as the *Erbswurst* ("pea-sausage") which, in spite of its large percentage of pork and concomitants, has become extremely popular with the German soldiers, and helped them to win the Franco-Prussian war.

The kitchen gardens of Bradore Bay are buried in snow before *legumina* can progress beyond the string-bean stage; but the Irish potato produces abundant crops, and in that sense may be truly called the "Bread of the North," without mentioning the fact that in cellars and roothouses it resists frost that would spoil sweet potatoes as well as turnips and apples.

Besides pemmican, the coast dwellers of Labrador store dried fish, dried berries (whortleberries), and a sort of cheese prepared from sheep milk. Farinaceous food they get only in the form of navy biscuit, which in the wigwams of the aborigines can be used as legal tender, commanding a high premium. A bushel (say twenty pounds) of choice dried fish is considered a fair price for a pound of biscuit, and sugar is so rare that the hunting tribes of the interior will wrap up a half ounce sample in an old rag, and suck it, as a magic cordial, in moments of sore distress.

The Rupert Bay Indians economize their fuel, and as a rule light a fire only for culinary purposes and to facilitate the process of inunction. An old hunter, covered with a loose fur cloak, will take a piece of half melted tallow and slowly rub himself all over, before starting on his daily visit to the beach, and again before going to bed. Two pounds of tallow used up in that manner, is not thought more than a fair allowance for a cold day.

A SNOW TORNADO.

The intensely cold, dry air of the Labrador highlands might expurgate the lung microbes of a far-gone consumptive, though the horrible snowstorms heralding the advent of spring, would ruin the chances of a sanitarium located in those bleak solitudes. Even dyspeptics would prefer a milder tonic than a frost at 60° F.; but certain phases of nervous disorders might be benefited by the absolute silence of the long winter nights. "The abolition of noise," says Prof. Andrew Wilson, "would mean a vast improvement in the health, temper, spirits, and general welfare of everybody; . . . and a recent Continental tour has impressed me very forcibly with the fact that hotel keepers might do a worse

thing (in the way of business) than advertise — and insure — that their caravanseries are quiet and free from the clamor and din which beset these establishments as a rule."

A cool night sets the beasts of the wilderness agog, but a severe frost chills even wolves into silence; and at Rupert House, some forty miles from Hudson's Bay, there are nights when for ten hours together not a sound can be heard save the low rustling of the pines or the half bark of a dreaming dog.

The natives of Labrador would dispense with reindeer and sheep sooner than with their canine friends. Dogs hunt their game, guard their wigwams, pull their sleighs, and perform even certain surgical services, since, according to Capt. George Pryor, crippled "rein-dogs" are sometimes spared if they will learn to lick the frostbitten feet of their masters. The poor brutes seem to realize that their survival depends upon the faithful discharge of that function, which, as a benign mechanical irritant, as well as by the combined influence of moisture and animal warmth, actually appears to re-vitalize tissues deadened beyond the chance of redemption by means of chemical specifics.

(To be continued.)

WHAT BABY THINKS.

Nobody finks I can tell the time of day, but I can.

The first hour is five o'clock in the morning.

That's the time the birds begin to peep. I lie still and hear them sing: —

"Tweet, tweet, tweet!
Chee, chee, chee!"

But mamma is fast asleep. Nobody awake in all the world but just me and the birds.

Bimeby the sun gets up, and it's six o'clock in the morning.

Then mamma opens one eye, and I can hear her say: —

"Where's my baby?"

N'en I keep still — jus' as still as a mouse, an' she keeps saying, —

"Where's my baby?"

N'en all at once I go "Boo!" and she laughs and hugs me, and says "I'm a precious."

Mamma's nice, and I love her 'cept when she washes my face too hard and pulls my hair with the comb.

Seven o'clock!

That's when the bell goes jingle, jingle, and we have breakfast.

All the eight an' nine an' ten an' 'eleven hours I play.

I run after butterflies and squirrels, and swing, and read my picture book, and sometimes I cry — jus' a little bit.

Twelve o'clock!

That's a bu'ful hour. The clock strikes a lot of times, and the big whistle goes, and the bell rings, and papa comes home, and dinner's ready!

The one and two hours are lost. Mamma always carries me off to take a nap. I don't like naps. They waste time.

When we wake up, the clock strikes three. N'en I have on my pink dress, and we go walking or riding.

And so the three and four and five hours are gone.

At six o'clock Bossy comes home, and I have my drink of warm milk.

N'en I put on my white gown, and kiss everybody "Good-night," and say, "Now I lay me," and get into my bed.

Mamma says, —

"Now the sun and the birdies and my little baby are all gone to bed, and to sleep, sleep, sleep."

So I shut my eyes tight, and next you know 't is morning!

An' 'nat 's all the time there is. — *The Pansy.*

What Minutes are Worth. — An artist once picked up the scattered pieces of glass after a large stained window had been constructed, and with the fragments he made one of the most exquisite windows of a great cathedral in Europe. So should we use the fragments of time that are scattered through our lives. Moments are like the grains of gold. It is said that the gold room of the United States Mint has double floors, the upper one of which acts as a sieve, while the lower one catches the minute particles of precious dust which sift through; and that, by this contrivance, about thirty thousand dollars' worth of gold is saved every year. We need some such method to save the priceless but easily wasted moments of our lives. Said Napoleon, "Remember that every lost moment is a chance for future misfortune." — *Sel.*

An exchange gives 8400 as the number of saloons in New York City, which would extend fifty miles, if placed side by side.

IMPORTANT NEW DISCOVERIES RELATING TO DIGESTION.

BY J. H. KELLOGG, M. D.

(Concluded from September, 1892.)

An examination of the stomach by the most modern methods, includes much more than has been briefly outlined in the foregoing paragraphs. The chemical examination does not stop with a determination of the amount of chlorine found in the gastric juice and the acidity of the digestive fluid. The digestive fluid contains, in addition to hydrochloric acid, pepsin and rennin; the first, with hydrochloric acid, acts on digestible albumens and allied substances; that is, such foods as eggs, meat, gluten of wheat, etc. The rennin is the active principle of the gastric juice, by means of which milk is curdled,—the first step in the digestion of this food substance. The presence and the degree of activity of these digestive ferments are determined by the chemical examination, as is also the quality of the digestive product formed.

There are many persons who have sufficient appetite and eat heartily, and yet are constantly losing flesh in consequence of the failure of the digestive organs to complete the work of digestion in such a manner that the products formed can be converted into good blood.

The rate at which the digestive process is carried on, is determined, as well as the presence or absence of mucus, blood, bile, and other morbid matters which are present in the stomach in different stages of disease.

One of the most important facts studied in chemical examinations, is the condition of the contents of the stomach as regards the different forms of fermentation, which lie at the foundation of so large a proportion of the cases of stomach disorder.

Not only the fact of fermentation, but the relative amount, is carefully determined by the method above outlined, which is the only one in existence by which exact information upon this important point can be obtained.

In addition to the chemical examination, a very careful physical examination of the stomach is made, by which the following facts are determined: —

1. The location of the stomach.
2. The size of the stomach.
3. At what time, after eating, the food leaves the stomach; whether too soon, carrying imperfectly digested substances into the intestines, or after so great a delay that the process of fermentation is begun. In cases in which the stomach is greatly dilated, it is sometimes found that the stomach is never empty, a fact which accounts for a great variety of distressing symptoms.

The position of each kidney, as well as that of the liver, spleen, and colon, is also determined, as well as the condition of the sympathetic ganglia which control the digestive processes, and which occasion, when diseased, a great variety of morbid symptoms, such as nervousness, nervous and other forms of headache, symptoms of threatened paralysis, etc.

In a careful examination of several thousand stomachs, within the last few years, the writer has been

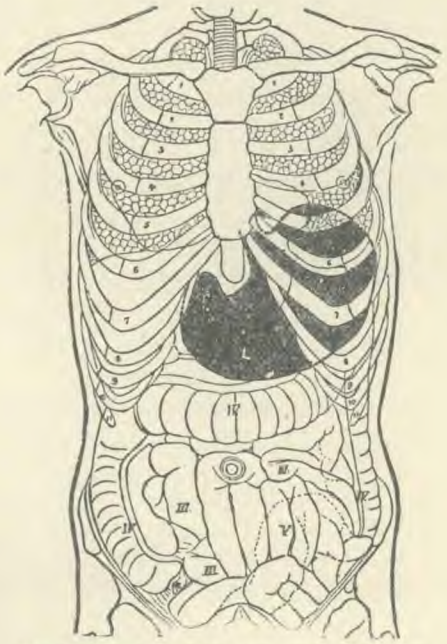

FIG. 1.— NORMAL POSITION OF INTERNAL ORGANS. (AFTER ZIEMSSEN.)

astonished to find dilatation of the stomach and displacement of one or both kidneys and of the colon, present in a very large proportion of cases. Dilatation of the stomach is found to exist in fully forty per cent of all the cases of chronic dyspepsia, and mobility or prolapsus of the right kidney is found in from sixteen to twenty per cent. These conditions are responsible for a great share of the pain and other disorders and symptoms suffered by chronic dyspeptics.

In Fig. 1 is presented an outline representation of the normal position of the internal organs. It will be observed that the lower border of the stomach

falls slightly below a point located halfway between the lower end of the sternum and the umbilicus.

In Fig. 2 the stomach is shown as it was found in a patient who had been a chronic dyspeptic for many years. The enormous dilatation easily accounted for the symptoms from which the patient had suffered, although she had never been conscious of an abnormal condition of the stomach, aside from ordinary dyspeptic symptoms. The extreme obstinacy with which the symptoms had resisted all means of treatment applied, had led the patient to a state of almost complete despair of recovery. Nevertheless, by directing efficient measures to the correction of the condition of the stomach and the restoration of the diseased kidney to its proper position, the patient made a rapid recovery, and now enjoys very good health. Scores of similar cases might be cited, and cases in which the dilatation was even more pronounced. The neglect of these cases results in conditions which are curable only by surgical means, sometimes involving operations of a most serious character. The dilated stomach sometimes retains a portion of its contents for days and even weeks, until an attack of sick-headache or a bilious attack (a very certain indication of a dilated stomach) brings relief by vomiting, whereby the decomposing and fetid accumulations are unloaded. The quantity of such matter sometimes vomited during a bilious attack is almost past belief, and is to some degree an indication of the enormous size which the stomach may acquire in chronic dilatation. The writer has met cases in which the lower border of the stomach nearly reached the lowest limit of the abdominal cavity.

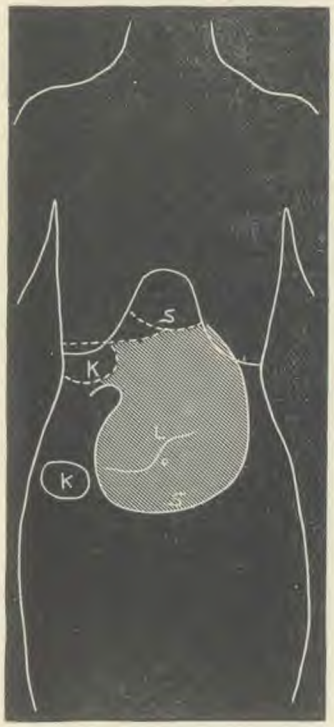

FIG. 2.

The constant drag of such a stomach upon the liver and kidneys must result in their displacement also. In the case represented in Fig. 2, the right kidney had been dragged out of its bed, and was found at a point four inches below its normal position, floating about in the abdominal cavity in the most disorderly way. The constant strain of this weight upon the delicate sympathetic nerves and the nerve centers connected with them, was a source of constant pain and suffering, which had been attributed, as is generally the case, to a disordered liver, although the liver was in nowise at fault, except as secondarily disturbed through the influence of the dilated stomach and displaced kidney. Sometimes the displaced kidney becomes seriously diseased in consequence of the disturbance of its functions arising from its unnatural position. Renal calculi, or as they are commonly called, "kidney stones," are of frequent occurrence in patients suffering from abscess of the kidney. Acute and chronic inflammation, abscess, and even cancer of the kidney, may originate in this way. In some instances, the diseased condition becomes such that an operation is required for its removal.

In Fig. 3 is an exact representation of the enormous calculus found in a kidney of this sort, removed by the author a few months ago. Suppuration had taken place, so that an abscess also existed, producing so great enlargement of the organ that the removal of a portion of the lower rib was necessary to make room for its extraction. The stone weighed nearly one third of a pound. By the aid of every possible precaution and skillful nursing, the patient made a good recovery, and is now enjoying better


FIG 3 — RENAL CALCULU OR KIDNEY STONE.

health than for many years; but the indications are strong that disease of the opposite kidney has begun. Nothing, of course, can be done for this, except to palliate the symptoms; for, while it is possible for an individual to live very comfortably with only one kidney by the exercise of extraordinary care, it is impossible to dispense with both.

Fortunately, it is generally quite easy to correct, by dietetic, medicinal, and other means, the various morbid conditions of the stomach and its functions, which exist in the worst cases of chronic dyspepsia, or at least so to palliate them as to enable the patient to enjoy good health; but it is absolutely necessary that the nature of these conditions should be thoroughly understood. The ordinary treatment of dyspepsia is, unfortunately, little less than blind experimentation, and the results likely to follow the remedies employed, can only be shrewdly guessed at by the aid of the native intuition of the physician, supplemented by facts gathered from experience and study. The new methods, which have been scarcely more than hinted at in this article, are the result of the combined observations and discoveries of multitudes of patient workers, chiefly within the last half century. Golding Bird, the eminent professor of medicine in Guy's Hospital in London, more than forty years ago originated a chemical method,— recently perfected by Hayem and Winter, of Paris,— which is the only method by which the exact and positive information required for the accurate study of stomach disorders can be obtained. This method, of course, relates simply to the examination of the stomach fluid. Numerous other observers, prominent among whom are Prof. Trastour, of Nantes, France, and other eminent physicians, have contributed to the methods by which the size, form, and position of the stomach and other abdominal organs may be accurately determined. The rigid application of these methods in many hundreds of cases, noting carefully the results of treatment based upon them, has given the writer increasing confidence in the ability of scientific medicine to conquer the hydra-headed disease which is at once the chief support and the opprobrium of the medical profession. We may mention incidentally that dyspepsia is a very indefinite term, and one which may, with entire propriety, be discarded. The careful study of more than six hundred stomach liquids, made by the writer, the results of which have been published elsewhere,[1] have shown that cases of indigestion may be divided into three classes and twenty-two subdivisions, amounting practically to twenty-two different forms of dyspepsia, each of which requires a definite and separate method of treatment and management.

The details of this classification are too technical for explanation here, but have been fully explained in the work referred to.

[1] "Methods of Precision in the Investigation of Disorders of Digestion," by J. H. Kellogg, M. D. Modern Medicine Pub. Co., Battle Creek, Mich.

HEALTHY HOMES.

I.—The Site and Outward Surroundings.

BY HELEN L. MANNING.

The inclemency of the weather at certain seasons of the year, here in our northern climate, makes artificial shelter of some kind a necessity; and the home maker needs to exercise wisdom, lest in providing himself and his family with a house, he invite disease to dwell with them. Bad drainage, unwholesome surroundings, and most deadly of all, close, unventilated living rooms, in which the air is breathed over and over again, are prolific causes of most of the ills to which flesh is heir. A house may be made and kept in a sanitary condition; and in home making, this will be our paramount aim when we come to realize, with Emerson, that "health is the first wealth." To a large degree, our physical, intellectual, moral, and spiritual welfare depend upon our maintenance of good health.

Domestic sanitation and individual hygiene become, then, subjects of great importance, and the more so when we consider that the welfare of the homes constitutes the welfare of the nation, and when once good private sanitation is universally secured, then good public sanitation will follow as a matter of course.

A building lot or site should not be voluntarily chosen simply because it is convenient or cheap; but if necessity forbids freedom of choice, then study carefully how to make the best of the location by under-drainage, grading, and otherwise neutralizing objectionable points. Clay soil is inclined to hold water and breed dampness, unless extra precautions are taken to provide a well-ventilated basement to the house. But the worst of all situations is

upon "made soil," something not uncommon in cities and towns. A low spot is filled in with refuse containing more or less organic matter, and the emanations from the various processes of decay beneath the surface are very unwholesome. Certainly three or four years should elapse after the filling in before it would be really safe to place a house on it. A gravelly subsoil is generally regarded as affording the best natural drainage, and consequently the most salubrious site. The surface should slope gently downward from all sides of the house, and though this advantage is not often afforded naturally, it can easily be secured by skillful grading. An overflowing eaves trough or a heavy storm will not then flood the basement or undermine the walls.

The denizen of the city can pay little heed to the beauty of the landscape, for if naturally afforded, it would be shut off by interminable rows of brick or stone houses; but the suburban and country home maker should choose, if possible, a pleasant prospect. The vicinity of a swiftly flowing river, or a small lake lying in a gravelly basin, is good, but beware of sluggish streams, marshes, and sloughs; for no matter if the elevation of the site is good, the dread miasma will rise, and spread over no small area. An eastern frontage is most desirable, or at any rate the living rooms should be on the east side of the house, both on account of the sun and the wind. The morning sunshine always brings special blessing and cheer, and is seldom oppressive, even in hot weather, and of course east rooms are cool for summer afternoons. The most boisterous and cutting winds are those which prevail from the west and southwest, while east winds are less frequent and more mild.

The immediate surroundings of a house ought to be considered with an eye both to beauty and to health. Stables, barnyards, hen houses, etc., should be sufficiently remote from the dwelling to make sure that their foul odors will not permeate the air surrounding, and in any case, see that they are not located on the side whence the prevailing winds blow. A grove of nice trees on the windward side makes a good windbreak, and adds to the attractiveness of the situation. It is well to provide both front and back yards, with a reasonable amount of shade from trees and shrubbery, but the shade should not be close enough to the walls of the house to shut out much of the health-giving sunshine. A house with its grounds so heavily shaded as to favor dampness the greater part of the year, is unwholesome in the extreme. But how many such there are! In the aristocratic localities and in the poorer parts of every town, are found houses, from the stately mansion to the tumble-down cottage, whose roofs and porches are thickly covered with mosses, because of being overshadowed by a dense growth of trees and shrubbery. Picturesque! Oh, very; but how unsanitary! I have in mind a house of this class, large and roomy inside, surrounded with spacious grounds, which might have been the home of health instead of a lurking place for the "white plague," had the family understood domestic sanitation and personal hygiene. Beneath this roof, one after another, three beautiful young girls bloomed into womanhood like pale lilies; but alas! their loveliness became too ethereal for earth, as Consumption remorselessly claimed them one by one as his prey.

"What a mysterious dispensation of Providence that Judge B —— should be so terribly bereft," said a kind-hearted neighbor to the gruff old doctor who had been called shortly before the last daughter died.

"Nothing mysterious about it," replied the doctor, scowling. "The whole atmosphere of the house is one of death. The sunshine is scrupulously kept out; there is standing water in the cellar three fourths of the year, creating so much dampness that boots and shoes mold in any of the first-floor closets; and patches of mold often appear on the wall paper. Worse than all this, they have a mortal fear of 'night air' and 'draughts,' and so provide no ventilation. The surviving members of the family are still inviting death, and they won't have long to wait for him to come, either!"

A Powerful Object Lesson.—The recent utter and humiliating downfall of John L. Sullivan, long considered the champion pugilist of the world, is probably the most powerful object lesson which could be given to a multitude of young men on the value of temperance and the ruinous effects of debauchery. No moralist could have done as much in years as Corbett, the new champion, did in less than two hours, to drive home upon the youth of America the truth that sobriety and right living are the only hope of the greatest success in any field of effort. When Sullivan, crying with the chagrin and pain of defeat, declared that "booze" had been the cause of his ruin, he gave what nine out of every ten men who pay any attention to prize fighting will agree is the true explanation of the sudden and complete collapse of a man long believed to be peerless as a pugilist. The ex-champion had for years defied the laws of

health and prudence by indulging in many protracted debauches. His appetites and passions have been recklessly indulged, and now, by his own testimony, he is old before his time, and a fallen master of the only vocation in which he ever attained prominence.

Most authorities upon pugilism will always maintain that Sullivan at his best was, as a fighter, the superior of the man who easily defeated him; and the fact that he was well-nigh helpless against a youth whose physical powers have not been lowered by excesses, and whose vitality is unimpaired by drink, tells its story too plainly to be misunderstood. If there had been a prize fight for the championship of the principles of right living, the result could not have been better for all interests of decency and common sense. A temperate man whipped a drunkard, and a well mannered man beat a surly ruffian. The more intelligent, more decent, and more self-respecting of the two combatants was the victor, and the world sees that even in prize fighting it pays to live with prudence and sobriety. — *Cleveland Leader.*

HEREDITY.

Your strictures are unmerited,
Our follies are inherited,
  Directly from our gram'pas they all came;
Our defects have been transmitted,
And we should be acquitted
  Of all responsibility and blame.

We are not depraved beginners,
But hereditary sinners,
  For our fathers never acted as they should;
'Tis the folly of our gram'pas
That continually hampers —
  What a pity that our gram'pas were n't good!

Yes, we 'd all be reverend senators,
If our depraved progenitors
  Had all been prudent, studious, and wise;
But they were quite terrestrial,
Or we would be celestial,
  Yes, we 'd all be proper tenants for the skies.

If we 're not all blameless sages,
And beacons to the ages,
  And fit for principalities and powers,
If we do not guide and man it,
And engineer the planet,
  'T is the folly of our forefathers — not ours.

— *Tid Bits.*

THE LIMEKILN CLUB ON SANITARIANISM. — The doings of the Limekiln Club are embodied in a series of humorous sketches by Charles B. Lewis, in the Detroit *Free Press.* In one of these, a colored orator of great repute, from abroad, addresses the Club, and gives them his ideas on sanitarianism as follows: —

"My deah frens, I ar' happy to be wid you dis evenin'. As you hev doubtless been informed, I shall speak to you on de subjick of health. What is health? I answer, Dat is Natur' in her simplest form. Man is supposed to be created in a perfeckly healthy state. He is a finished piece of mechanism. All de wheels an' levers an' springs an' gearin' are in place, an' all run smoothly. Now, what stops de masheen? Man's own ignerance and keerlessness. Elder Toots, fur instance, has a baby at his house — a lump o' charcoal about a year ole. (The elder blushes.) Dat baby was bo'n in de best of health, an' Natur' would keep him dat way if she war 'lowed to. But she hain't 'lowed. Mrs. Toots goes and puts clothes on it, and she feeds it sweetened milk, an' doses it wid paragoric, an' weakens its spine by drawin' it in a baby kerridge, an' it is tumbled into a feather bed o' nights, to roast 'tween two grown people. (Agitation.) Dat masheen is out of order before it is a year ole. Den de ole woman, she recommends sassyparilla, and de ole man, he recommends burdock, an' all de women come in an' recommend dis, dat, an' de odder, an' if de baby libs through it, its kase luck is wid him.

"My frens, de aiverage man comes mighty nigh bein' an idiot in takin' car' o' hisself. You hev seen him wearin' a fur cap on his head, while his shoes let in de snow and water. He wears an obercoat on his back, an' nuffin but a thin shirt ober his chist. He 's mighty skeert about freezin' his fingers, while his throat is exposed to blizzards. An' he 's ailin' — ailin', or thinks he is. It 's herb teas, root tonics, pills, plasters, and cures, until de balance wheel in his masheenery comes to a dead stop. (Applause.) Natur' wants to keep goin,' but she can't. He drinks beer, an' dat clogs de wheels. He drinks whisky, an' dat clogs de valves. He pours down lemonade, ginger ale, buttermilk, ice water, tea, coffee, an' what not, an' den he wonders why de fires under his biler won't burn. (Shouts of applause.) Take an ox and put him through a like performance, an' he 'd be dead in less 'n a y'ar.

"De simplest and plainest laws of health ar' outraged every day by de aiverage man. Did Adam smoke? Did Eve wear corsets? Did Solomon chaw terbacker? Did Ruth chaw gum? Did de children of Israel make for a beer saloon after crossing de Red Sea? Did Rebecca eat gum drops and ice cream, and call for soda water? Adam was de

first man an' made perfeck from heel to head. How long would he have remained so arter eatin' half a mince pie before goin' to bed? Suppose he had slept in a bedroom 6 x 8, wid de window down an' two dogs under de bed? (Yells of applause.) Supposin' Eve had laced herself up in a corset, put on tight shoes, sot up all hours of de night, eaten her fill of trash, and sizzled her ha'r? When you come to look into de way man misbehaves hisself, you can only wonder how he eber libed to get dar.

"De man who wants to lib to a good old aige an' keep shet of de doctors, has got to observe sartin principles. No dead cats must be allowed to remain under de house above a week. He may love his dog, but de dog must be giben de parlor bedroom if he must sleep in de house. Bones, fish heads, hen feathers, ole rags, an' rats should be cleared away from de back doah at least twice a y'ar. He must wash his feet now an' den, eben if it is a little trouble. Good plain water is what his system wants, an' anything else is an injoory. Let de air into your sleepin' rooms, eben if you ar' behind on your rent and expect a visit from your landlord. Adam had only fruit and vegetables to eat; chicken pot-pie is onhealthy. Warm biscuit and honey do n't do no particular good an' cause flutterin' of de heart. I reckon coffee acts to thicken de blood, an' watermillyons —"

The speaker was here interrupted by tremendous applause, so hearty that thirteen joints of the stove pipe fell. Confusion for ten minutes.

THE FUNCTION OF THE WINDOW.— Primitively and etymologically, the window was a wind-door. In primitive times, when our ancestors opened the wind-door, they got light as well as wind or air. Doubtless their survival and our present existence are due to the fact that in this way they took their fresh air "straight." We "children of light" imagine we have improved on their methods, but have we done so in all respects? We "improve" by putting glass into our windows. Henceforth the wind-door is opened only upon occasion; securing light, we allow the window to have for its new function the shutting out of wind or air, until it has so far lost its original, primary function of air supply that even the dictionaries fail to note the etymology, origin, and meaning of the word. Usually and naturally, the way to find a thing is to go back to the spot where it was lost and pick it up. The method is applicable to the recovery of lost arts, including the art of ventilation. Until we have restored the window, in a proper way, to its original function,— that from which it derived its name,— and thereby availed ourselves of all its resources of outdoor respiration, for the purpose of effecting the other kinds of respiration, viz., house, room, and human respiration, all combined in a single system, we never will be able to find even the road that leads to the complete ideal in ventilation.— *Good Housekeeping.*

THE WAY TO REST.— To understand this, is of more importance than to know how to work. The latter can be learned easily; the former, it takes years to learn, and some people never learn the art of resting. It is simply a change of scenes and activities. Loafing may not be resting. Sleeping is not always resting. Sitting down for days with nothing to do, is not restful. A change is needed to bring into play a different set of faculties, and to turn the life into a new channel. The man who works hard, finds his best rest in playing hard. The man who is burdened with care, finds relief in something that is active, yet free from responsibility. Above all, keep good natured, and do n't abuse your best friend, the stomach. — *Sel.*

HOW LONG WE ARE TO LIVE.— According to the tables used by life-insurance companies in calculating rates of insurance, a person one year old may expect to live thirty-nine years longer; of ten years, fifty-one; of twenty years, forty-one; thirty years, thirty-four; forty years, twenty-eight; fifty years, twenty-one; sixty years, fourteen; seventy years, nine; eighty years, four. Our readers will easily gather from the above tabulated statement the number of years to which their lives, according to the law of averages, may reasonably be expected to extend.

HEALTH OF THE MIND.— Miss Alcott used to relate the following concerning Emerson: "When his library was burning in Concord, I went to him, as he stood with the firelight on his strong, sweet face, and endeavored to express my sympathy for the loss of his most valued possessions; but he answered cheerily: 'Never mind, Louisa; see what a beautiful blaze they make! We will enjoy that now.' The lesson was never forgotten; and in the varied losses that have come to me, I have learned to look for something beautiful and bright."

THERE are eight hundred public baths in the city of Tokio, Japan, where natives are washed at a temperature of one hundred and sixty degrees at the price of one halfpenny.

JAPANESE BATHING CUSTOMS.

DR. MICHAUT, in a recent Parisian medical journal, gives an interesting account of the Japanese, and the good results accruing to them from their habit of daily bathing. Doubtless the simple dietary of these people, and especially their abstinence from flesh food, has much to do with their exemption from rheumatism and allied diseases, as well as their frequent use of the bath.

"One fact strikes every observer who has visited Japan: It is the nearly complete absence of certain diseases which should be very common in that country, taking into consideration the climate and the unhygienic conditions in which the inhabitants live.

"Thus, Japan is a country essentially humid and rainy. The ordinary mean of rainy days is from 180 to 200 a year. The variations of temperature are extremely rapid; in a single day the thermometer may rise 15° (about 25° F.). A large part of Japan is covered with rice fields, which, under the action of solar heat, cause a great quantity of the vapor of water to remain in the atmosphere during all the summer. The winter is very cold; the summer is hot as that of Indo-China. The houses are low and badly protected against the cold, and are exposed to every wind. The dress of the Japanese leaves the chest naked, winter as well as summer, and the legs uncovered. The ordinary people do not wear hats; the country people pass half their lives with their legs in the water of the rice fields. All these conditions taken together would indicate *a priori* the frequence of certain maladies which are particularly encouraged by humidity and sudden changes of temperature, rheumatism for example.

"Should we not search for the cause of this immunity from a disease so common among Europeans?

"The Japanese take baths at a temperature which a European could not support. That which a doctor in Europe calls a hot bath, say 100°, is a cold bath for the inhabitants of Japan. The temperature of the bath which the Japanese takes every evening, no matter to what class of the people he belongs, poor or rich, is never less than 107.6° F.; and is sometimes even as high as 122 .

"We briefly describe the method in which the ordinary Japanese takes his bath. Having reached a public bathing place, he washes his body first with warm water and soap, for reasons of cleanliness; for the bath is common, and men and women, young and old, bathe themselves in the same water In Yokohama, and some other cities, the English have required separate baths for the women, and the Japanese have progressed somewhat in that direction, as they separate the sexes by a rope, while the master of the baths sees that no one passes the bounds. The bather having washed himself with warm water and soap, plunges into the common bath, in which he remains but a few minutes. When he comes out, he finishes his ablutions by pouring cold water over his entire body.

"Naturally the skin is covered with perspiration; the body temperature remains at 100.4° to 103.1° F. during some hours. This explains how, in winter, we see the Japanese walking through the snow with bare legs, men and women with chest and head uncovered. Winter as well as summer, the ordinary people go about nearly naked.

"The hot baths are taken from infancy. The excretory ducts of the Japanese skin are more functionally active than those of Europeans, their skin is thicker, and much less sensible to cold or exterior excitations.

"Another disease which does not exist in Japan is rickets. The Japanese mothers nurse their children until very late, up to five, six, and even seven years. It is this alimentation, exclusively lacteal and material, to which may be attributed the absence of the infantile complaints so frequent in Europe, athrepsia, diarrhœa, and gastro-intestinal affections. The mortality in infancy is thus very small; the wet nurse is unknown, and artificial alimentation equally so. Not a single nursing bottle can be found in Japan. All mothers, without exception, nurse their children."

FINISH YOUR WORK.— How much of life is wasted in unfinished work! Many a man uses up his time in splendid beginnings. The labor devoted to begin ten things and leave them useless, would finish five of them, and make them profitable and useful. Finish your work. Life is brief, time is short. Stop beginning forty things, and go back and finish four. Put patient, persistent toil into the matter, and be assured, one completed undertaking will yield yourself more pleasure than a dozen fair plans, of which people say, "This man began to build, and was not able to finish."— *Sel.*

RELATION OF EXERCISE TO RESPIRATION AND HEART ACTION.

BY J. H. KELLOGG, M. D.

RESPIRATION is very closely connected with muscular activity and muscular effort. Even a slight change of position is sufficient to cause a change in the rhythm of respiration. When a person is lying upon a level, in a horizontal position, the respiration may not be more than ten to twelve in a minute, slow and deep; while in sitting up, it will be increased two or three per minute; in standing it will be increased to eighteen or twenty movements in a minute; while in walking it will be increased still more; and in running, the rate of respiration may be as high as forty or fifty breaths per minute. Respiration is increased by exercise, because the poisons produced by the activity of the muscles excite the nerve centers, and these stimulate the muscles of respiration to greater activity. The effect of this increased activity is, first, to throw off the poisons which are being produced and thrown into the blood; and secondly, to take in a larger quantity of oxygen, the purpose of which is to burn up this poison, and also to furnish to the muscles an element which is indispensable to support muscular activity. It is found that the muscles absorb oxygen much more rapidly while active than while at rest. The lungs eliminate carbon dioxide (CO_2) during exercise in increased quantity, and it is possible that the increased quantity of carbon dioxide in the blood may be one reason for the increased activity of respiration.

The normal activity of the lungs differs in different persons. It is the result of impulses received from the *medulla oblongata*. A curious case has recently been reported from New York: A man was received into one of the hospitals there, who, a year or two ago, received an injury at the base of the brain, and since that time has been compelled to breathe at the rate of 150 times a minute. For more than a year this man has been breathing at this remarkable rate, instead of sixteen or twenty times a minute.

It has been found that during exercise the blood undergoes a change. While at rest, the blood is alkaline, but during exercise it loses its alkalinity, as the result of absorption of wastes by the muscles. The lungs may be considered as both the chimney and the draft of the vital furnace; the fresh air is brought in, and the poisonous gases are poured out, through the respiratory organs. Hence it is necessary, when the wastes are accumulating in the muscles from exercise, that the vital draft shall be increased; so the usual rate of respiration is increased during exercise. Dr. Edward Smith has made a careful study of this subject, and taking the amount of air or oxygen received per minute while lying down, as the standard of measurement, or 1, has constructed the following table:—

Sitting up	1.22
Sitting and singing	1.26
Standing	1.33
Walking at the rate of 1 mile an hour	1.90
Walking at the rate of 2 miles an hour	2.76
Walking at the rate of 3 miles an hour	3.20
Walking at the rate of 3 miles an hour and carrying a weight of 34 lbs.	3.50
Walking at the rate of 3 miles an hour and carrying a weight of 118 lbs.	4.75
Walking at the rate of 4 miles an hour (five times as much as when lying down)	5.00
Running at the rate of 6 miles an hour (seven times as much as when lying down)	7.00
Walking in a treadmill and ascending at the rate of 45 steps a minute	5.70
Swimming	4.33

The amount of air taken into the lungs is in direct proportion to the degree of muscular activity, being increased from 1 to 7 — sevenfold — by increasing the muscular activity from the passive state of lying down, to the active condition of running at the rate of six miles an hour; that would not be a very rapid run.

It has also been observed that there is a close connection between the exercise of animals and their respiration, or the amount of oxygen which they receive. The frog uses so little air that it is not necessary to supply it with so efficient a respiratory apparatus as in human beings and the higher order of animals. The frog has ribs, but no breastbone, and consequently no diaphragm, so that he cannot breathe as we breathe, by expanding the chest; he simply has an air-bag within the body. When he wishes to fill this air-bag, he swallows air in the same way that we swallow water; the air is taken in through the nostrils, which are guarded by valves; these close, and by compression of the throat, the air is taken down into the air-bag. Just notice the frog when he is taking in air, with his nose out of the water; you will see the throat moving up and down, which is these little valves opening and closing during the process of drinking air.

The bird has an extraordinary capacity for receiving oxygen. It not only has an enormous chest and lungs, but its air capacity is also increased by means of its chest bones, which are hollow; these bone cavities connect with the lungs, so that the bird stores up air in its bones, and thus keeps a large amount of air on hand. The bones being hollow lessens the specific gravity of the bird. The bones of fish are solid.

Now notice the difference between the temperature of the frog and that of the bird. The frog is said to be a cold-blooded animal. It is not really a cold-blooded animal, since its blood is just as warm as the air or water in which it lives. The frog makes so little heat and receives so little oxygen into its body that its temperature does not rise above the surrounding air or water; while in the bird we have a temperature three or four degrees higher than in man, and in some instances it rises still higher than that. This high temperature is due to the great activity of the bird. The bird flying through the air lives a wonderfully active life; the swallow will easily keep up with the swiftest railroad train. Compare the high grade of life of the bird with the low life of the frog, and then remember that the difference between their modes of life is due to the difference in the amount of oxygen which they consume.

The direct effect of exercise is to bring into play the respiratory muscles, and hence to increase their strength. If the subject is a young person, in whom the joints of the vertebræ and the cartilages which join them to each other and to the breastbone, have not become ossified by age or idleness, the *size* of his chest will be increased by exercise which brings the lungs into play as well as the muscles of the chest, and the joints and cartilages being flexible, the ribs are drawn apart and the chest capacity is increased. In old persons, in whom the cartilages and joints have become ossified, there can be no increase in chest capacity, although there may be an increased activity of the muscles of the chest.

Prof. Marey, a prominent English physiologist, has made some experiments as regards lung capacity, through systematic observations of the students of the Joinville school. Examinations were made at the beginning of the term, and after about six months it was observed that the rhythm of respiration had been changed; while asleep, their respiration was slower, deeper, and more profound, and the amount of air taken in was found to be double that which had formerly been observed. The respiration had thus been permanently modified by exercise. So we see that exercise increases the breathing capacity of an individual when idle or asleep, as well as during the moments of exercise.

The relation of exercise to heart action is also a matter of interest. The heart beats, ordinarily, 4 times to every movement of the lungs; so if we breathe 18 times a minute, the heart beats about 72 times a minute. This is the normal relation between the movements of the heart and the lungs, although in disease this relation often changes. So it does not follow that if a person, like the gentleman in New York above referred to, should breathe at the rate of 140 times a minute, his heart would beat 600 times a minute.

The acceleration of the vital activities by exercise usually increases the heart beat from 10 to 30 times a minute. Even such slight movements as a change from a lying to a sitting, or from a sitting to a standing, position will increase the heart beat. For example, suppose a person's heart beats 60 times a minute when lying down; when sitting up, it will beat from 68 to 70 times a minute; standing up, it will beat from 72 to 76 times a minute; if he walks quietly along, the heart beat will be at the rate of from 80 to 85; and if he runs violently, the heart beats may be increased to 120 or 140 beats per minute. I examined a young man some time ago, just after he had been exercising in running up and down

stairs a couple of times, and found his heart beating 176 times a minute. If the heart beat is perfectly regular, with no intermissions between the beats and no irregularity of any sort, the rapid beating is simply the result of the violent exercise, and is not significant of any injury, nor of danger; but if exercise induces irregular action of the heart, then it is a matter which demands the most careful consideration.

Why does the heart beat increase by exercise? It is doubtless in consequence of the need of the muscles for oxygen; the muscles get oxygen through the medium of the blood, and this the heart supplies. The muscles need more oxygen during active exercise, and so it is arranged by nature that the heart shall beat more rapidly to supply the muscles with oxygen sufficient for their nourishment, and also for the purpose of washing away the poisons.

It is necessary, also, that the lungs should be supplied with oxygen to oxidize the poisons in the system, as well as to contribute an element necessary for its support.

It is observed that when a person has been exercising violently, the respiration becomes quiet much before the heart does. Why is this? — Probably because the mechanism which impels the heart to action is within itself. The heart contains little nerve centers stimulating it to activity, so that in many animals it may continue to beat even after removal from the body. I have seen the heart of a turtle, for instance, still beating days after the turtle was killed. The lungs receive their impulses from the *medulla oblongata*, and quickly cease their excessive activity when the necessity disappears. The heart centers become excited during activity, so that the heart returns more slowly to its natural rhythm.

Another fact of importance in relation to the heart is the result of fatigue. The heart beat becomes slower than usual a little time after violent exercise, probably because the heart itself, being a muscle, becomes fatigued, so that it does not act as energetically as it should.

The advantage to the heart of proper exercise is that it increases its size and strength; it becomes larger, stronger, and more vigorous as the result of judicious physical exercise. In the oarsman, or the man who is training for rowing, the heart as well as the other muscles becomes larger; in fact, this increase in the size and vigor of the heart is one of the essential features of training. If it were not for the increased size and vigor of the heart, the rower would not be able to sustain the violent exertion to which he subjects his muscles during the contest. It is necessary that his heart should grow in order for him to accomplish a certain feat in rowing; he could not do it unless his heart had been prepared for it by previous work.

It is rapid work which brings the heart into greatest activity. A person might make his muscles strong by lifting a heavy weight, and yet his heart might be comparatively weak. So with an oarsman; his muscles may be strong, and yet his heart not be strong enough to pump the amount of blood through the lungs which would be necessary to supply the proper amount of oxygen to the body in rowing, running, etc. Oarsmen and short-distance runners always have large hearts.

This training may be overdone. Training may be carried so far as to produce an over-development of the heart, and thus harm may result. The consideration of this fact is very important, because, as the heart becomes larger and stronger and its activities are increased, all the vital activities are increased with it; digestion improves, etc.; but if the activity of the heart is overdrawn, and it becomes too great, then the natural balance of the vital activities is destroyed. The brain may receive too much blood, and sleeplessness may result. The lungs may be so congested by the increase of blood that the individual, upon lying down, finds it difficult to breathe, so that he must be propped up in bed. The stomach may receive so much blood that it will also become congested. So with many other organs of the body, most serious results may follow. Overtraining the heart is thus very injurious, and may be exceedingly harmful. It has been found that oarsmen and short-distance runners very often become seriously diseased, and die prematurely, in consequence of the damaging effect of excessive work upon the heart.

FOR every foot of stature a man should weigh twenty-six pounds.

SIT ERECT. — To sit erect is not necessarily to sit stiffly. In sitting it is essential to guard against bending forward at the waist line, for this contracts the chest and cramps the lungs and stomach, often causing dyspepsia. Another position equally injurious is bending back and sitting so low that the lower vertebræ of the spinal column are brought in contact with the seat; the spine was never intended to be sat upon. This is a very common habit with those who sit a great deal. — *Mabel Jenness, in Jenness-Miller Monthly.*

THE ADVANTAGES OF CYCLING.

THE first advantage of cycling is that it relieves great and crowded communities of much bad air. It takes men, although in a small proportion, out of the close room or office into the open air, leaves them free for ventilation, and ventilates the cyclists themselves. Every one who thinks on this matter will, even though he may have some prejudices upon it, concede so much. In such a city as London, distance from the country, had, so to speak, crippled healthy exercise. How could the busy youth, engaged from nine or ten in the morning until four or five in the afternoon, reach before the day was over even the borders of such places as Hamstead Heath, Barnes Common, or Epping Forest? He would be wearied before he received the first breath of country air. He might go by rail; but there was the expense, the closeness and bustle of the station, the worry of a return journey, and the difficulties of so measuring out time as to catch the out-going and the in-coming trains. The result was that he was driven to remain in town month after month and year after year without change. He was by this necessarily deteriorated. He might go to the billiard table or to the bowling alley; but his physical wants were not supplied.

Man is an animal of outdoor activity, and as such he demands scope for action, like the strongest animals, and here he was cooped in like a bird in a gigantic cage. To such a prisoner the cycle has practically given wings. He learns to travel four times as quickly as he can walk. He learns the shortest roads into the country, and when he reaches his destination, he can, without altering his mode of progress, enjoy the change he has passed into with the keenest sense of emancipation from an unnatural confinement. In addition, the exercise itself has for him its pleasant varieties; it brings into play muscles which, being long idle, add only weight to the body, and become the storehouses of dead products — rusts which the eliminating organs have to dispose of by one or two channels alone, which after a time are overtaxed and deranged in function. The exercise of cycling came in, then, opportunely for the physical wants and desires of a large and oppressed community,— a community which could not ride on horseback, and could not walk, by reason of long disuse of their muscles, at such an advantage as would do good service; so far cycling rendered a service that was of really priceless value.

Something more has to be said in favor of the exercise. By it the mind is benefited as well as the body. The mind, not less than the body, pines under the penalty of home imprisonment. It must have freedom, if it is to develop and become sound and good. Let it rest day after day all through life, feeding on the same fare; let its eyes rest upon the same pictures, its ears receive the same grinding sounds, its nostrils absorb the same persistent odors, and how can it become anything more than a cribbed, wearied, discontented, and dwarfed mind? The mind of the youth buried in the confined community was of this kind. It knew no expansion, felt no elasticity; became timorous, obstinate, feeble,— what was called by the country folk the mind of Cockaigne, the Cockney mind,— afraid of the sight of every domestic animal, from a cow to a lapdog; frightened at sounds out of the range of Bow bells, and feeling the country to be a wilderness in which it was unpleasant and possibly dangerous to wander alone.— *London Lancet.*

STRAIGHTEN THE BACK.— One of the greatest and most common deformities of the day is one that with care and attention can be remedied. It is the round-shouldered or stooping habit. Many of the best natural figures show this tendency to stoop, while in the narrow chested it is marked to a painful degree; and yet by raising one's self leisurely upon the toes in a perpendicular position several times a day, this deformity can be easily rectified. To do this properly, one must be in a perfectly upright position, the arms dropping at the side, the heels well together, and the toes forming an angle of forty-five degrees. The rise should be made very slowly, and from the balls of both feet, and the descent should be accomplished in the same way, without swaying the body out of its perpendicular line. The exercise is not an easy one, but may be accomplished by perseverance and patience. It can be modified, too, by standing first on one leg, then on the other. Inflating and raising the chest at the same time is a part of the exercise, and if persevered in, will ultimately show an increased chest measurement, development of lung power, and a perfectly straight and erect figure.— *The Indiana Pharmacist.*

OBEDIENCE: WHAT IS IT? AND HOW CAN IT BE CULTIVATED IN CHILDREN?

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

OBEDIENCE is not a natural impulse which every child possesses as a matter of course, as many seem to believe, but it is a trait of character wholly dependent upon training; and in order that perfect obedience shall become a habit, this training must be *systematic* and *continuous*. We must keep in mind the end to be attained, remembering that a trait of character becomes fixed only by becoming a habit, and that the discipline in this direction "must be unswerving, not enforced one day and permitted the next."

One of the most frequent causes of failure to secure good results in any training, is a lack of continuity of discipline. One day the standard is set high, and every effort made to keep it there; the next day it is lowered, because we are too nervous and hurried to make the effort to keep it high, so what was prohibited yesterday is permitted to-day. Such fitful, spasmodic attempts at training may be carried on for years without accomplishing the desired object. To maintain this continuity of discipline requires a great effort on our part, but it is the only way I know of to establish habits which shall become fixed and permanent traits of character.

Whatever rules or requirements are laid down for children should be in force every day alike; and hence it is particularly important that the very fewest possible requirements be made. A multitude of rules is confusing to children, and they often disobey from forgetfulness. A few rules, thoroughly carried out, will accomplish more in the end than twice the number carelessly enforced.

True obedience springs from love or respect. The person who expects to secure obedience from a child, must so deport himself at all times as to gain the child's love or respect, or both. And the child must see that what is required of him is for his own good.

Obedience can be fostered by the manner in which the requirement is made. The request should always be a courteous one, spoken in a firm, pleasant voice, not higher than the ordinary tone; and generally it should be in the form of a request, not a command. A fretful, querulous, or undecided tone of voice should be avoided. Children may be taught to respect the wishes of their parents and teachers so much that a simple statement of their wishes, as, I would prefer you to do this, or, Will you please do this? will be all sufficient.

Many a child can be *led* into obedience who could never be driven into it. It is not a wise plan to threaten children; they will almost invariably be tempted to do exactly the thing they know they will be punished for doing. The threat calls the attention forcibly to that one thing, and nine times out of ten the child will *do* it, almost in spite of himself.

If a child old enough to think does a wrong act, for the first offense he should be told that it is wrong, and *why* it is wrong, and that he must not repeat it; but is it not necessary to add, as we are so inclined to do, "If you do it again, I shall punish you," thus making the fear of punishment the prime thought in the child's mind? What we wish the child to do, is to obey because it is *right* to obey, not to avoid punishment. Of course, if he does disobey, he may need to be punished; but it is not necessary to threaten him. The deed, not the punishment, should stand out in his mind as the most important thing,—the thing to be ever afterward avoided. Threats of punishment I believe to be a fruitful cause also of deception.

Children who would otherwise be tempted to rebel, will often obey readily if given an alternative; as, if the child is doing something he enjoys, tell him he may resume it when he has done what you wish. Save conflicts by alternatives when possible, but never at the sacrifice of right and principle. We should also try to avoid calling into action any undesirable traits of character, as stubbornness or self-will, by making no unnecessary demands, since all qualities, bad as well as good, are strengthened by exercise.

With children who are old enough to understand it, much can be done to cultivate obedience, by keeping before them high ideals of obedience, by relating to them incidents where obedience resulted in great and lasting good, by reading to them the Bible story of Abraham when called to sacrifice Isaac, and other similar examples of obedience, and by dwelling upon the blessedness and happiness it brings to us. Keep the virtues we wish them to imitate constantly before them, that their thoughts may be attracted to the good and true, rather than to the evils they must avoid. This will aid in building up the positive rather than the negative side of their characters. Let us strive to check evil by putting good in its place.

In training children to obedience there is great need that we govern ourselves. Let us be sure that the requirements we make are actuated by our desire for the good of the child, and not simply for our own convenience and comfort, or through some selfish motive. Children have rights which should be respected as well as those of older persons; but they are often prohibited many a harmless amusement merely because it interferes with the selfish convenience of their elders. A child feels injustice as quickly and keenly as older persons; and if constantly chided in this way, will soon come to look upon obedience in other directions as a sort of tyrannical restraint.

The motives actuating us in requiring obedience should be based upon superior wisdom and a reasonable certainty of benefiting those of whom obedience is required. Such are the principles which form the foundation of the divine commands, and such should be the principles upon which all our requirements are based. We should also show our children that we ourselves are obedient to the law of God, the laws of our being, and the laws of our country. Obedience to divine and moral laws should be among the earliest lessons of childhood. Obedience in one direction will aid toward obedience in others. The child who willingly and cheerfully obeys his parents and teachers, will be the more willing and ready to obey God.

A GOOD WAY TO CULTIVATE PROMPTNESS.

THE following extract from one of Miss Elizabeth Harrison's talks to mothers on child culture is well worth the consideration of any mother whose children are lacking in promptitude: —

"A friend came to me and said, 'What shall I do with my Willie? He dallies so about everything that he has to do. If I send him up stairs after my thimble or thread, it may be a half hour or even an hour before he returns. I have scolded him and scolded him, but it seems to do no good.'

"'By scolding,' I replied, 'you have emphasized the fault you wished to cure, and have separated yourself from your boy. Now try to emphasize the opposite virtue — promptness — by praising him for it when you have the opportunity.'

"'Ah, there's no use in talking of that,' she answered, 'he is never prompt.'

"'Then,' said I, 'if he is never so voluntarily, make an occasion. Ask him to go to the kitchen, or some other part of the house, on an errand for you; tell him that you will count while he is gone. When he gets back, commend him for having returned more quickly than usual. At dinner tell his father, as if it were a fine bit of news. This will make it a meritorious achievement in your son's eyes.'

"The next week she came to me with her face fairly radiant and said: 'I have been counting, and Willie has been trotting ever since last week.' I laughed and told her that her mother-wit would soon have to hunt up some new device.

"Mothers, so cultivate the rational element in yourselves, that you can see that every fault in your child is simply the lack of some virtue. In the inner chamber of your minds, study your children, confess their faults to yourselves, not to your neighbors, and ask what is lacking that these defects exist. Like Nehemiah of old, build up the wall where it is the weakest; if your child is selfish, it is unselfishness that needs cultivation; if he is untruthful, it is accuracy that is lacking; perhaps he is tyrannical to the younger brother or sister, it is the element of nurture or tenderness which should be developed. Build up the positive side of your child's nature, and the negative side will not need to be unbuilt."

A WOMAN'S PRACTICAL DRESS.

Miss Anne E. Tabor, of the Battle Creek Sanitarium, of whose improved divided skirt we gave cut with description, in our January number, has recently perfected a women's working dress which is at once so neat, so comfortable, so convenient, and altogether so hygienically valuable, that we take great pleasure in calling the attention of our readers to it. The costume is composed of three pieces: the adjustable two-seamed dress, the jacket, and the improved divided skirt. The first may be arranged for either outdoor or indoor wear,

THE INDOOR COSTUME.

and requires three pieces to complete it: the dress proper, the *guimpe*, and the jacket. The dress proper has a seam under each arm and two (or four) small darts to shape the front lining, the outside being left full. Both outside and lining are gathered to fit the neck in front. The shoulders are cut very short, thus giving perfect freedom to the arm. The skirt may be either gored or full, and the dress may open at the front, back, or side, as desired. The jacket which completes the outdoor costume has but two seams. It need scarcely be said that no bones are used in this dress, none being needed, even for the purpose of stretching seams, as no seams show.

The indoor costume is here shown,— a *guimpe* made of some soft material, with simple sleeves, and yoke. Dress proper and jacket can be made of four and one third yards of 52-inch goods. The *guimpe* is made of one and one half yards of 22-inch silk. One advantage of this suit is that ladies doing their own housework, or school-girls boarding themselves, may don a long-sleeved apron over it while at work, which can be removed in a moment, and the jacket put on, when

THE OUTDOOR COSTUME

the individual is at once presentable. The suit is becoming alike to stout and to thin persons.

The two-seamed gown form can be draped upon the same as upon any other gown form. Sleeves can be fitted into this kind of body just as in a body with many seams. In draping, there need be no waist line, neither is there any real need of a cord to finish the waist; however, if we do make a waist line, it should be distinct.

In case the figure be a difficult one to fit, a seam taken in the back will arrange for those shoulders which so droop or round that a straight body will not set well.

SLOYD WITHIN A CIRCLE. — NO. 2.

BY MRS. M. F. STEARNS.

Our grandmothers taught us Sloyd and kindergarten in the old days, before any one ever heard of Frœbel or Salomon. Of course they did not have our material, but did any kindergarten beads ever half equal one of those magical New England button bags that poured out hours of contentment, in its varied contents of big buttons and little buttons, round, square, and cylindrical,— the forms were all there, if the names were not?— and did ever kindergarten clay give more pleasure than the dear old "mud pies"? So with all the delightful, homely contrivances with which the childhood of twenty-five and fifty years ago was amused.

Whoever has had the pleasure of "patching" an old-fashioned comfortable, knows something of Sloyd. Why! our grandmothers fairly put us in bed and tucked us under with arithmetical and geometrical problems, as any one can testify who has slept under one of those intricate combinations, formed of angles of every degree, pentagons and hexagons, oblongs and squares,— a whole plane geometry tacked together and demonstrated in dazzling colors.

Now to-day all this good old "common sense" is being gathered up and run in a new mold, better adapted to schoolroom work, and called "Sloyd," and any series of models worked out in material adapted to a child's use, if they are properly chosen and graded, so that they develop the hand and brain equally, giving skill to the hands and acute perception to the mind, might be called "Sloyd." Thus we have wood and iron Sloyd, basket Sloyd, pasteboard and paper Sloyd, and even Sloyd sewing and knitting.

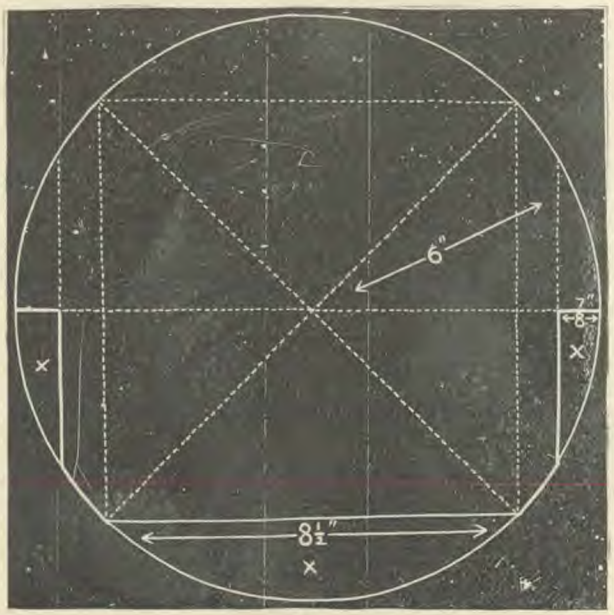

FIG. 3.— MAIL POCKET. MODEL NO. 2.

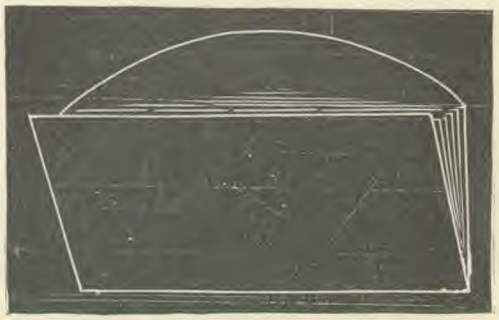

FIG. 4.— MAIL PACKET. MODEL NO. 2

All Sloyd work, however, whether it be for the homes or chool, must be founded on certain principles. The articles to be made must be strictly useful, not articles of luxury. There must be no surface decoration; the beauty of the thing must be in its form and coloring and adaptability to the use for which it is intended, the great aim in the work being to teach the child a love for usefulness, a love for making *useful* things, to cultivate its taste for true beauty, and its distaste for all cheap decoration. Probably more time, health, and money have been wasted on fancy work and "cheap art" than can be estimated. One is reminded of the old game of "Simon says thumbs up and thumbs down," as one reviews some of the house decorations of the last ten years. Surely it is a foolish game people have been playing with fashion. If she says, "Decorated milking stools," from East to West, gilt-legged, plush-topped, ribbon-bowed milking stools walk into every parlor where her decree is respected. Almost everything to which a bow of ribbon could be tied, and which could be hung on a wall, has been utilized as a means of decoration.

Few can afford any special training in art, but the Artist of artists has provided all with an open textbook, and happy is he who reads it. Everything is in it. If we wish a suggestion for making some solid form, we shall find it in the solid rock — the model base for all solids that are not forms of life — the cube. What more delightful study in form

can be found than in a beautiful bed of crystals? If we wish lighter or plane forms as models for paper and pasteboard work, we can find them in vegetation, in the endless variety of the leaves of plants and trees, and the petals of flowers. Here the circle will be seen in all its parts, as the base form.

The children will enjoy drawing circles on paper, and then taking the petals from flowers to arrange around the center within the circumference. This will teach them that the general outline of all flowers is circular, and it will also suggest to them varied forms that can be made within a circle, or by combinations of circles, that will prove useful in all lighter forms of Sloyd work.

In this same book of wonders, we can find suggestions as to the appropriate use of colors. There we see the colors of all great masses to be dark or subdued, as the browns of the ground and tree trunks, and the greens of the fields and foliage; the lighter and brighter colors as seen in the flowers, being used only to touch up the picture. The blue of the sky was not given us to walk upon; nature's work-a-day dress is of plain coloring. So in the selection of our Sloyd materials let us make appropriate choice of colors. For most of our work the light grays and browns in the paper will prove most serviceable.

To make Model No. 2, a mail packet, or large envelope convenient for mailing samples or bulky papers: Describe a twelve-inch circle, placing T square on center point, draw a diameter, bisect this diameter at right angles with another, connect the points where the diameters meet the circumference. With the T square placed on center point again, draw another diameter, which will exactly divide the square already formed into halves, cut off the lower arc from this, divide the side arcs into halves, cut off half of each lower side of these arcs, leaving a margin seven eighths of an inch wide. Fold the corresponding part of the upper half of the arc on dotted lines, and then fold the entire margin over the face of the square. Fold the square on the center line, paste the curved part of the upper margin to the straight edge of the lower, fold over the remaining upper arc for the lap, brush it lightly with mucilage, and the envelope, or mail packet, is complete.

Now the little worker who does all this, may make mistakes, and may have to make many attempts before a really perfect envelope can be formed; but he must be made to realize that the time is not wasted, that—

"No endeavor is in vain,
Its reward is in the doing;"

and the mamma or papa who is the happy recipient of the finished envelope, could not buy another anywhere nearly as nice as this one, because the little worker has filled this with love, and that is something that money cannot buy.

The materials for Model No. 2 are the same as for Model No. 1, given last month.

HINTS ON SMALL ECONOMIES.

To try to make a little money go a long way and do a great deal, is the life task of many a woman. No one would say it was delightful work, but few will deny that it is more enjoyable when it is a success than when it is a failure. There is always a sense of satisfaction to be obtained from being able to say, "Something attempted, something done," even though that something is nothing more than gaining a few pence by saving them.

Some people have an idea that it is very degrading to make small economies, and that the habit of making these economies is the sign of a small mind. This does not follow by any means. As a rule it is the people who have the habit of saving in small things who are able to give largely; while people who are lavish and careless about small things, land themselves and every one connected with them in poverty.

Systematic saving prevents waste, but it also promotes comfort. Extravagant people run through their means, and then have to pinch in various uncomfortable ways to make up; but thrifty people are more likely to be able to provide liberally what is required. Even in Solomon's time it was the woman who "looked well to the ways of her household," whose "household was clothed in scarlet, and who stretched out her hand to the poor."

"Take care of the pennies, and the pounds will take care of themselves," is a proverb which is looked upon as old-fashioned in these days, but it is none the less true for all that. It is the trifles which cost money. The large expenses of life we prepare for, but the etceteras connected therewith fasten themselves on, and place us in difficulties almost before we know it.

To achieve small economies, therefore, the great thing is to watch ourselves, and cure ourselves of the habit of buying trifles. One way of doing this is to give up the practice of carrying the purse in the pocket. This is an effectual way of preventing our-

selves from buying what is unnecessary. It occasionally leads to inconvenience, without doubt, but also there is no doubt that it leads to economy. If purchases have to be made, calculate as nearly as possible what they will cost, and take out that sum and no more. Bargain hunters very often say "how cheap" they bought this or that. They forget that to go without would have been cheaper still.

To resolve never to buy anything on the instant is a great help to economy. Foolish purchases are generally made thoughtlessly.

Paying ready money is a sovereign remedy against extravagance. As Emerson says, "It is a check on the imagination." When we buy goods and take credit from the tradesman, we get them easily, sometimes too easily for honesty. May be when the time comes for us to pay for them, we shall have learnt not to care for them, and our debt will be a pain to us. If we think economy mean, we must feel that debt is meaner. When we run into debt, we compel others without their consent to pay the price of our gratification. This is decidedly unfair. Conduct of this sort cannot be described as generous and noble.

Keeping a strict account of expenditure is a great assistance to economy, chiefly because account-keeping shows us to ourselves as we are. A clever housekeeper once said that account-keeping, to be of real service, ought to be a faithful record of mistakes. If, when writing down our expenditure, we were to make notes in the margin, which should serve as signals of rocks on which we had run aground, the existence of those particular rocks would be impressed upon our memory.

One of the most effectual ways of effecting small economies, is to prevent small wastes. The utilization of odds and ends of food is an excellent way of making small economies, of the importance of which we are often told. But people do not always remember that it takes time, trouble, and good cookery to make much of odds and ends. Any one with half an idea can prepare a good dinner out of costly material, but to make an excellent dinner out of very little, requires intelligence if not genius.— *Palace Journal.*

CONTRIBUTED RECIPES.

Cracked Wheat Custard. — Lightly brown the wheat in the oven, and put through a coffee-mill to make it finer, though not into flour. To one half cup of wheat, after it is ground, add a pinch of salt and a small egg, and beat quite light; then mix well with two cups of unskimmed milk, and steam in a double boiler or a common steamer half an hour. Beat up once or twice thoroughly as it begins to heat, before the egg is set. When done, it will be a tender, white custard, and can be eaten with cream or without dressing.

Cracked wheat cooked as it usually comes from the market is very nice, and we use it a great deal; but the way just given makes it possible to prepare it more quickly than when unbrowned and unground.

S. Addie Bowen.

Farina Banana.— For one quart of rich milk take four tablespoonfuls of farina, and cook in a double boiler one hour. Add two tablespoonfuls of sugar, and when it is slightly cooled, pour it over thin slices of banana. Serve without dressing, either warm or cold. Evora Bucknum.

A piece of cheese cloth makes a good duster.

Do not fill lamps to the top, and do not burn them until they are empty, or nearly so, for fear of an explosion.

Among the many ways in which kerosene may be made to serve as a cleansing agent, is in the washing of windows. Into a basin put two tablespoonfuls of kerosene and two of water. Take a soft cloth a little larger than the hand, dip it in the basin, half wring it, and wash your windows, both sash and glass. Then rub dry with a soft newspaper, and polish with a soft towel. This process will remove fly specks and dirt from both glass and paint more easily and quickly than soap and water, and leaves the glass with a better polish. The quantity given is sufficient for washing two ordinary-sized windows.

The best way to clear out and straighten the fringe of towels, doilies, etc., before ironing, is to comb it, while damp, with an inch length of coarsest toilet comb.

Raggles.— "There ain't agoin' to be good livin' in trampin' this season."

Tatters.— "I'm afraid not, these here cookin' schools is teachin' gals how to use up the cold wittals."

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

THE HUNGER-CURE.— Half a century ago, the hunger-cure was one of the most popular methods of treatment in some parts of Europe, and by Dr. Shew and others was introduced into this country. It consisted in abstaining absolutely from food for one or two weeks. Many persons claimed to have been greatly benefited by this singular method of treatment. Hunger-cures were established in different parts of the country. A lady under the personal care of the writer a few years ago, had undergone this treatment at an institution of this sort, which flourished for some time in the State of Ohio, although now extinct. She claimed to have derived very great benefit from the treatment, especially in improvement of digestion and bowel action. Having suffered for many years before from constipation, she affirmed that for many years following the treatment her bowels were perfectly regular in action, and that her health was in every way improved.

A revival of the hunger-cure is one of the new medical fads in Germany, which is brought forward as a new system, although, in fact, it is nothing but an old system revived. Evidence of the enthusiasm in the properties of this new method is found in the fact that a very intelligent lady, the wife of a prominent journalist of Berlin, recently completed a fast of forty days, during which she tasted nothing but a little lemon juice. The lady claims to have been cured similarly to the case above mentioned, and states that she is now enjoying better health than for many years previous, although she considers that the fast was not quite long enough, as she still finds herself suffering from some physical ailments for which she believes the hunger-cure to be a panacea.

That fasting may be beneficial by giving an overtaxed and over-stretched stomach and colon an opportunity to return to their normal dimensions, is entirely probable. But when the cure extends to so extreme a length as a fast of six weeks, it ceases altogether to be a rational procedure, and becomes a dangerous measure, and one only worthy of condemnation. Fasting for a day or two now and then, or even a week's fast, might be of decided benefit in individual cases; but no one should undertake a week's fast without placing himself under medical supervision, as great harm as well as possible good may be done by so depleting a procedure.

THE WHITE COLOR OF MILK.— The cause of the white color of milk has been supposed to be the great number of minute globules of fat suspended in the liquid, as is the case with an artificial emulsion. An ingenious experimenter, however, has recently investigated this subject, and found that the white color of milk is preserved even when all the fatty substances have been removed, with the exception of a very minute trace. According to the observer, the color of milk is due, not to the fat which it contains, but to the great number of minute casein films inclosing the fat. That the fatty substances of the milk may be periodically removed, leaving behind the empty films, is shown by the observation of buttermilk, which contains only a very small trace of fat, and is much whiter than milk to which an equal quantity of water has been added, although the latter is several times richer in fats than is buttermilk.

PROFITABLE FOR THE UNDERTAKER. — Patent medicines do not always kill at the first dose, though cases are not wanting which demonstrate their activity as deadly poisons; but in the long run it is probable that more persons die as the result of the chronic poisoning and damage done by the use of patent medicines than from any other one cause. An Irish newspaper recently published the following advertisement, which doubtless states the truth with greater exactness than the advertiser intended: —

"WANTED.— A gentlemen to undertake the sale of a patent medicine. The advertiser guarantees it will be profitable to the undertaker."

COFFEE DRUNKENNESS. — The idea that tea and coffee are harmless stimulants, or exhilarants, as poetically but untruthfully expressed in the lines of Coleridge, "The cup that cheers but not inebriates," is probably responsible far more than any other for the wide-spread employment of these drugs, which the physiologist well knows are possessed of an active principle far more potent as an intoxicating agent than is alcohol. Indeed, we have often asserted, and we believe upon good grounds, that a cup of strong tea or coffee is capable of producing a higher degree of intoxication than an equal quantity of lager beer; that is, a smaller number of cups of strong tea or coffee would be required to render a person thoroughly intoxicated than would be required of lager beer.

The following account of coffee drunkenness in South America, from the pen of Fanny B. Ward, we quote from a contemporary journal: —

"I have often heard it remarked that there is no drunkenness in Brazil, but the statement is untrue, not, perhaps, so far as alcoholic drinks are concerned, but the whole country is perpetually in a state of semi-intoxication on coffee, men, women, and children alike, and to babies in arms it is fed from a spoon. It is a common saying among Brazilians, that coffee to be good must be as 'black as night, bitter as death, and hot as hell,' and at all hours of the day and night, in season and out, everybody literally guzzles it — made according to the proverb. The effect is plainly apparent in trembling hands, twitching eyelids, mummy-hued skin, and a chronic state of nervous excitability worse than that produced by whisky. Are you overheated in the noonday sun or chilled by the dews of the evening; are you wearied or blue, or suffering from bodily pain or homesickness; coffee is the Brazilian's unfailing panacea, as the Chinese turns to his opium, and the toper to his toddy. It is brought to your bedside the instant you are awake in the morning, and just before you are expected to drop off to sleep at night, at meals and between meals, and whenever a caller comes in — always black as night, bitter as death, and hot as sheol. Connected with each of the theaters is a garden or café, to which the people repair between every act to partake of ices, confectionery, wines, and coffee of course."

THE BACILLUS OF TUBERCULOSIS IN RAILROAD CARS. — A German physician, Dr. Prausnitz, has recently examined the dust of railroad trains with reference to tubercular bacilli. He collected the dust from the compartments of trains conveying patients from Berlin to Meran, and inoculated a number of guinea-pigs. The result showed that the dust from two out of five compartments examined, contained the bacilli of tuberculosis. The dust in one compartment communicated tuberculosis to three out of four inoculated animals. The other gave positive results in two cases out of four. When one considers the carelessness of consumptives in expectorating upon the floors of railway compartments, churches, concert halls, and other public places, it is not surprising that the dust of such places contains bacilli. It is only surprising that infection is not more frequently traced directly to such sources. Doubtless, infection frequently occurs through the medium of inoculation of the infected dust of railway compartments, if, indeed, it is not the most common method in which tubercular infection occurs. Railway officers should certainly take extraordinary pains to obviate the evident danger to the well, who are exposed by traveling in the same cars and sleeping in the same berths which have been occupied by persons affected by pulmonary disease.

A STRONG DIET. — To those who imagine that grains and farinaceous foods are what is commonly called a "light diet," or are lacking in the elements calculated to produce bodily strength and vigor, will be surprised at the following, which we quote from a recent writer believed to be authentic: —

"The Japanese have made a race of giant men — a race of wrestlers. These wrestlers often weigh 200, 300, and 400 pounds. At the Imperial hotel, in Tokio, they brought their champion wrestler to my room. He was prodigious in size and as fat and fair as a baby. He was a Hercules in strength, but looked like an overgrown cherub of Correggio.

"'What do you eat?' I asked.

"'Rice — nothing but rice.'

"'Why not eat meat?'

"'Meat is weakening. Beef is 70 per cent water. Rice is 80 per cent food. I ate lean beefsteak once, and my strength left me. The other man ate rice and threw me down.'

"My courier said: 'This wrestler is the Sullivan of Japan. No one can throw him.'"

HOT-WATER DRINKING IN ANCIENT TIMES. — We have it stated on good authority that Cyrus was perhaps the first to adopt the practice of boiling water as a sanitary measure. It is said of him that while crossing the Choaspes, he had all the water for drinking purposes first boiled in silver bowls.

NATURE AHEAD OF THE DOCTOR. — Probably the majority of people, at least when sick, are possessed of the notion that doctors are endowed with some sort of magical healing power, by the aid of which they are able to exercise a sort of authority over disease. These people are laboring under the impression that no matter what the nature of their malady, if they can only have the right doctor and the right remedy, they may expect to be cured. The part which nature performs in the cure of disease is too often overlooked, notwithstanding the fact that all curative power really resides in nature and not in the doctor. This healing power of nature which is implanted in the constitution of every human being, the ancients called *vis medicatrix naturæ*. The *Hospital Gazette* illustrates the value of the *vis medicatrix naturæ* by telling a story of a miser who had injured both his feet in the same manner to an equal degree. He called a surgeon who seemed disposed to magnify the nature of the injury, and evidently for the purpose of defending himself in charging a large fee for his services. The injured man, Mr. Elwes, recognizing the situation, and being quite equal to the emergency, remarked : —

"I do not consider myself much hurt, whereas you think I am, so I will make this agreement : I will take one leg, and you shall have the other ; you shall do what you please with yours, and I will do nothing to mine, and I will wager you the amount of your bill that my leg gets well first." Elwes delighted in telling this story, and used to assert with triumphant glee that he "beat the apothecary by a fortnight."

AN ANTI-SPITTING ASSOCIATION. — Spitting, except in a proper receptacle, should be prohibited by law in all public buildings and such public carriages as omnibuses, street-cars, railroad-cars, steamboats, etc. Modern science has shown that sometimes potent causes of disease and death are communicated by germs which are found in the expectorated matter of persons suffering from infectious maladies. For example, pneumonia, diphtheria, and consumption, three of the most deadly diseases, which are responsible for fully one fourth of the deaths that occur in thickly settled districts of civilized countries, are always communicated by germs found in the sputum of patients suffering from these diseases, and are doubtless propagated through the diffusion of the particles of dried sputa which are deposited upon the floors of lecture rooms, churches, street-cars, and omnibuses, and upon the street pavements, become dried, and are ground to dust, and then whirled into the air as minute motes, which dance in the sunbeam and carry disease and death to those who unsuspectingly inhale the germ-laden air. These deadly germs can be found in the air of almost every church, opera house, or lecture room, and their presence has also been demonstrated in the air of sleeping-cars. The State of Pennsylvania has prepared and widely circulated a little notice setting forth the dangers of spitting, which has been posted in every schoolhouse in each city, and the teacher has been requested to call attention to the evils which it points out at least once a week. The example is a good one, and ought to be imitated by every school board in the land.

The measure taken for the suppression of the spitting nuisance above referred to was the result of the active effort of an association formed by the ladies of Pittsburg, under the leadership of Mrs. J. M. Oakley. It might be called the Anti-spitting Association, as it is giving special attention to the suppression of this public evil, the dangers of which are yearly becoming more conspicuous.

DANGER OF A POLLUTED WATER SUPPLY. — The results of the recent investigation of the character of the water of Hamburg, lately the scene of a terrible cholera scourge, shows it to contain a great amount of animal and vegetable matter, as well as suspended particles of mineral matter. The character of the water is such as doubtless to encourage to a high degree the development and diffusion of cholera germs. The drinking of polluted water was long ago shown to be the principal means of communicating cholera, as well as typhoid fever and other infectious diseases of allied character. The horrible state of affairs which exists in the city of Chicago, which uses the south end of Lake Michigan for a cesspool, into which its enormous sewers are discharged, as well as for the source of its water-supply, threatens to be the scene of a horrible cholera outbreak on the occasion of the great World's Fair next year. It is hardly to be expected that we shall escape an invasion of cholera next year, when so many thousands of visitors will come from all parts of the civilized world to attend the Exposition ; and once cholera germs have obtained a foothold in Chicago, the whole city will be infected almost within twenty-four hours, on account of the extraordinary facilities for the absorption of microbes possessed of so great vitality as the cholera bacillus. The sanitary authorities of Chicago have wrestled with the sewer and water problems, and are constructing a great canal leading from Lake Michigan to the Illinois River, which will constitute at once a sewer and a ship canal, and which, when completed,

will doubtless cure the present awful state of affairs. But the canal will not be completed in time for the Exposition, and consequently visitors in Chicago can scarcely avoid drinking the diluted sewage which flows in the water pipes of the Western metropolis. On the Exposition grounds, water brought in a pipe from a distance of many miles, will be kept for sale at one cent a glass; but outside the grounds, no safety from the dangers of contaminated water can be secured, except through the use of imported water or water which has been boiled. Our advice, which we hasten to give in good season, is that every visitor to the great Exposition should carry with him a bottle of water which he knows to be pure, or else drink while in the city nothing but thoroughly boiled water.

Relation of Soil to Typhoid Fever.— This important question seems to be quite definitely settled by some recent observations by Sir Charles Cameron, a distinguished health officer of Dublin, Ireland.

According to the *Medical Record*, Dr. Cameron has found by studying the statistics of Dublin in relation to the topography of the city, that in the last ten years, in that portion of the city in which the soil is clay, the deaths from typhoid fever have amounted to but one in 144; while in portions of the city in which the soil is gravel, the proportion of deaths has been much greater, amounting to one in ninety-two. It was found, also, that the disease became most active whenever the soil became dry, a circumstance which occurs much more frequently with gravel than with clay. The germ-laden ground air, or subterranean atmosphere of a gravelly soil, is one of the most prolific sources of extending typhoid fever in cities, and in districts where the germs of this disease have once been introduced.

Our civilization will not have reached its highest stage of development until public sentiment in favor of radical sanitary measures shall have been cultivated to such a degree as to secure the passage of laws absolutely prohibiting the construction of vaults, cess-pools, and other contrivances for soil contamination.

Poisonous Nostrums.— Many poisonous substances are sold to the unsuspecting public and swallowed by them in a great variety of forms, and to the extent of many millions of bottles annually. Not infrequently fatal results follow the use of these poisonous drugs by those who are unacquainted with the poisonous properties of the nostrums so highly commended to them as remedies. A very commonly used and much abused drug of this sort is santonin, which, under the various names of worm confections, worm troches, worm lozenges, etc., is sold in great quantities as a popular remedy for intestinal worms. If a child picks its nose while asleep, or grates its teeth, or is white about the mouth, or vomits, or has a pain in its stomach, or wind on its bowels, or a coated tongue, or a bad breath, or, in fact, is in any way out of sorts, the mother or some old lady in the neighborhood asserts that it has worms, and proceeds at once to administer santonin lozenges or something of the sort. Recently a child of two and one half years of age died as the result of eating ten cents' worth (a dozen) of santonin lozenges.

Skimmed Condensed Milk.— The public are not generally aware of the fact that certain brands of condensed milk are made from milk from which the cream has been removed by means of a "separator." It is not always possible to discover by the label upon the package the real nature of the contents; neither is it easy to test by a cursory examination the difference between this separated milk and milk which contains the normal amount of cream. But the great difference in the nutritive value of skimmed, or separated, milk and full cream, renders it important to call attention to this fraudulent practice. Young children fed upon such milk would be almost certain to fall into a state of amaurosis for lack of sufficient oleaginous material.

A Radical Sanitary Reformer.— It is reported that the Ameer of Bokhara has recently undertaken the introduction of sanitary reforms among his people. He began by issuing orders for the general cleaning up of the city. Some of his subjects who were not noted for cleanly habits were displeased, and failed to comply promptly with the royal edict; but they were quickly brought to terms by a second order, which commanded the execution of every person who should not, within a week's time, put his premises in a sanitary condition. There can be no doubt that the sanitary condition of the city of Bokhara forthwith became first-class.

Remenyi a Vegetarian.— It is gratifying to note that Remenyi, the celebrated Hungarian violinist, attributes his superb health and vigor at fifty-nine years of age, to his total abstinence from alcoholics of any description, from tobacco, and from a meat diet. He may be said to be now fairly in his prime, with a face as free from lines and wrinkles as an ordinary man of thirty-five,

PARÆSTHESIA, OR NUMBNESS. — The sensations of creeping, crawling, and prickling, and a variety of other sensations which are known to neurologists as "paræsthesia," are of very little consequence as regards the question of paralysis. They are very often present in those forms of paralysis in which there is a destruction of the tissues in the spinal cord, but not present when there is no such destruction going on in the spinal cord. They are not, in themselves, indicative of disease. I have met perhaps a thousand cases where persons have said to me, "Doctor, I am going to have paralysis; my hand is numb; one side of me is numb; my face is numb." These symptoms are very seldom indicative of paralysis.

When a patient says this, I apply an æsthesiometer (an instrument having two points which can be approached or separated, so as to indicate sensibility). It is possible to feel these points separately, in a state of health, at certain distances. For example, if the skin is sensitive when these points are approached to within one tenth of an inch, the patient's condition is nearly normal; but if the points must be separated one fourth of an inch before they can be distinguished as two points when the eyes are closed, there is a loss of tactile sensibility. But the condition to which we have referred is simply one of morbid, perverse sensation, and these perversions of sensation frighten many people; they fear they are going to have paralysis.

Some time ago a gentleman came to me as a patient who had been having sensations of this sort for ten years. "Doctor," said he, "I am in imminent danger. I have been having these numb, creeping, crawling sensations for ten years. I have never told my wife or children about it, but for the last ten years I have lived in constant expectation of being paralyzed at any moment." He had been very brave; he had kept all his burdens and fears to himself; and yet, the poor man was simply frightened. There was nothing in the world the matter with him but a dilated stomach.

A dilated stomach affects the sympathetic center which is at the back of the abdominal cavity, and produces these perverted sensations through an irritation of this great sympathetic center, and by a reflex action of the sympathetic center causes an irritation of the sensory center in the brain or spinal cord. These sensations, however, do not indicate a diseased condition of the nerve center, they mean a diseased condition somewhere else. A vast number of cases of these reflex actions of the nerve centers come from disorders of the bowels, stomach, and spleen.

NEW MODE OF ARTIFICIAL RESPIRATION. — As every person may be called upon sometime to make immediate application of some mode of artificial respiration, as in case of apparent death from drowning, suffocation, heart failure, etc., the following simple method of producing artificial respiration ought to be given as great publicity as possible. This method was devised by an eminent French physician, who recently reported two successful cases to the Academy of Medicine, Paris. The method consists in opening the patient's mouth, and placing a spoon or some other object between the teeth, then seizing the tongue and making artificial traction, the movements being made at about the same rate as ordinary respiration. By this exceedingly simple method, respiration may be incited in many cases in which there seems to be no possible hope of the resuscitation of the patient. At the same time intermittent compression of the chest is made. Success may be achieved in many cases in which either method used alone might prove unavailable.

MILK FOR BURNS.—A practical physician recommends cloths saturated in milk as one of the best remedies for burns. A bad burn treated in this way healed with surprising rapidity, although other remedies had been used without benefit.

TO REMOVE FOREIGN BODIES FROM THE THROAT.—We find recommended in a recent medical journal, as a means of aiding in the expulsion of foreign bodies from the throat, the procedure of blowing forcibly into the ear. By this means, powerful reflex action is excited, which aids in the expulsion of the foreign substance.

PARLOR DANCES AND GERMS.—Dr. Schneck, a member of the Illinois Medical Society, calls attention to the fact that parlor dances usually take place on carpets, stirring up the accumulated dust of the previous six months, and thus exposing the participants to infection with a miscellaneous array of microbes, some of which may be responsible for the coughs and consumptions which are often traceable to this form of dissipation.

NOT ERUDITE.—An Indiana charlatan displays his ignorance by condemning the use of Latin in medicine, declaring that he had cured a great many cases of *e pleuribus unum* under the name of pleurisy, a simpler name, less likely to frighten poor people than the one he denounces, which he declares "sounds like a sure killer every time."

A medical contemporary, we are sorry to say, is not far behind the quack doctor referred to, in neglect of classical Latin, as shown by the expression of the hope that the *vox populi* may have good reason for their hypothesis that bilberries are a good remedy for diabetes.

POISONING BY TINNED MEATS.—The extensive use of tinned meats, such as corned beef, ox-tongue, etc., at the present time, renders it important that the public should be informed of the fact that such meats are not infrequently the cause of dangerously poisonous symptoms. In a case reported in a recent number of the *British Medical Journal*, five persons were made very sick by eating a portion of freshly opened tinned ox-tongue. Two of the persons barely tasted the meat, one ate a portion as large as a shilling, and two others only ate an omelet which had been divided by a fork which had previously been used in carving the tongue, and had not been washed. The symptoms were severe pain in the abdomen, uncontrolable vomiting and purging, and collapse. Two of the persons were for some hours in great danger of death. One was unconscious for several hours. In the worse cases the patients were very ill for several days. The peculiarity of poisoning of this sort is that the poisonous effects are not apparent immediately, but only after there has been time for the development of the germs which have been swallowed, and the production of the ptomaines which are the immediate cause of the poisonous symptoms.

HOW TO CURE OBESITY.—The most recent, and we believe the most practical and successful, method of treating obesity, consists in limiting the patient to a single article of diet. No great importance is attached to the kind of food taken, the virtue of the method consisting in the fact that if obliged to subsist upon a single article of diet, the appetite soon diminishes to such an extent that only the amount of food necessary to prevent actual starvation can be tolerated by the patient, and thus the accumulation of surplus material is drawn upon to sustain life, and the weight is rapidly diminished. By the addition of exercise of such kind and amount as is adapted to the patient's condition, a cure may be facilitated. The case of a patient treated by this method has recently been reported, in which the weight had been reduced, within a few months, from more than 400 to 142 pounds.

WHAT IS MALARIA?—There is probably no medical question of equal importance which has been more patiently discussed and studied, in relation to which there still remains so great a diversity of opinion. The London *Lancet* recently instituted a commission of inquiry for the purpose of determining the nature of the so-called malarial fever in tropical Africa. The conclusion arrived at was that malarial fever is the result of an animal parasite invading the body, and developing in the blood. Eminent physicians in France, Italy, India, and America, have arrived at a similar conclusion respecting the malarial diseases which prevail in the countries mentioned. Nevertheless, there are medical authorities of equal eminence who still maintain that in any intermittent fever, as in various forms of malarial disease, there is no parasitic infection of any sort, but that the disease is simply the result of errors in personal hygiene or the effects of chill. The investigation of the subject is still being carried on by eminent men in various parts of the world, and it is hoped that before many years the question will be definitely and satisfactorily settled.

How to Remove Corns and Callosities.— Moisten the corn or thickened skin with alcohol, then cover with a layer of pure crystallized salicylic acid. Place a little bit of cotton wool over this, moisten with a saturated solution of boracic acid, and cover with a piece of gutta-percha tissue. Apply a bandage over the whole, to keep the dressing in position. If the callosity is not very thick, the dressing may be removed in four or five days, when the indurated skin will be found detached from the tissues.

When the callous is very thick, as is sometimes the case, especially upon the sole of the foot, the dressing may be left in place for ten days, or may be renewed at the end of four or five days.

The Use of Fruit.— Thousands of persons abstain almost wholly from the use of fruit, and maintain that they are unable to eat it, that it disagrees with them, etc., who would be greatly benefited by its use by simply observing the precaution to avoid the use of cane sugar. Such persons will find that ripe, sweet, or sub-acid fruit may be taken raw without difficulty, if well masticated, and taken at proper times, as at meals. The eating of fresh fruit is one of the most salutary of all dietetic practices. The substitution of an abundance of fresh fruit for the greasy meats, pastry, ices, condiments, pickles, and other unwholesome viands, so abundantly consumed by the average American, would be found a preventive measure of great value against such diseases as rheumatism, gout, nervous dyspepsia, neurasthenia, and a host of other distressing ailments.

The Significance of Children's Cries.— The significance of the cry of young children as an indication of the location of a diseased process, has long been recognized. The importance of noting symptoms of this sort is very great, in consequence of the inability of the young child to explain the nature of his ailment in words. A careful study of the relation of the cries of children to various ailments, has resulted in the formulation of the following facts: —

1. *A peevish, muffled cry.*— This is observed in pneumonia and capillary bronchitis. The breathing of the child is seriously interfered with and labored, and hence violent crying is naturally impossible.

2. *A hoarse, brassy cry.*— This is the cry of croup. It is accompanied with crowing respiration.

3. *A sharp, shrill, solitary cry.*— This peculiar cry, uttered at intervals of considerable length, is indicative of cerebral disease, particularly hydrocephalus.

4. *A moaning or wailing cry.*—This cry is particularly observed in marasmus, or tubercular peritonitis. It is usually indicative of abdominal disease.

5. *Continued or obstinate crying.*— Such crying indicates earache, thirst, hunger, the pricking of a pin, or possibly a bad temper, or general nervousness.

6. *Whining* indicates exhaustion.

7. Crying just after coughing, or while moving the bowels, indicates pain during the act.

The absence of crying is a much more important indication than its presence, as it indicates complete exhaustion, unconsciousness, and hence a grave condition.

Washing the Stomach to Relieve Convulsions. — It is known that convulsions in children are, in the great majority of cases, due to the presence of indigestible food in the stomach. The processes of fermentation and decomposition which are taking place in the undigested mass, result in the production of poisons, which are absorbed into the blood, and act upon the nerve centers in a manner similar to that in which strychnia and other powerful poisons operate. The promptness with which relief has often been obtained in these cases by the use of an emetic, demonstrated long ago the importance of relieving the stomach of its decomposing contents in the treatment of cases of this kind; but, unfortunately, it is frequently impossible to administer medicine of any sort, as the child, when found, is unconscious and unable to swallow. In a recent medical journal, a physician reports success in the treatment of a case of this sort by using a stomach tube, and thus thoroughly removing at once the irritating and poisonous stomach contents which were the cause of the condition. As the result, the convulsion ceased at once, the child fell into a peaceful slumber, and the next morning was as well as usual. This means will doubtless prove, in the hands of skillful men or a nurse who has been trained in the use of the stomach tube, the most efficient of all means of relief in these distressing cases.

Remedy for Earache.— Dip a little cotton into sweet oil heated as hot as can be borne, and drop it in the ear, previously preparing the ear for the cotton by seizing its upper portion and drawing it upward and backward, so as to open and straighten the canal. Chloroform, laudanum, and similar substances should never be put into the ear. Cotton should be introduced only with a pair of suitable forceps or tweezers.

ANSWERS TO CORRESPONDENTS.

REMEDY FOR DANDRUFF.—E. P. W., Mont., asks for the best remedy for dandruff.

Ans.—A simple and very effective remedy is a mixture of equal parts of alcohol and castor oil. Apply after a thorough shampoo of the scalp two or three times a week.

THE USE OF MENTHOL IN CATARRH.—T. M. K. wishes to know how menthol should be used in an aggravated form of catarrh, and also in the first stages.

Ans.—Menthol is a valuable remedy in all stages of catarrh. It is a harmless remedy, and will be found beneficial in most cases.

EARACHE.—F. B., N. Y., wishes to know the cause and cure of earache.

Ans.—Earache is usually due to a congestion or inflammation of the middle ear. Fomentations, a hot ear douche, or the application of dry heat, as with a hot-water bottle or a bag of heated sand, are useful measures. In some cases the services of a specialist are required.

FORMULA FOR SALOPHEN.—A subscriber asks for the formula of salophen, said to be a positive cure for rheumatism.

Ans.—Salophen is not a patent medicine. It is a drug of definite chemical composition, the same as quinine, opium, or any other drug. It is not a panacea for rheumatism, but is an excellent antiseptic; and as intestinal fermentation and putrefaction are present in most cases of rheumatism, this remedy is valuable as an intestinal antiseptic.

THE CAUSE OF NERVOUS PROSTRATION.—Mrs. J. D. S., of Georgia, wishes to know the cause of nervous prostration, and what treatment to give.

Ans.—"Nervous prostration," or neurasthenia, is the result of a variety of causes. It is not a disease in itself, but is rather a symptom of disease. In the majority of cases of so-called nervous prostration or nervous exhaustion, disordered digestion will be found to be the foundation of the malady. The treatment consists in removing the cause and employing all means by which the general health and vigor can be improved. In some extraordinary cases absolute rest is required; in others, vigorous exercise. Each case must be treated on its own merits, and in relation to the cause rather than the symptoms.

THE EATING OF FATS, GREASY FOODS, ETC.—J. V. B., N. J., asks the following questions: "1. Is the eating of fats and greasy foods or the use of sugar a detriment to one who is inclined to constipation? If so, why? 2. Is it a detriment to one's health to habitually abstain from a certain meal once a week? 3. Is it injurious for a student regularly to take a nap of about fifteen minutes after the noon meal?

Ans.—1. Yes; for the reason that such a dietary induces inactivity of the liver. 2. No. Rather beneficial than otherwise. 3. Probably not, but a long sleep after eating is harmful.

CASTORIA.—THE TREATMENT OF HERNIA.—D. J. C., Oregon, asks, "1. Do you regard 'Castoria' as a proper medicine for children? 2. What is the best treatment for rupture in infants? 3. What is your idea of the use of trusses in cases of rupture? 4. Certain parties claim to cure hernia permanently without the aid of truss or knife. Is this possible?"

Ans.—1. No. 2. The surgeon should be consulted and a truss applied. 3. Trusses, when properly applied in the case of young children, often result in a cure. 4. Possibly, but not probably. We have made a thorough trial of the methods referred to, and while they sometimes succeed, failure is the rule.

PIN WORMS.—M. M., Iowa, wishes a remedy for pin worms.

Ans.—The best remedy is thorough emptying of the bowels by means of a large enema, or coloclyster, taken with the patient in the knee-chest position so that the water introduced may empty the entire large intestine, and may reach the cæcum, which is the seat of the disease; to be followed by a decoction of quassia made by adding four ounces of quassia to a gallon of water, and steeping over night. The water which evaporates should be replaced so as to make the decoction measure a gallon when used. One, two, or three quarts may be introduced, according to the capacity of the bowels. Care should be taken that the entire colon is filled. After retaining it for ten or fifteen minutes, or half an hour if possible, the solution should be discharged, and the bowels washed out with water. The remedy should be used two or three times a week, care being taken to empty the bowels thoroughly before applying the quassia solution. If necessary, a little soap may be added to the water used for the enema, before the quassia decoction is administered.

RELIEF DEPARTMENT.

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

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

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

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

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

The following list contains the names and addresses of persons who have kindly consented to act as agents for us in this work, and who have been duly authorized to do so. Facts communicated to any of our local agents in person will be duly forwarded to us.

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

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

HEALTH AND TEMPERANCE AGENTS.

COLORADO.

Barraclough, Mrs. Tillie E., Trinidad.
Ragan, Mrs. May, Loveland.
Shaw, S. B., Colorado City.
States, Geo. O., Eckert.
Tait, Mrs. J., 80 So. Wash. St., Denver.
Voris, Mrs. Addie, Canon City.
Wilson, J. B., 1019 E. Ash St., Pueblo.

ILLINOIS.

Smith, Wm. B., care 28 College Place, Chicago.

IOWA.

Curtis, B. F., Sibley.
Ferguson, Mrs. R., Kalona.
Frederickson, C., Sioux City.
Hansen, P. A., Ruthven.
Harrington, Mrs. Jennie, Clermont, Fayette Co.
Holliday, Mrs. Honor, Coon Rapids.
Jacobs, Mrs. Mariette, Fontanelle.
Johnson, John H., Box 57, Exira.
Moss, Anna M., Fairfield.
Owen, Mrs. M. R., Columbus Junction.
Rounds, Mrs. L. D., Albia.
Slife, N. A., Paralta, Linn Co.
Watkins, Maggie, Eddyville.

KANSAS.

Bridges, Mrs. Clarissa C., Beloit.
Morgan, M. C., Wathena.
Kirk, Chas. F., Phillipsburg.
Mc Mullen, F. M., Oronoque

MASSACHUSETTS.

Bradford, Anna A., Acushnet.
Comins, J. S., Holyoke.
Jernegan, S. B., 7 George St., Lynn.
Lays, James, Brockton.
Merry, E. L., Vineyard Haven.
Payne, W. L., Charlemont.
Smith, A. W., Worcester.

MICHIGAN.

Ac Moody, E. C., Tekonsha.
Alkire, Mrs. Lizzie, Bear Lake.
Bailey, G. P., Bunker Hill.
Baker, Leonard, Fife Lake.
Carman, G. F., Potterville.
Carpenter, Marcus L., Fremont.
Conway, Robert, Frankensmith, Saginaw Co.
Dennis, Mrs. J. D., Williamston.
Ferris, James F., Meauwataka.
Ford, Augustus, 39 State St., Hillsdale.
Hall, John, Akron.
Hanson, H. E., Shelby.
Hatch, J. A., Watrousville.
Heckert, D. B., Ogden Center.
Hempstead, G. L., Flint.
Irwin, John, Jr., Pomona.
Jessup, Joseph, Gaylord.
Kellogg, A. F., Leroy.
Kneeland, L. B., Orleans.
Lawrence, C. A., Brookfield.
Malin, D., Vassar.
Mc Connell, Robert, Memphis.
Mc Cormick, Mrs. E. L., North Branch.
Mc Farland, G., Montague.
Mc Neil, Francis, Imlay City.
Mc Omber, Maggie, Fenton.
Perrine, Geo. C., Eaton Rapids.
Phippeny, Mrs. R. F., Cedar Lake.
Roberts, J. C., Parma.
Snyder, Anthony, Pittsford.
Stringer, Mrs. Carrie, Lapeer.
Sweet, J. W., Ypsilanti.
Thompson, J. H., Quincy.
Trotman, John, Traverse City.
Tyler, D. S., N. Muskegon.
Westphal, Mrs. G. C., Brighton.
Wheeler, F. A., Sherman.
Young, S., Ionia.

MISSOURI.

Beasley, N. H., Poplar Bluff.
Chapin, J. S., Bolivar.
Clarke, Joseph, Lowry City.
Davis, James W., Sedalia.
Duxbury, Robert, Pacific.
Evans, Wm., Hamilton.
Flower, A. E., 3211 Salisbury St., St. Johns.
Hobb, Josephus, Kingsville.
Hollingsworth, O. S., Antler.
Hoover, H. T., Memphis.
Hoover, T. A., Nevada.
Moore, J. Scott, Henderson.
Rice, F. J., Appleton City.
Santee, C., Carthage.
Sellarck, T. J., Fredericktown.
Tovey, W. B., 1411 E. 16th St., Kansas City.
Willis, H. K., Pleasant Hill.

NEW HAMPSHIRE.

Farnsworth, Ellen G., Washington.

NEW YORK.

Bowe. E. A., Batavia.
Cobb, . C., South Russell.
Dobbins, James, Jamestown.
Eaton, W. C., Jeddo.
Evans, David, Black Creek.
Gleason, Alex., 1201 Niagara St., Buffalo.
Hicks, F. H., Salamanca.
Jones, Ellen E., Frankfort.
Lindsay, C. W., Coomer Sta.
Pratt, Chas. N., Keene Center, Essex Co.
Raymond, N. S., Wheeler.
Simkin, Wm., Wellsville.
Taylor, C. O., Norfolk.
Thurston, S., 214 Winsor St., Jamestown.
Treadwell, Wm., Pennelville.
Tuttle, A. E., Watertown.
Tyrel, M. S., North Creek.
Vanduzer, A. J., Newburg.
Weston, Orvin, Pierrepont.
Whitford, Irving, Adams Center.
Willson, J. V., 317 W. Bloomfield St., Rome.

OHIO.

Peterson, John, Box 25, Astoria.
Van Horn, E. J., 74 Kinsman St., Cleveland.

OREGON.

Burden, Warren J., Montavilla.
Hurlburt, E. D., St. Johns.
Johnson, C., Marquam.
Logan, L. A., Elk City.
Morrison, Isaac, Talent.
Tabor, B. L., 163 Winter St., Salem.
Wait, V. O., Albany.

PENNSYLVANIA.

Barron, Wm., Montrose.
Bowersox, A. S., New Columbia.
Butzer, J. L., Spartansburg.
Kagarise, J. S., Salemville, Bedford Co.
Matteson, Mrs. A. J., Mill Village.
Parker, J. M., Mexico.
Spencer, Anthony, Canton.
Voorhees, L. W., Shinglehouse.
Williams, I. N., Washington.
Williamson, C. H., Washington.
Zeidler, W. H., 23rd Ward, Pittsburg.

PROVINCE OF QUEBEC.

Dingman, Darwin, So. Bolton.
Hammond, Mrs. D. H., So. Stukely.
Rickard, H. E., Fitch Bay.

RHODE ISLAND.

Stone, Mrs. S. D., Apponaug.

WASHINGTON.

Barber, O. W., Carrollton.
Barrett, T. H., Box 113, Wilkeson.
Nellis, S. W., 309 Poplar St., Seattle.

WEST VIRGINIA.

Bowen, Mrs. G. L., Newburg.

WYOMING.

Worth, Mrs. Prudie, Buffalo.

TEMPORARY HOMES.— It is often necessary to find a temporary home for a homeless and friendless child, while a permanent home is being found for the little one. We are glad to announce that the following persons have volunteered to open their homes, in case of emergencies, to such needy ones. We shall be glad to add to the list. Correspondence with these persons should be conducted through this office.

Dennis, Dr. J. D., Michigan.
Van Essen, E., Michigan.
Kirk, Wm., Michigan.
Snyder, Anthony, Michigan.
Snyder, F. D., Michigan.
Snyder, Henry, Michigan.
Wallace, John, Michigan.

A SUFFERER FOR FOURTEEN YEARS.— Miss C., of Iowa, writes us that she has been a chronic sufferer for more than fourteen years, as the result of overlabor, and has finally come to be a complete invalid, but is nevertheless compelled to labor for the necessities of life for herself and her aged mother, with whom she lives. Notwithstanding her feeble health, this poor woman is doing all she can for others, and writes especially in behalf of other needy persons, only incidentally mentioning her own poor health. We shall take immediate steps to secure for her such treatment as her case requires, in the Sanitarium Hospital.

TWO BOYS WHO NEED A HOME.— A friend writes of the case of a poor German lady, whose husband is a drunkard, and makes the life of the poor woman and her children almost unendurable. She wishes to find homes for her two boys, aged respectively fourteen and fifteen years, where they will have Christian care and education. The family is in great poverty in consequence of the drunken habits of the father. Who will offer these boys a home?

A YOUNG GIRL WHO NEEDS A MOTHER'S CARE.— A girl of thirteen, bright, with many good qualities, has no home except in a family where the husband is intemperate, and the woman, though kind, cannot give her the care which she needs. She is thus drifting into evil associations. She sorely needs a home where influences will be thrown around her that will serve to keep her in the path of purity and honor. What mother heart answers to this appeal?

FOUND A HOME.— We are glad to report that several desirable homes have been offered for the little girl of eight years, whose case was mentioned in these columns last month. We had not expected so hearty a response to the appeal made in behalf of this unfortunate little one, and are greatly obliged to the good friends who are so ready to second our efforts in finding relief for the needy and unfortunate.

LITERARY NOTICES.

THE *American Woman's Journal* for January, 1893, is illustrated with fine portraits of Elizabeth Cady Stanton, Susan B. Anthony, and Rev. Anna H. Shaw.

"WHY YOUNG PEOPLE DIE," is a timely consideration of a most important subject. It is ably discussed by a layman, Mr. Frederic M. Heath, and is to be published by Fowler & Wells Co., New York.

"NOTES BY A NATURALIST."— By H. N. Moseley, M. A., F. R. S., late Fellow of Exeter College, Oxford. New and revised edition, with map, portrait, and woodcuts, and a brief memoir of the author. Cloth, uncut, 8vo. Price, $2.50. G. P. Putnam's Sons, New York and London. An account of observations made during the voyage of H. M. S. "Challenger" round the world in the years 1872–76, under command of Capt. Sir G. S. Nares and Capt. F. T. Thomson.

THE finely illustrated article on "Women's Work in the University of Michigan," in the *Literary Century*, for December, has justly caused a considerable demand for that magazine. The article in question is a valuable contribution to the history of the philanthropic work of Michigan women. In sending our young daughters and sons to this, the greatest educational institution of our State, this valuable factor in their student life — the moral, and social influence thrown about them by the wives of the leading professors — has never been taken into account. Send 10 cents for a copy, and learn all about it. The *Literary Century*, Ann Arbor, Mich.

CONTENTS of the Propaganda Envelope of the Society for the Promotion of Physical Culture and Correct Dress: "Annual Club Book;" "Artistic Dress," by Mrs. Frances M. Steele; "Fashion's Slaves," by B. O. Flower; "The Unreasonableness of Modern Dress," by Bayard Holmes, M. D.; "The Corset," by R. L. Dickenson, M. D.; "The Influence of Dress in Producing the Physical Decadence of American Women," by J. H. Kellogg, M. D.; "Scientific Shoes," by Samuel Appleton; "Perfection Bust Supporter," by Mrs. C. D. Newell; "Hygienic Underwear," by Jaros; "Ypsilanti." The entire envelope sent by mail, postpaid, on receipt of 50 cents. Address orders to Mrs. H. F. Kett, 3552 Prairie Avenue, Chicago; or, Mrs. Underwood, Women's Club, Atheneum, Chicago.

"CONCERNING ALL OF US."— By Thomas Wentworth Higginson, 210 pages, 16 mo., cloth, ornamental. Price $1. Harper & Brothers, New York. Twenty-nine short essays on a variety of subjects, social, literary, and ethical. They are characterized by that grace of diction and that wisdom and candor of expression which have gained for their writer the title of "the prince of essayists." The volume is uniform in style with Curtis's "From the Easy Chair," Howells's "Criticism and Fiction," and Warner's "As We Were Saying."

THE *Pansy* for February is replete with good things in story, sketch, and verse. The American Literature paper this month deals with Hawthorne and Emerson. Good portraits of both these writers appear; also three fine illustrations of the Wayside, the Study in the Tower, and the Larch Path. The serials run along in the even, natural way which "Pansy" and "Margaret Sidney" so well know how to develop, and the number throughout, we may add, has not a dull line in it. Price $1 a year; 10 cents a number. D. Lothrop Company, Publishers, Boston.

"A MOTHER'S LETTER TO HER SON," by Mrs. Mary Clement Leavitt, has just been published as a four-page leaflet, No. 26 of the *Philanthropist* Series. It is admirably adapted to meet the needs of mothers as a welcome help in imparting much needed instruction to their sons concerning the obligation to live chaste, pure lives. Plain truths are delicately told, with an effective appeal to the higher, spiritual nature. It merits a very wide circulation, and ought to be placed in the hand of every boy and young man in the land. Price by mail, 10 cents per dozen; 50 cents per hundred. Address, the *Philanthropist*, P. O. Box 2554, New York.

"THE CYCLE INFANTRY DRILL REGULATIONS," a convenient pocket manual of 70 pp., prepared by Brigadier General Albert Ordway, and published by the Pope Manufacturing Co., Boston, has been approved by the highest military critics, has been subjected to the test of actual use, and is without doubt as nearly perfect as any drill book on the subject can be. To the army, militia, and thousands of cyclists, this book is alike valuable and instructive; but it is not only of value to these classes of the community, but the entire public is concerned to a greater or less extent in the work that cyclists everywhere are engaged in,— that of promoting the improvement of highways.

PUBLISHERS' DEPARTMENT.

JAMES CLEMENT AMBROSE, while on a late lecture tour through Michigan, stopped at the Sanitarium, and one evening delivered his lecture, "The Scholar in Politics," a very earnest plea for intelligence at the polls, regardless of sex. Though scholarly and thoughtful throughout, it was enlivened with wholesome wit and quaint sayings, and was greatly appreciated by his cultivated audience.

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THE Sanitarium guests were recently entertained by a talk given by Asad M. Rustum, a young Syrian, son of the Rev. Michael Rustum, who has been for twenty-two years a missionary among the people of his native land, but who is now preaching to the Syrians of Chicago. A Mahommedan marriage ceremony was illustrated in native costume. The young man is a graduate of the University of Beirût, and is in this country to prepare himself the better for Christian missionary work. He was accompanied by his sister, a bright girl of fourteen, who joined her brother in singing a few Syrian hymns and songs.

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CANNOT KEEP HOUSE WITHOUT IT.— Mrs. G. L. Bowen, of Newburg, W. Va., writes as follows respecting Mrs. Kellogg's "Science in the Kitchen" : —

"For some weeks I have been feeling a desire to tell you how much benefit your valuable work, 'Science in the Kitchen,' is to us. I had longed and waited for it, and feel well repaid for doing so. I could not keep house without it now — at least would not desire to try. We are learning to enjoy and appreciate it more and more. Of course its principles are all new to me, but I have good success in following your recipes, and take much pleasure in it. Our health is also benefited. Accept my heartfelt gratitude for your painstaking labor in compiling it."

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THE NATIONAL ROAD DEPARTMENT PETITION.—Hon. Albert A. Pope, of Boston, Mass., who has so actively interested himself in the improvement of roads in the United States, some time since circulated a petition for a National Road Department, at Washington, which has been signed by thousands of our most prominent citizens thoughout the country. As over 100,000 of these petitions were sent out by Mr. Pope, while comparatively few have been returned, there must still remain a large number in the hands of persons who have neglected or forgotten to return them. In regard to these, Mr. Pope asks, as a favor, that we will remind our readers that all the signed petitions should be mailed to him at once.

It has been asserted by some that the creation of the Road Department would place the roads of the country under the control of the general government, thus taking away all State supervision. But the object of the Road Department is simply educational, to promote knowledge in the art of constructing and maintaining roads, and in no way does it ask for a single dollar of the people's money to be spent by the National Government for the purpose of constructing national roads.

In behalf of this greatly needed reform, we would urge it upon our readers to write to the members of Congress from their districts, requesting them to aid in the passage of the bill which will accompany this petition. It is only by the co-operation of individual efforts that great results can be obtained, and this great movement for good roads is of incalculable importance to every city, town, and State, throughout the country.

THE Michigan State Board of Health has brought before the State Legislature a bill requesting that the State return to the 120° flash test for kerosene oil, using an improved apparatus in testing the oil. Several other proposed improvements of the public health laws were discussed, one providing for a public sanitary meeting, annually, in each township, city, and village, and for the adoption of estimates for sanitary work and expenditures. Such a law would advance the public health service in very much the same way that the annual school meeting advances the cause of education. Another bill is to prevent the introduction of any dangerous disease into any township, city, or village, permission of the local health officer being required before the entrance of any person or thing liable to contain infection. Another is a bill to authorize the destruction of infected clothing, etc., and to provide compensation therefor. Another bill is for an appropriation to enable the State Board to have an inspector to visit localities, and investigate outbreaks of dangerous communicable diseases, and aid localities in restricting them,— work with reference to human diseases similar to that which has long been done by the State Veterinarian with respect to diseases of animals.

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THE World's Fair Temperance Headquarters, which has been so widely noticed, and in which over 20,000 temperance people have become deeply interested, with the intention of making their home at that place during the World's Fair, is no more. On the evening of the 9th the great Hotel stood complete. At 9 o'clock on that evening a fire broke out in the portion of the building where the painters' supplies were stored. The wind was blowing a genuine western blizzard, and it was on one of the coldest nights of the winter. It was found impossible to extinguish the flames, and the building was completely reduced to ashes. In this experience, however, the nature of Chicago enterprise and the metal of our temperance people have both at once been given a full illustration.

Within sixteen hours after the flames were out, lumber was already being placed upon the site, and plans were on foot for rebuilding. The loss is largely covered by insurance. The building will be rebuilt on plans submitted to, and approved by, the insurance authorities, and will be made the safest building of its sort in the world. The office of the headquarters at 161 La Salle Street, Chicago, has been flooded with letters from the guests who had engaged lodgings in advance, and without exception it is the declared purpose of its patrons, as well as the plans of its promoters, to stand by the enterprise, and make it even a larger success than at any time before proposed, notwithstanding its misfortune.

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A SANITARY DAY.— The State of Pennsylvania proposes to have a Sanitary Day, similar to Arbor Day, Labor Day, etc., the idea being to devote one day in the year to the special business of cleaning up. The thought is certainly a capital one, for, as at present managed, house cleaning and yard cleaning are conducted in a most desultory fashion. People who consider themselves very respectable, clean up their houses and premises at least once a year, which is certainly highly conducive to health. It is not every house or premises, however, that is so fortunate as to receive the benefit of a thorough renovation for the expurgation of filth so often as once a year. Several years doubtless pass in

many instances, in which nothing of this sort occurs. To be sure, house cleaning once a year does not fully meet the demands of hygienic requirements; nevertheless, it is better to clean once a year, or even once in five years, than not at all. So we are heartily in favor of a Sanitary Day.

It is to be hoped that the State Board of Health of Michigan will memorialize our State Legislature for the appointment of a Sanitary Day. Through the efforts of local health officers and Boards of Health, such a day could be made of immense sanitary advantage to the State. Just preceding the day appointed, public meetings could be held, sanitary tracts distributed, and instructions given respecting house cleaning, disinfection, etc., and if necessary, facilities could be offered for the assistance of those unprepared to undertake the work for themselves. The establishment of a regular annual Sanitary Day would bring into existence a class of persons who would devote themselves especially to the work of house cleaning, disinfection, etc.; and by the aid of the local health officers, these persons could be made intelligent about their business, so that it might be carried on in accordance with the latest acquirements of scientific science. By all means let us have the Sanitary Day.

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LOOK out for cold weather, but ride inside of the Electric Lighted and Steam Heated Vestibule Apartment trains of the Chicago, Milwaukee & St Paul Railway, and you will be as warm, comfortable, and cheerful as in your own library or boudoir. To travel between Chicago, St. Paul, and Minneapolis, or between Chicago, Omaha, and Sioux City, in these luxuriously appointed trains, is a supreme satisfaction; and, as the somewhat ancient advertisement used to read, "for further particulars, see small bills." Small bills (and large ones too) will be accepted for passage and sleeping car tickets. For detailed information, address Harry Mercer, Michigan Passenger Agent, Detroit, Mich.

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*

"IMPROVEMENT THE ORDER OF THE AGE."—In following this motto we have been obliged to lay aside the old Standard Remington machine, and adopt the new Standard Smith Premier.

The Smith Premier Typewriter embraces many special features, which greatly facilitate work, and give promise of great durability. The carriage is run upon steel balls; the type arms are hung on conical bearings 1⅝ inches apart, in this way controlling both carriage and type arm, alignment is assured, and great speed can be acquired.

Mr. L. C. Smith, proprietor of the business, formerly made and sold the D. C. Smith hammerless gun, and has had wide experience as a manufacturer. He has struck another bonanza in this machine.

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*

A MOST BEAUTIFUL CALENDAR.—The Columbia cycling calendar for '93 is the most exquisite and truly artistic of practical calendars for the year. It begins with February, '93, and ends with February, '94. It consists of a circular piece of cardboard, 47 inches in circumference, the calendar picture being framed with a reproduction of the pneumatic rubber tire. The picture is in fifteen water colors, and represents a country scene with a bicycling couple in the foreground, resting in a cosy nook, after a delightful ride. The original picture is by a celebrated American artist, and the reproduction is so close to the painting that one hardly realizes that the delightful tones and shades are not the true brush marks. This calendar, issued by the Pope Mfg. Co., of Boston, is adapted for the library, dining-room, parlor, or business office.

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*

WHERE TO LOCATE NEW FACTORIES.

THIS is the title of a 150-page pamphlet recently published by the Passenger Department of the Illinois Central Railroad, and should be read by every mechanic, capitalist, and manufacturer. It describes in detail the manufacturing advantages of the principal cities and towns on the line of the Southern Division of the Illinois Central, and the Louisville, New Orleans, and Texas Railroads, and indicates the character and amount of substantial aid each city or town is willing to contribute. It furnishes conclusive proof that the South possesses advantages for the establishment of every kind of factory, working wool, cotton, wood, or clay. For a free copy of this illustrated pamphlet, address C. C. Power, Foreign Representative, 58 Michigan Ave., Chicago, Ill.

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Chicago & Grand Trunk R. R.

Time Table, in Effect June 26, 1892.

GOING WEST.						STATIONS.	GOING EAST.				
p m	p m	a m	p m	.....	.....	..... Boston	.....	a m	p m		
7.15	3.00	11.00	7.00					7.00	8.00	9.25	.....
a m	p m	p m	p m					p m	a m	p m	
9.45	5.00	6.30	8.00	.....	.....	..... New York	.....	9.55	7.40	5.07	.....
a m	a m	a m	p m					a m	p m	a m	
12.10	6.20	6.25	1.00	.....	.....	..... Buffalo	.....	8.40	5.50	4.20	.....
a m	a m	a m	p m					a m	p m	a m	
1.35	7.45	8.00	2.45	.....	.....	.... Niagara Falls	.....	7.30	4.10	3.10	.....
a m		p m	noon						a m	p m	
8.30	.....	3.00	12.00	.....	.....	..... Boston	.....	8.05	9.50	.....	.....
a m	p m							p m	a m		
9.30	8.40	....	.....	.....	.....	..... Montreal	.....	8.00	7.00	.....	.....
p m			p m					a m	p m		
11.30	.....	.....	1.00	.....	.....	..... Toronto	.....	8.35	5.25	.....	.....
			p m				p m		a m		
.....	.....	.....	8.00	.....	.....	..... Detroit	9.25	.....	7.45	9.25	.....
Day Exp.	B. C. Pass.	Lmtd Exp	Pacific Exp.		Mail Exp.		Mail.	Lmtd Exp.	Atlto Exp.	Day Exp.	Prt. H Pass.
am	pm	pm	pm	.....	am	Dep. Arr.	pm	am	am	pm	am
.....	3.44	.....	.....	.....	6.19	..... Port Huron	10.01	.....	.....	.....	12.10
6.50	3.49	12.22	8.40	.....	6.25	.Port Huron Tunnel.	9.56	12.35	7.30	8.50	12.05
8.05	5.10	1.27	10.07	.....	7.49	..... Lapeer	8.15	11.20	6.15	7.35	10.45
8.35	5.47	1.55	10.47	.....	8.35	..... Flint	7.30	10.47	5.40	7.05	10.05
.....	4.05	.....	8.00	.....	6.50	..... Detroit	9.25	.....	7.45	9.25	11.50
7.15	4.40	.....	8.25	.....	7.15	..... Bay City	8.37	.....	7.15	8.37	11.30
7.50	5.17	.....	9.00	.....	7.50	..... Saginaw	8.00	.....	6.40	8.00	10.43
9.05	6.50	2.22	11.20	.....	9.35	..... Durand	6.50	10.20	5.03	6.35	9.30
10.02	7.55	3.07	12.20	.....	10.40	..... Lansing	6.10	9.30	4.00	5.40	8.20
10.29	8.30	3.34	12.52	.....	11.15	..... Charlotte	4.34	9 01	3.25	5.11	7.47
11.15	9.25	4.15	1.50	.....	12.25	....BATTLE CREEK....	3.40	8.20	2.40	4.30	7.00
11.53	pm	.....	2.35	.....	1.08	..... Vicksburg	2.33	7.40	1.48	.....	am
.....	.....	.....	.....	.....	1.19	..... Schoolcraft	2.21	.....	.....	.....	.....
12.40	.....	5.45	3.30	.....	2.05	..... Cassopolis	1.29	6 68	12.45	3.07	.....
1.20	.....	6.20	4.10	.....	2.50	..... South Bend	12.45	6.20	12.00	2.35	.....
2.45	.....	7.35	5.45	.....	4.30	..... Valparaiso	11.10	5.00	10.30	1.20	.....
4.50	.....	9.30	8.00	.....	7.00	..... Chicago	8.40	3.00	8.15	11.25	.....
p m	.....	pm	am	.....	pm	Arr. Dep.	am	pm	pm	am	

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EAST.	† Day Express.	*N. Shore Limited	*N. Y. Express.	*N. Fall's & Buffalo Special.	‡ Night Express.	†Detroit Accom'n	*Atl'ntic Express
STATIONS.							
Chicago.....	am 9.00	pm 12.20	pm 3.10	pm 4.55	pm 9.30		pm 11.45
Michigan City	10.58	2.05	4.56	6.39	11.25		am 1.32
Niles.....	pm 12.40	2.57	5.48	7.31	am 12.30		2.50
Kalamazoo	2.05	4.00	7.04	8.57	1.57	am 7.10	4.28
Battle Creek...	2.45	4.30	7.37	9.38	2.35	7.52	5.20
Jackson.....	4.30	5.38	8.52	10.42	4.05	9.40	6.45
Ann Arbor.....	5.30	6.27	9.45	11.27	5.38	10.40	8.05
Detroit.....	6.45	7.25	10 45	am 12.30	7.10	11.52	9.35
Buffalo.....		am 3.00	am 6.25	7.35		pm 7.40	pm 5.00
Rochester.		5.50	9.55	11.20			8.20
Syracuse..		7.50	pm 12.15	pm 2.10			10.20
New York.....		pm 3.45	8.50			am 8.45	am 7.00
Boston.....		6.05	11.05	am 6.15			10.50
WEST.	†Mail.	† Day Express.	*N. Shore Limited.	* Chicago Express.	†Kal. Accom'n	*Pacific Express.	* Chic. Special.
STATIONS.							
Boston.....		am 8.30	pm 2 00	pm 3.00		pm 6.45	
New York.....		10 30	4.30	6.00	pm 8.00	9.15	am 8.30
Syracuse.....		pm 7.30	11.35	am 2.10	am 3.50	am 7.20	pm 2.20
Rochester.		9.35	am 1.25	4.20	5.55	9.55	5.10
Buffalo.....		11.00	2.20	5.30	9.0	11.50	7 45
Detroit.....	am 8.20	am 7 30	9.05	pm 1.20	pm 4.40	pm 9.00	am 2.15
Ann Arbor.....	9.37	8.27	9.59	2.19	5.48	10-27	3.08
Jackson.....	11.35	9.35	10.58	3.17	7.15	am 12.01	4.10
Battle Creek ..	pm 1.18	10 43	pm 12.02	4.30	8.47	1.20	5.20
Kalamazoo....	2.05	11.30	12.39	5.05	9.45	2.18	5.59
Niles.....	4.00	pm 12.40	1.48	6.17		4.15	7.15
Michigan City	5.20	2.00	2.45	7.20		5.35	8.28
Chicago.....	7.35	3.55	4.30	9.00		7.55	10.15

*Daily. †Daily except Sunday. ‡Except Saturday.

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Plain Oatmeal Crackers	10	Gluten Wafers	30	Granola (bulk 10)	12
No. 1 Graham Crackers	10	Rye Wafers	12	Gluten Food No. 1	50
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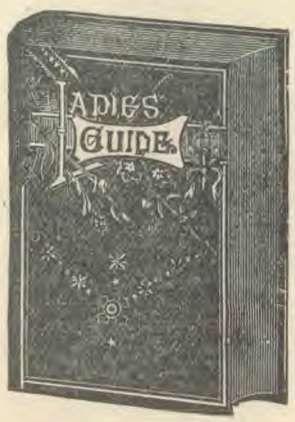

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