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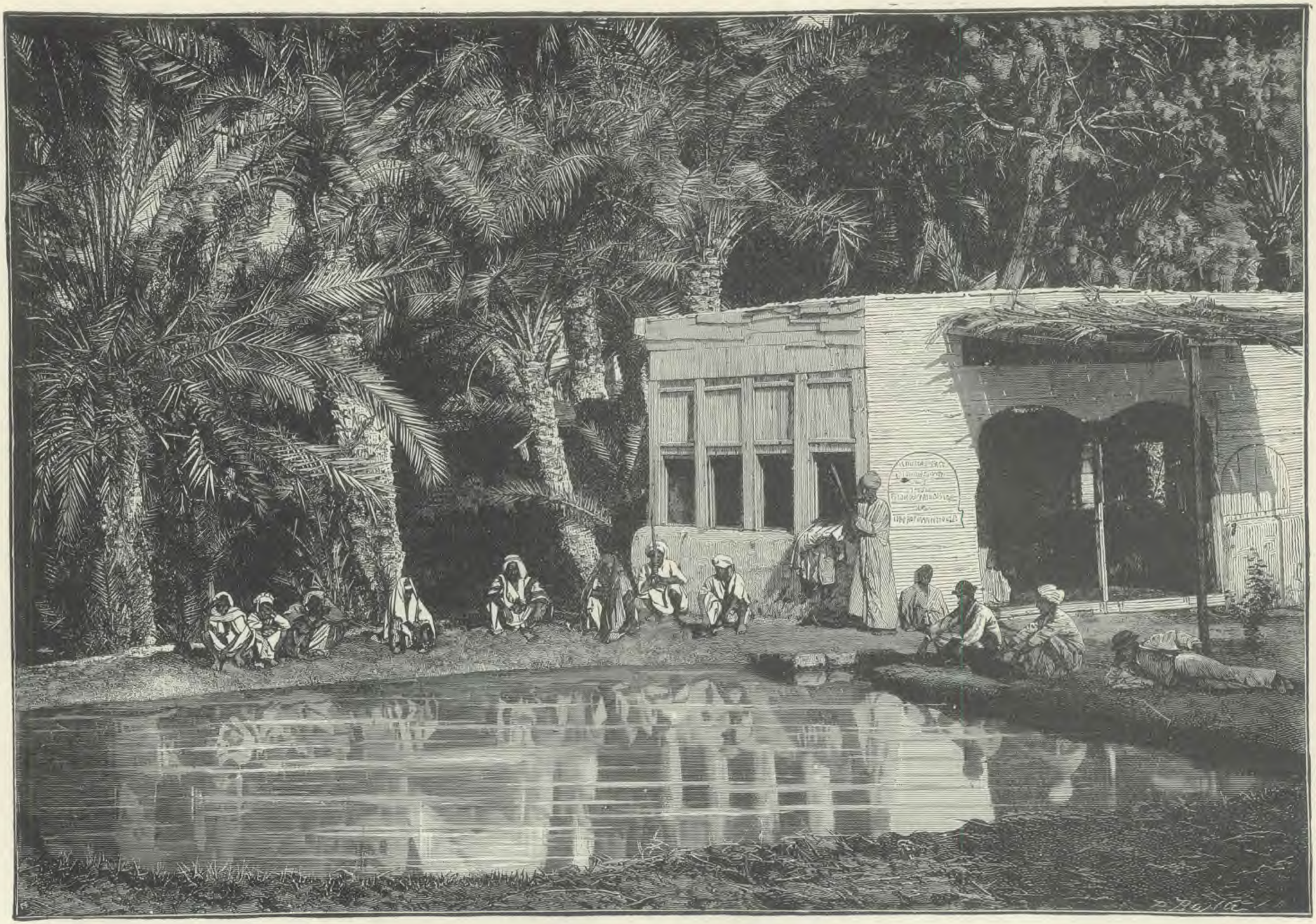

[See Happy Fireside.]

AYUN MUSA, or WELLS OF MOSES.

GOOD HEALTH
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INTERNATIONAL HEALTH STUDIES.

BY FELIX L. OSWALD, M. D.

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

1. — Italy.

A FEW years ago I crossed the Rocky Mountains in midwinter, during a period of more than usually mild weather; but near the summit-station of Marshall Pass, our train was, after all, delayed by a sudden snow-storm. Perfect cloud-bursts of frozen vapor came down in sheets and whirls, and only just before sunset the storm abated, and a gleam of sunlight revealed the wild grandeur of the scenery: Ice-fringed rocks, snow-crowned precipices, and snow-burdened pine-trees, sheltering here and there a dell with a few tufts of mountain grass.

"I should like to live up here for a year or two," said one of my traveling companions, "just for the fun of trying how far human ingenuity could prevail against the disadvantages of the situation, and contrive a little luxury in spite of nature."

For such purposes the Arctic regions, or a highland valley at the brink of everlasting snow, would, indeed, offer every desired opportunity. A comfortable winter camp in Northern Labrador might well elate its constructors with the evidence of man's victory in the struggle of his intelligence against the hostile powers of the elements.

The present condition of Italy, on the other hand, would illustrate, by an equally extreme instance, in how far the perversity and stupidity of man can spoil the most lavish bounty of nature. Considering the climatic advantage, the wealth of spontaneous products, and the incomparably happy geographical situation of the Mediterranean peninsulas, it might well be doubted if science and industry will ever surround the inhabitants of our own continent with the creature comforts which the tenure of an earthly Eden once bestowed on the population of Southern Italy. And yet there is no doubt that the happiest garden-lands of that paradise have been turned into a veritable Gehenna of human degradation and human misery in its most incurable forms.

A thousand years' war against nature has accomplished that prodigy. The reckless devastation of the magnificent forests which once clothed the slopes of the Apennines from Genoa to the Apulian coast-range, has turned a vast area of fertile fruit lands into arid sand hills; highland pastures have been rent by ever-widening ravines; the steeper slopes have become naked rocks, classic rivers have shrunk to sand-barred streamlets, and the *debritus* torn from the treeless uplands has shoaled harbors which once could have sheltered the fleets of an empire.

The character of the population has undergone a corresponding change. For a long series of generations free inquiry was punished as a crime, while blind faith was as persistently inculcated as a supreme virtue, till not science only, but the very love of knowledge, had become a persecuted exile, walking the streets in disguise, or enjoying a precarious refuge at the court of a few enlightened and priest-defying princes. The mass of the people became not only ignorant, but contentedly ignorant, hugging the most childish superstitions, and hoping that their law-abiding intellectual torpor would be accepted as an atonement for the activity of their vices. The systematic suppression of secular science paralyzed industry, the cities swarmed with beggars, and the wasted fields al-

SAVOYARD BEGGAR-E' Y.

most failed to support their scant population of cowed and convent-ridden peasants. But the science of health was even worse than neglected. Ignorance may excuse the excesses of savages, and palliate their vices; but in mediæval Italy, physical degradation was not only tolerated, but systematically encouraged, by that doctrine of anti-naturalism which taught its disciples to glory in deformity and despise the body as an enemy of the orthodox soul. The fanatics of the world-renouncing monk creed actually welcomed disease as a sign of divine favor; they repudiated the love of health as they repudiated their natural affections and the love of nature, life, and earth; they openly vaunted their decrepitude, and promoted the work of degeneration with a zeal never exceeded by the enlightened benefactors of the human race.

For a period of thirteen hundred years the ecclesiastic history of Southern Europe is the history of a systematic war against the interests of the human body; the "mortification of the flesh" was enjoined as a cardinal duty of a true believer; health-giving recreations were suppressed, while health-destroying vices were encouraged by the example of the clergy; domestic hygiene was neglected, and the founders of some twenty different monastic orders vied in the invention of new penances and more and more preposterous outrages upon the health of the poor convent slave. Their diet was confined to the coarsest and often most loathsome food. They were subjected to weekly bleeding and all sorts of profitless hardships and deprivations. Their sleep was broken night after night, fasting was carried to a length which often avenged itself in permanent insanity, and their only compensation for a daily repetition of health-destroying afflictions was the permission to indulge in spiritual vagaries and spirituous poisons. The same bigots who grudged their fellows a night of unbroken rest or a mouthful of digestible food, indulged them in quantities of alcoholic beverages that would have staggered the conscience of a modern beer-swiller.

The physical welfare of a community was held so utterly below the attention of a Christian magistrate that every large city became a hot-bed of contagious diseases; small-pox and scrofula became pandemic disorders, the pestilence of the "black death" ravaged Europe from end to end; — nay, instead of trying to remove the cause of the evil, the wretched victims were advised to seek relief in prayer and self-torture, and a philosopher uttering a word of protest against such illusions would have risked having his tongue torn out by the roots, and his body consigned to the flames of the stake.

It is doubtful if mankind will ever wholly recover from the after-effects of that millennium of madness; but the nations of Northern Europe had at least three important circumstances in their favor. In the first place, their forcible subjection to the rule of the

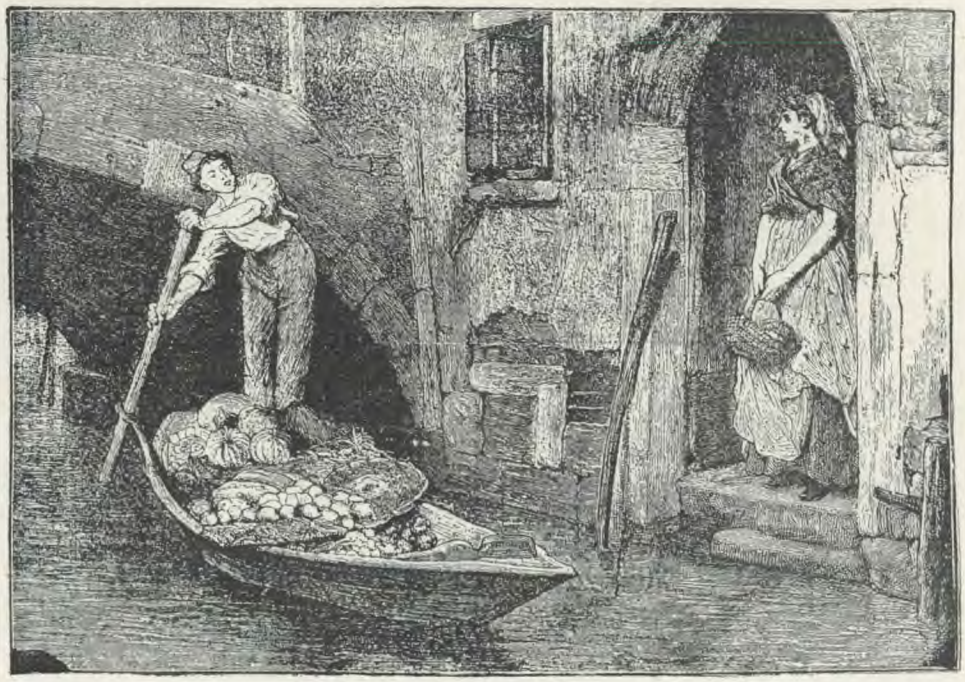
priests was achieved at a comparatively late period. At the end of the ninth century the coast of the Baltic, as far west as Holstein, was still inhabited by tribes preferring the nature-worship of their pagan ancestors to the world-renouncing fanaticism of their spiritual task-masters. In the second place, all Northern Europe, with the exception of Ireland, recovered its practical independence at the critical period coinciding with the discovery of a new world. In the third place, the numerous nobility of the Germanic nations always maintained a degree of personal freedom that enabled them to keep the dogmatic poison-mongers at arm's length, and make their castles so many strongholds of more or less out-spoken Protestantism.

In Southern Europe such privileges were the prerogative of fortune's favorites — one or two dozen exceptionally independent, and exceptionally enlightened autocrats, in each century of monastic despotism. On the enormous plurality of the population the curse of an anti-natural creed was enforced to its extreme consequences, and with results which the exempted nations of the human race should study for the benefit of all subsequent generations.

Pen-pictures of ornamental Italian shepherds wooing the echoes of a sylvan solitude, may answer the programme of a sentimental novel; but a work subserving the purposes of science cannot dispense with facts; and it is a sad, but wholly indisputable, fact that human degradation has reached its depth in the land which all the gods of pagan antiquity seemed to have blessed with their choicest favors. I have seen the sore-eyed progeny of the Egyptian fellah, and the bloated tenants of a Slavonic slum-alley, but I do not hesitate to assert that the *ne plus ultra* of combined meanness, vice, and stupidity, expressed in the features of a human face, can be found in the hamlets of Southern Italy more frequently, and under more repulsive circumstances, than anywhere else on earth.

"The paradise of priests, and inferno of truth-loving men," as General Garibaldi calls his native land, can really be enjoyed only by travelers reserving their attention for the museums of classic antiquity, and shutting their eyes to the phenomena of the present world; for, on closer inspection, even the mountains, so fair and attractive in the blue haze of the distance, are too often found a mere chaos of dusty rocks and arid ravines. In Northern Africa, similar scenes of desolation are frequently redeemed by a picturesque Bedouin highland camp; but in Italy the dreary wilderness of the treeless coast hills is not rarely a welcome refuge from the sadder dreariness of a lazzaroni village. Rows of sun-blistered hovels, without a leaf of redeeming verdure, dusty streets, reeking with ordure and offal, mangy curs rummaging heaps of refuse in search of edibles, and scrofulous children ransacking the same heaps in quest of rags; bleareyed old beggars crouching in dens attracting swarms of flies by the accumulation of garbage and dirt, — and such dirt! — dormitories where an attempt at house-cleaning would require the use of a shovel rather than of a broom.

Still such villages enjoy the advantage of elbow room, and are, on the whole, less unspeakably repulsive than the crowded pariah quarters of the larger towns, where home-made malaria, in its ugliest form, makes contagious disease a permanent affliction. The ordinances of the street-cleaning department (health-



A VENETIAN FRUIT-SELLER.

officers being unknown in all but the largest cities) are stubbornly resisted by mendicants, who value squalor as a stock in trade, and invalids of the working classes can rarely be persuaded to remedy their troubles by reform in personal habits, but prefer to seek relief in "charms," and all sorts of priestly hocus-pocus. Temperance, in such Ghetto cities, is too often only a child of penury. Young and old indulge dietetic vices to the extent of their financial resources. Their *penchant* for red-hot condiments and all kinds of indigestible compounds excites their vindictive passions, and at the same time stimulates their sensuality to a degree that makes their assemblies a constant scene of biped tom-cat fights, diversified by occasional attempts at erotic poetry. Even their abstinence from alcoholic stimulants has been somewhat overrated. "In regard to temperance," says Mr. H. F. Hillard ("Six Months in Italy"), "I am inclined to think that the natives of the wine-making countries generally, and especially the inhabitants of Southern Italy, enjoy a reputation rather beyond their deserts; and if the proportion of cases of stabbing brought to the Roman hospitals, which occur in or near the wine-shops, were more generally known, I have no question that it would furnish a strong fact wherewith to point the exhortations of a temperance lecturer."

Vintage festivals are the most popular holidays in Southern Italy; still there is no lack of total abstainers from free choice, especially among the better class of the educated nobility, whose frugal habits sometimes border on the asceticism of the pagan stoics. In the moss-grown old towns of the northern border States, there are scholars who prefer the solitude of their libraries to the gayest *festa*.

Here and there in the highlands one meets individuals that seem to have preserved many of the moral and physical characteristics of the old Italian hero-race, just as the ancient woodlands of the once shady peninsula have escaped destruction in a few of the mountain glens of the upper Apennines. The courage of those highlanders has been tested on a hundred battle-fields; and during the political revivals of the last three generations, the name of the *Carbonari* (charcoal-burning mountaineers) became almost a synonym of patriotic liberalism. Persecution has often enough driven those patriots to brigandage, and other questionable means of self-help; but here, as elsewhere, honesty is a highland child, and rather than steal, the natives of the northern border mountains often travel hundreds of miles in quest of work, or send out their boys to try their luck in distant France, where young Savoyards, selling home-made toys, or exhibiting trained pets, can be seen on the streets of all the principal cities.

Venice, too, is a rather un-Italian city in many respects. The hereditary enterprise of the old Adriatic sea-rovers still revives now and then in their descendants, and nowhere else south of the Alps do artists have a better chance to discover model representatives of a human type which has almost disappeared from Southern Europe, but which still occurs sporadically, however sadly tarnished by its un-congenial surroundings, like an ancient statue reclaimed from its tomb of rubbish or river-slime.

HOW TO KEEP COOL.

BY S. ISADORE MINER.

A PERTINENT question during the summer season is, "How can I keep cool?" A great many think to solve it satisfactorily by spending the heated term in the country or at the seaside. We use the word *think*, because many times the experiment proves to be, to make use of a homely but expressive saying, a jump from the frying-pan into the fire.

In contemplating a summer's outing, there are a great many things to be taken into consideration, not the least of which is the fact that the home frying-pan can be rendered more endurable than can any other; for if the resort be a popular one, there is generally more attention paid to dress than is comfortable to the wearer, or conformable to the state of the weather, while at home one may be comfortably yet neatly dressed in a costume wholly suitable for the place and occasion, but which fashion decrees unbefitting the parlors and verandas of a resort. And who cares to dawdle away all the heated hours of the day in the close little room of some crowded hotel, perhaps in the third story back, or under the sun-blistered eaves? Better a quiet country-house among the hills, or a woodland camp by some small stream or lake.

Of course many go for just such pleasure, but the few who really go for comfort ofttimes return sadly disappointed. There is no rest or comfort to be obtained when one is put constantly on dress parade; and as for heat, we would like to know what can equal the sensation of feeling wilted when it is utterly impossible to wilt, because of the stiff corsets and heavily embroidered underwear, which must be worn with even the thinnest costumes, "to make them set

properly"? Even sensible people are apt to do as the Romans do when in Rome, though they come home grumbling about the "absurdities of fashion," and vow never to go again. *Rest* seems a rather paradoxical word to use in connection with such a summer's trip, especially if there is a doctor's bill to meet after all, to say nothing of the bills of landlords, waiters, and — mosquitoes!

There are more satisfactory ways of solving the question, however, especially to those the state of whose purse forbids any "tour" (fortunate people!); and even those who are inclined to try a change of scene and climate, may not find the following suggestions unprofitable.

As we have before stated, dress has a great deal to do in the matter of keeping cool. It is a mistake, commonly made, to dress so thinly in the cool of the morning that no garment can be spared later in the day, when the sun is sending down scorching rays straight from the zenith. A better plan is to dress in the morning with either a heavier or an extra suit of underclothing, changing as the day advances for a lighter suit, or laying off the extra one; and changing back again as the cool of the evening draws on. This of course requires some time and trouble, but that serious annoyance, a summer cold, is thereby avoided, and even the putting off and on of the clothing is refreshing in itself, if the garments are simply made and easily adjusted, as they should certainly be in taxing weather. The underclothing should be of some light-weight woolen material, and evenly distributed over the body. Woolen is so much better an absorbent than cotton, that all perspiration is readily taken up, and the body is not chilled by the contact of a damp garment, in case of a sudden breeze.

Another important factor in wooing a comfortable coolness is diet. Anything of a greasy or heating nature should be discarded. Milk alone will furnish all the fatty material needed to supply the demands of the system, while to meet the waste in moisture carried off by the profuse perspiration, fruits should be eaten abundantly, as well as most summer vegetables. The natural craving of the appetite seems to suggest the bill of fare for this season, while nature sets about to furnish it plentifully, so there is no need of feeding perverted tastes on greasy, heavy, and highly seasoned viands. Grains, of course, are staple articles all the year round, and, combined with properly cooked fresh vegetables, fruit, milk and cream, will furnish a *menu* at which no epicure could find occasion to complain, and which will certainly not have to be eliminated from his system by the hot-sweat process.

Drinks, too, as part of the dietary, should receive attention, as the additional waste in moisture creates more than the ordinary thirst. Many reply to this craving by sending down a glassful of some iced drink, chilling the stomach, and thus retarding the digestion of the food that has perhaps just been introduced. Fermentation sets in before digestion is completed, and from this cause may be traced the majority of cases of cholera morbus, and other summer complaints. The water from any well of ordinary depth is as cold as should be taken into the system, and no doubt every one has experienced the fact that too cold drinks augment instead of quenching thirst. Iced water, if taken at all, should be sipped, and held long enough in the mouth to partake somewhat of the temperature of the body. Spiritous drinks should be entirely eschewed. Alcoholic beverages are great heat-producers, and their user is ten times more liable to sun-stroke and stomach disorders than the total abstainer.

For many reasons, the "soft drinks" served at restaurants, etc., are unhealthful. In the first place, they are generally called for when the purchaser is very warm, and the intense cold suddenly thrown into the system, ofttimes produces severe chill. Again, they are often compounded with liquors. If one must drink something when on the street, let him call for a "milk shake," as being the least harmful. Generally all the foreign substance this contains is a little fruit-syrup for flavoring, the chief ingredient being fresh milk churned to a foam while the customer waits. It certainly makes a very agreeable beverage. Lemonade made from fresh fruit is open to no objection except that it is nearly always taken "ice cool." Oatmeal also makes a refreshing drink, cooked with a large proportion of water, which is afterward drained off and cooled.

Another point that hinges on the waste of moisture, is cleanliness. Through the countless pores of the body the perspiration constantly exudes, and great care should be exercised to keep the skin in good working order. This is greatly conducive to bodily comfort, as well as health and wholesomeness. A daily bath is none too often, and should be considered more of a necessity than a luxury.

On top of all these suggestions of cool-keeping, try a little rational "mind-cure." "If you would n't talk so much of the heat," said a sensible friend of mine, "I believe you would find it more endurable. I'm sure I don't think half so much about it till I hear you complain, and then I am set at once into a dripping sweat." Let us take the evils, as well as the pleasures of life, moderately, and we will find that

there is more real enjoyment in living than we supposed. Keeping cool in mind will certainly tend toward coolness of body, as well as avert any unpleasant warmth in our social relations. And we will warrant that with care in the directions of which we have spoken, the summer's heat at home or abroad can be agreeably tempered; and certainly at home one has the matter in his own hands, so to speak, and stands a far better chance of avoiding a summer illness, than when in pursuit of some mirage of imaginary coolness.

SOME SANITARY PECULIARITIES OF BUENOS AYRES.

BY C. W. WAITE.

PERHAPS there exists nowhere a more slovenly race of people than the natives of the Argentine Republic. The *gauchos*, or inhabitants of the rural districts, live in a condition of filth and squalor that renders the traditional bog-trotter Irish cabin a model of neatness in comparison; and the native dwellers of the cities are not much ahead of the denizens of the *pampas* in this respect. But the foreigners who have flocked into Buenos Ayres within the past score of years have done miracles in the way of effecting reforms in the sanitation of the city. These foreigners consist of English, Germans, French, Scandinavians, and Americans. The Italians, though outnumbering all other foreigners four to one, "do not count," like Rip Van Winkle's last drink, in this estimate, for they are, if anything, filthier than the native *gauchos*. But the Italians, numerous as they are, and increasing by the arrival every few days of immense steamer-loads of fresh immigrants, take scarcely any part in the politics of the country or of its capital; so that when we speak of the "foreign influence" ruling in Buenos Ayres, it is proper to leave out of the calculation the Italian hordes "in store and to arrive."

The English influence predominates over all others. It was through the assistance of English capital that the magnificent system of water-supply and sewerage, now in process of completion, was introduced. Its cost has been colossal, but it will amply repay the fearful expenditure which it was once thought might bankrupt the city. The water for the use of the city is obtained from the La Plata River, some miles above the city, and the sewage is drained into the river below where the tributary Boca empties into it. The flushing of the city sewers is thorough, and the system, with some few corrections of recently discovered faults, will, when finally consummated, be recognized as one of the finest in the world. Whereas ten years ago Buenos Ayres might have been properly called one of the filthiest cities washed by the Atlantic Ocean, within a year it will be justly entitled to the appellation of one of the very cleanest and healthiest of such cities. In fact, it has for three years, since the last appearance of cholera there, shown a remarkably exceptional bill of health. This visitation of cholera was very slight. The yellow fever has only at rare intervals made its appearance at Buenos Ayres, although the cholera has several times wrought fearful ravages there. But with the exceedingly thorough sanitation of the city now effected, both of these epidemics may be looked upon as things of the past in the great city of the Plate.

There is one very singular feature of meteorology in this part of th eArgentine Republic; namely, the *mal aire*, or bad air, consisting of an occasional sharp gust or current of wind coming from off the *pampas*, and supposably remotely blown from the Cordilleras. This gust, striking a person, will sometimes produce an immediate headache, or fever, or cold, or other ailment; and it is so severe that it has been known to break the crystals of watches and other glass articles. At first I received these stories about the *mal aire* with utter incredulity, but I have the word of such men as the Rev. Dr. Thompson, the distinguished Methodist missionary; Rev. Father Fidelis (formerly Rev. Dr. Stone of Boston); Dr. Calborne, the most eminent English surgeon there; and Gen. Osborne, for twelve years the American Plenipotentiary to the Argentine Government, all of whom confirmed the popular narrations of actual material damage done by these silent, mysterious, and sometimes unfelt passages of bad air, or electricity, or whatever it may be called, through the body of the atmosphere. At times a party will be sitting in the court-yard of a residence, in a clear and pleasant afternoon, and suddenly a slight shiver will be felt by one or more of them, and a sudden attack of fever, or neuralgia, or some other ailment will tell the story that the *mal aire* has swept by them.

The Surgeon-General of the United States has within the past year or two issued circulars to the health-officers of the different seaports of our country, to the effect that the sand and gravel, scooped up from the bottom of the La Plata River in the Buenos Ayres harbor, for ballast (these ballast-loads amounting to from two hundred to nearly a thousand tons), contain the germs of yellow fever; and severe quar-

antine regulations are adopted by Savannah and other of our ports, discriminating against Buenos Ayres, and causing loud complaint on the part of vessel owners and masters. If the Surgeon-General be correct, the fact constitutes a very interesting phenomenon, and the commercial interests involved are awaiting with much anxiety a scientific investigation of the question. For one, as a layman, I beg leave to enter the expression of my utter disbelief in the theory. Buenos Ayres was never a home for the yellow fever, as Rio Janeiro is, and the valley of the La Plata has been always remarkably free from this scourge, considering the character of its population in past years. The distinguished authority at Washington has by his *dictum* (in so far as it could do so) fastened an odium upon the Argentine capital to which it is not justly obnoxious; and in proof of this, one has but to refer to the regular reports of the Buenos Ayres Board of Health for the past half dozen years.

With her half million inhabitants, with her now thoroughly renovated streets, with her complete and severe sanitary regulations, with her dockage system to cost nearly fifty millions of dollars, with her commerce, the wonder of the mercantile world, with her finely developing system of common schools, with her noble philanthropic institutions in which millions of money are invested, and with her conglomerate population patronizing liberally and even munificently all efforts in the higher walks of art and literature, the Argentine capital deserves nothing but encouragement from this portion of the hemisphere to which she is so great an honor.

THE HYGIENE OF A SMILE.

When, in the midst of life's hurry and worry, we meet a smiling face, it seems a perfect God-send, and we sometimes think, when seeing how much woe and suffering there is in the world, that if we would, each of us, smile more, life would be so much easier to live, for all of us; for a sunny face sweetens both outside and in; both the owner and the beholder. The trouble with us is, that when we take the pains to smile, we feel, as a general thing, that we are doing it solely for somebody else's benefit, while, if we did but know it, it is "life, and health, and peace" to ourselves in many ways.

For one thing, it is morally impossible to snarl at the same moment we smile; for in spite of us, our voices *will* soften to keep the smile company; neither can we fret; and so both snarling and fretting have to go, — and good riddance! Worrying too is, perforce, banished; for an entirely different set of muscles is brought into play, those which make a smile utterly refusing to be used in making people unhappy. Snarling, fretting, worrying, — the three evil genii that rule over the spirits of men, — how comfortable would be this present life of ours, could they be once utterly put to rout!

And they can be. Let us make this a matter of duty, for a smile is the hygiene of life, just as surely as sunshine and fresh air. If you answer that you do not feel like smiling, then all the more I say, Smile; and my word for it, life's affairs will begin to mend with you from this hour.

The magical change which the training of the muscles of the human countenance in one particular direction will make upon our habits of thought, even to involving a correction of character, who can explain? Strange that a melancholy mood of the mind should go with a downward curve of the mouth, while a serene and equable frame invariably accompanies an upward one!

But so it is. Let us then make it the real business of our lives to cultivate this all-powerful "upward curve"! Thus we shall open the door, and let into our hearts and lives the fair goddess Hygiea, and all her goodly, well-favored train, love, joy, peace, and the rest.

With these faces of ours, which have been set for so long in the frown of discontent, or the pucker of worry, it may be a little hard at first to coax the unaccustomed muscles; but once we get the physical habit established, the nervous energy will travel the same route over and over, without thought or volition of ours; and whether reckoned as cause or as effect, the victory will be worth the winning. E. L. S.

Educate the people to the fact that effects follow causes.

What men want is not talent, it is purpose; in other words, not the power to achieve, but the will to labor. — *Bulwer-Lytton.*

A horse — one horse a day — taken regularly, is both a preventive and a cure for nearly all human maladies. To some, advice must be given to ride slowly; but to others, we may say in the language of the old polypharmaceutists, "When taken, to be well shaken." — *Dr. Frank H. Hamilton.*

DRESS, IN RELATION TO THE MUSCULAR DEVELOPMENT OF WOMEN.

BY KATE LINDSAY, M. D.

3. — The Repression System in the Training of Girls.

NATURE in the young will always be in a condition to do her work well if we do not hamper her; but in the ordinary training of girls there is a system of repression constantly going on. Johnnie runs out-of-doors in his first pants, and rejoices in his freedom to romp and climb; but at the same time, Mary, who would enjoy these things as much as her brother, begins to be told that she cannot do this or that because she is a girl. She must walk demurely, and not skip and jump like a "Tomboy"! Johnnie has good warm clothes and thick boots, and is protected against any weather. Mary can go out if it is pleasant, with her arms folded, and her hand tucked in a little muff, thin, stylish wraps, short skirts, thin underclothing, made warmer, may be, by a few little tucks, thin stockings, and thin shoes. If she were allowed vigorous exercise, she might escape serious harm, even in her improper clothing; but no, that would not be proper for a girl! The grandmothers and aunts would all be horrified if she were else than a "little lady"! Then while Johnnie is off skating, she sits down by the fire and pores over a novel, — out of a Sunday-school library, perhaps, — or an exciting story in some child's paper, and imbibes sentimental notions. Then she takes to doing a little fancy work, and goes to school, and the work of repression still goes on.

At school she sits in a cramped position, leaning forward, or with one shoulder higher than the other. Or the seats are too high, and the feet cannot reach the floor, but dangle helplessly in mid-air; or the desks are too high, and round shoulders and contracted chest are the result.

Muscular training should be a part of a girl's education from babyhood up; but at the present time fate, mothers, the school-system, public opinion, circumstances, and everything else, seem to have conspired to cheat her out of even her birthright to good health. A boy counteracts such abuse to a large extent by a game of ball, or by coasting, skating, running, etc., as soon as school hours are over; while a girl must sit at the piano, on a stool that has no back, and practice her music for an hour or two, and then take up her fancy work. In all this her position is as bad as at school. Her form soon begins to show the evils resulting from lack of muscular development, and her mother becomes alarmed. But to put Mary into proper muscular training to correct these evils does not seem to occur to any one, not even the physician. Instead, her mother goes to the corset-maker's for a special corset, or her own are laced a little tighter, with the idea of bracing her up, and some shoulder-supports are secured, and these still further hinder the development of the emaciated muscles. Then if the poor victim happens to become lop-sided, she is taken to some specialist, and has a plaster-of-Paris jacket or a spinal brace made for the purpose of correcting the deformity. The mother was not alarmed by the earlier symptoms — the pale cheeks, the soft, flabby muscles, and the flagging steps. She is simply troubled by the deformity of figure. So the girl has the corset, and the shoulder-braces, and the spinal-support, and the plaster-of-Paris jacket. Strange that she does not have a good figure after all the trouble, and loses her health in the bargain!

What would you expect of a tree that was kept bent all the while, with a weight on top of it? Would it ever grow into a broad, stately, sheltering oak? The same process and results may be seen in this system of repressing girls. Their physical endurance is so dwarfed that they can never manifest themselves in any strong, noble purpose in life. No danger of their ever revolutionizing society, or doing any notable action.

Most of the women who have ever amounted to anything were "Tomboys" in their youth. They had good times with their brothers. I have conversed with many notable women, and they have told me

this in answer to my questions. Frances Willard says she did everything that her brothers did. She never suffered suppression or repression in any direction, and you all know what a noble specimen of womanhood we have in her.

Mothers, if you want your daughters to become strong, beautiful, self-reliant, and noble women, teach them to cultivate their muscles. No matter how well their brains are educated, if they have not the muscle to carry out its commands, they will be helpless and useless members of society. Cultivate their brains, by all means, but do not neglect to cultivate their muscles correspondingly. Give due care to the cultivation of their morals as well, and you will have —

"A perfect woman nobly planned,
To warn, to comfort and command."

TIGHT-LACING AND GALL-STONES.

BY J. H. KELLOGG M. D.

PROF. LAWSON TAIT, of Birmingham, Eng., who has doubtless removed more gall-stones than any other living man, states that nearly all his patients of this class are women. It is very seldom, indeed, that he is called to operate upon men for this condition.

Why do women have a monopoly of gall-stones? This is surely an interesting question. It is not too much bile that occasions gall-stones, but too little. It is no wonder that the average woman has too little bile, and bile that is so thick that the small tubes through which it flows in the liver readily become choked. Doubtless this is in part due to her sedentary habits. But to add to the evils growing out of this condition of the bile, the poor liver is subjected to the pressure of stays, corsets, waistbands swinging heavy skirts, and perhaps a tight belt outside of all. Under these circumstances, it is only by a "tight squeeze" that the thick bile can get through the narrow channels in which it flows, and doubtless many of the minute bile ducts become stopped altogether by the pressure to which they are subjected. The bile collected in these obstructed tubes soon hardens, and the nucleus of a gall-stone is formed. The bile accumulates behind until the small stone is forced down into the gall-bladder, where it receives further additions of hardened bile, and so grows, in some cases, to a considerable size.

The number of stones which may thus accumulate in the gall-bladder is limited only by the size of the latter. The writer has counted more than forty stones, each as large as a bean, in several cases. By and by, a gall-stone, by some sudden jolt or other circumstance, finds its way into the duct which conveys the bile to the intestine. If it happens to be too large to pass readily through, the individual has an attack of "biliary colic," suffers great pain for a few hours, becomes yellow as saffron, and is afflicted by an intolerable itching of the skin. If the stone gets through, the patient soon recovers, and is as well as usual until another stone gets jostled into the duct. And so the process goes on, unlimited by anything but the end of the stock of gall-stones or of the patient's life.

This is only one of the ways nature has of remonstrating against the crime of tight-lacing. It is difficult to conceive of a more effective means of abusing the body, or of a more senseless fashion, than that of compressing the waist. The enlargement of the hips in the female figure is not an element of beauty. Artists, from the old Greeks down to the modern painter or sculptor, in their productions, have always taken pains to lessen a little this feature of the female form, or to conceal it by some art in pose or drapery The artist, too, paints the waist as nature made it, not as fashionable dress-makers have deformed it. How, then, can a woman imagine that she is in any way adding to her beauty in accentuating her large hips by compressing the waist? We cannot answer this profound question; we give it up. It would require a metaphysician as astute as Plato, or an unraveler of mysteries as ingenious as the author of the theory that Lord Bacon wrote Shakespeare's plays, to find a lucid explanation of this fashionable foible.

The writer found a young woman at work in a brick-yard in the "Black Country," in England, who had no hat or bonnet on her head, no shoes or stockings on her feet, a ragged dress covered with mud, as was her face also, and under her dress, a French corset and six heavy quilted skirts!

Surely corset-wearing must be set down among the ancient mysteries which are incapable of explanation. We write in the consciousness that that ragged young woman in the brick-yard, and the other daintily dressed young woman in the fashionable drawing-room, will probably go on wearing their corsets in spite of all professional protests. If we could make them believe with the Chinese maiden that their souls reside in their stomachs, possibly we might induce them to let out their waistbands an inch or two, unless, indeed, it might occur to them that their souls were as narrow as their waists, and hence had room enough. But the world moves, and a future generation may see the corset banished from both brickyard and *boudoir*.

REVELATION WORKS REVOLUTION.

BY FANNIE BOLTON.

"WELL, Jennie," said Mrs. Hollister. "I see that I shall not need to argue against the tobacco habit; you are fully capable of handling the subject. I simply wish to say that nicotine is poisonous, and that it is found in tobacco; and that theine is a poison, and it is contained in tea and coffee; and that pork is unclean; and that all these things are forbidden by the word of God.

"There is another still more serious aspect to the question than any we have yet noticed. A husband and wife who expect to become parents, should be doubly careful about their thinking, eating, drinking, and dressing; and, indeed, they ought to cultivate the very best of habits in every direction. Their whole lives should be conformed to the laws of health and rectitude. It is not simply *their* life and usefulness they may mar by hurtful habits, but the life and usefulness of their children Don't you know that children are liable to inherit the habits and peculiarities of their parents? The form and character of the little ones will be largely determined by what their parents do and are, and to the parent belongs also the awesome and glorious responsibility of educating them for time and eternity."

Both John and Jennie were visibly impressed. John's face looked pale and determined as he bade Mrs. Hollister good by, and kissed his little wife before going to his work.

Mrs. Hollister and Jennie busied themselves all the afternoon in cutting and making dainty garments.

"You will have to take these off, my dear," said Mrs. Hollister, tapping Jennie's waist.

"Ho Mrs. 'Ollister! I never could do without them. I've always been so plump, I do fall into such a bunch without them. I don't hever wear them tight."

"I can't help it, my dear. I insist upon your taking them off. They are of no physical benefit to you at any time; they prevent the development of the muscles, and make you weak where you should be strong."

"Is that so?" exclaimed Jennie, now thoroughly alarmed. "Then I'll take them off this very minute."

Jennie soon reappeared, looking as neat as before. She breathed a deep sigh of satisfaction as she found herself able to stoop without the inconvenience of having two sharp steels goading her flesh.

"I have some patterns of waists to be made without bones that will fit you nicely, and keep your form in place," said Mrs. Hollister. "But I beg of you, do not put those miserable things on again. Neither Eunice or myself ever wear them. Yes, Jennie, and you must have your garments suspended from the shoulder, and have everything loose. It will be so much more comfortable than the way you are now dressed."

There were some long consultations held from time to time between the young wife and her friend. Diet, dress, exercise, and everything that pertained to a mother's health and a child's well-being, were discussed.

"Ho Mrs. 'Ollister," said Jennie, one day, "if I could only have such a son as your Will, or such a daughter as your Eunice, I would be the proudest mother alive; and John would be so pleased, too; for he thinks your children are perfection. Neither of us 'ave hever 'ad any heducation or bringing up, and now we feel it. You say that what we are, and do, will affect our children. Ho dear! 'ow I wish I 'ad read more and knew more. I do n't want our children to be without any hinclination to study just because I am an hignorant thing. I should n't 'ave thought or cared two years ago, but since I've lived at your 'ouse things seem different. Sometimes, I think it 'as made me sad, and yet I would n't want to be without the experience for hanything. It hopened a new life to me, and sometimes I 'ave to cry because I know so little. John does n't seem to care quite as much as I do. Just think of it! he goes to sleep sometimes when I'm reading the most hinteresting reading to him,

and he won't read for himself. I think it is too bad."

"Well, be patient, my child. We all feel the sorrow of our ignorance more or less. The more we know, the less we shall see to be proud of in ourselves. But it is a hopeful thing and a mark of development that you begin to sorrow over your lack of knowledge, and to desire better things. You must not be discouraged with John. Men ripen slower than women. But the fruit that ripens most slowly keeps longest. In the end, dear, perhaps, you'll find, as I have, that your husband is away ahead of you in wisdom."

That evening John and Jennie had a very serious talk in their cosy parlor. John had decided never again to use tobacco, tea, coffee, or pork. They read what they could find in the Bible on the subject of diet, and then in the medical book. John had found a tract on the subject of heredity, in which they were both much interested, and they were filled with a sense of life and its importance such as they had never felt before.

With the acquisition of true knowledge comes a spirit of communication. There is a life principle in it that urges its extension. This spirit animated both John and Jennie. Jennie found several opportunities during the day to impart the light she had received to others. She met with some ridicule and scorn, and so had a fellowship in spirit with the sufferings of all reformers; but she was greatly encouraged to see some seeds take immediate root, and bear practical fruit. John brought a friend home to supper who had become much interested in the subject of diet and heredity, and desired to see John's book, and to get one like it. Mrs. Hollister had sent down a large armful of health journals and magazines, and the three spent a pleasant and profitable evening in examining the books and comparing ideas. The influence of the new home began to extend in happy ways. John seemed to take up life with new interest, and soon assumed himself the position of reader. Several times he declared that Jennie had snoozed during his reading, in spite of her protests to the contrary.

"THE top of the morning to you all!" said Dr. Hollister one beautiful autumn day, as the family came in to breakfast. "We are a richer family this morning than we were last night."

"I thought something wonderful had happened from the luxuriance of your greeting," said Mrs. Hollister.

"What is it, pa?" asked Eunice. "Have we fallen heir to an estate?"

"I should think we had," said the Doctor. "You are to have the honor of having a namesake."

"Oh, some of your patients have — O pa! tell me quick; has Jennie —?"

"Yes, she has the loveliest baby girl you ever saw. She has her mother's features as plain as can be. Never saw a happier family. John is as proud and happy as Robin Redbreast was last spring when he fluttered over that nest of naked robins, and their brooding mother. I tell you I couldn't help my heart swelling to see those poor souls rejoice and weep. John broke clear down when baby was put into his arms. He said he was n't worthy to be a father, that he never could bring up his little girl as he might have, if he had only spent his money differently in obtaining something of real worth; but he declared that he would seek to become a worthier man for his child's sake. Jennie's rosy face is a trifle pale, but she is solemnly and sublimely happy. I tell you, a doctor's life may be hard and self-sacrificing at times, but its the richest life a man can live. Don't talk to me of a business life. A doctor's certificate brings him into the very portals of the holiest in human life, and I often find myself bowing my head, and stepping aside, stirred to the very depths by such scenes as I witnessed this morning. As I was coming away, John put his arms around my neck, and thanked me over and over, for the inspiration I had put into his life. I tell you, it humbled me. I feel as though I were wholly unworthy of the opinion and the affection of these humble souls; but if God will help me, I shall be more worthy of their respect and following."

Mrs. Hollister and Eunice drove down to see the baby and mother, and a new tie of sympathy and affection bound the old mistress and her girl.

"Ho Mrs. 'Ollister, I've been longing for you to come!" said Jennie. "Do see my darling." She laid down the bedclothes, and there was the daintiest morsel of flesh, with little, doubled up pink fists and rosy face. She had an abundance of pretty, black, silky hair that lay in little damp rings on her forehead and neck.

"Oh, what a sweet bud!" exclaimed Eunice, lifting her to the light, and examining her pink feet and pretty fingers. "And I am so glad, Jennie, that you have her dressed so sensibly. You have n't her all bandaged up with cruel tight bands. What a perfect shame it is to see little babies bandaged up until they can hardly breathe! I don't wonder they cry, poor little things! And so this baby is to be called after me? My, I feel as though I had n't lived in vain; but I hope she will honor the name more than I have ever done."

"Ho, bless you, child! I don't want her to be, hany better than you are, or more honorable. You would

laugh to see John 'old her. He looks at her as though she were a perfect miracle, and keeps wiping his nose and heyes. Then he flutter-budgets around me, and loves us both halmost distracted. Every hour or so, he comes w'irling around the corner in his cart, as he comes to and fro from the factory, and he w'ips in to see how baby and I are doing. He says he can't think of hanything else. All the men at the factory are wishing him joy, and see, they clubbed in together, and bought him that beautiful cradle for baby. Did you ever see what a fortunate lot we are? It just seems as if every good and perfect gift comes right to us."

Mrs. Hollister bent over the couch to whisper, "Every good and perfect gift cometh down from the Father of lights, with whom there is no variableness, neither shadow of turning."

"Yes," said Jennie, "I've been thinking of that, and I've 'ad some pretty sober thoughts. It does seem to me that now as I 'ave this little one to train, that I need more than mortal wisdom. Ho Mrs. 'Ollister, I feel that I 'ave received a beautiful gift, but 'ow can I keep her pure and good? It would break my 'eart to see my little one in the streets with the ruffian children all around here, and hear from her lips the vile language that I hear from theirs."

"Yes," said Mrs. Hollister, "you will need heavenly wisdom. I have been through the experience, and I know what a dreadful thing it is to see the little faces lose their beauty of innocence, and become coarse and unlovely."

"I couldn't bear it," said Jennie. "But I am so rough myself, so full of hevil and guilt. I tremble when I think of 'ow I may spoil my little beauty."

"Well, don't worry over it, dear. God will help you, I know. It is true that not only impure actions and language, but even impure thoughts, wield a great influence over the face and manners and character of a child. I know that the brain power is lessened by evil thoughts, that not only the moral but the physical nature suffers with every transgression, even in thought. There is great need of divine help in the task you have before you."

"Dear me," exclaimed Jennie, "what a deep thing it is! You know that I have never had much hinstruction, never have been to church. Ho 'ow hunfit I am to be a mother! Where can I find a perfect pattern?" asked Jennie pleadingly, "so that I can study her ways, and know just what to do. Won't you be my pattern, Mrs. 'Ollister?"

Mrs. Hollister's face grew sad for a moment. "No, dear," she said, "I cannot be your pattern. I am just as unworthy as you are. I am a poor, fallible mortal, but I'll tell you where to look for a perfect pattern in everything Look to Jesus. He represents himself as a father, as a mother, as a husband, as a Redeemer and Saviour. He is the Friend of sinners, the One who is mighty to save, who can cleanse the scarlet sin, and make you white as snow."

Jennie lay very quiet listening, but she did not say anything more, and Mrs. Hollister rose to go. "The baby looks just like you, Jennie, and she is as pretty as a pink," said Mrs. Hollister, as Eunice tucked her in beside her mother, and kissed her good by.

(To be continued.)

BEYOND.

NEVER a word is said
But it trembles in the air,
And the truant voice has sped,
To vibrate everywhere,
And perhaps, far off in eternal years,
The echo may ring upon our ears.

Never are kind deeds done
To wipe the weeping eyes,
But, like flashes of the sun,
They signal to the skies,
And up above the angels read
How we have helped the sorer need.

Never a day is given,
But it tones the after years,
And it carries up to Heaven
Its sunshine or its tears,
While the to-morrows stand and wait—
The silent mutes by the outer gate

There is no end to the sky,
And the stars are everywhere
And the time is eternity,
And the here is over there:
For the common deeds of the common day
Are ringing bells in the far away!

—*Henry Burton*

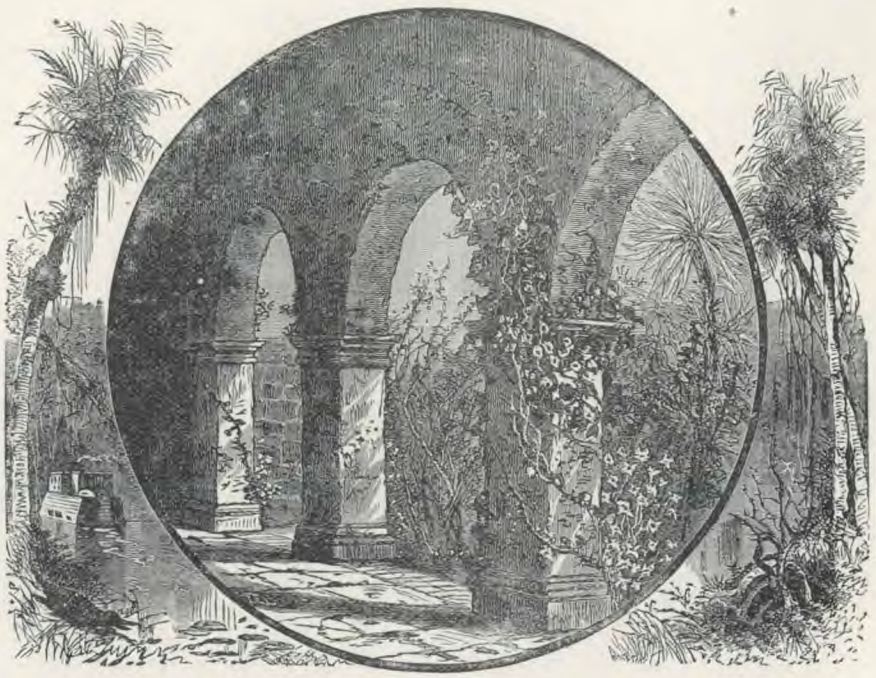
ANTIQUITIES OF THE NEW WORLD.

BY S. ISADORE MINER.

EXCEPT in the relics of a pre-historic people, our country has little to boast of in antiquities. Everything is too new, and seems to wear the air of having but just been invented and put upon the market. *Ancestry* is a word that finds no occasion for use; for things spring up mushroom fashion in the night, and morning asks no apology for their existence.

England glories in her giant oaks and sheltering elms,—trees that canopied ancestral generations of some of the illustrious explorers of our world, long

before it was even questioned whether the waves of the broad Atlantic, receding from European coasts, lapped the shores of Western Asia. There, in Normandy and Britain, and along the banks of the Rhine and the foot hills of Spain, rise the massive masonry of castles, both in ruins and in a state of well-preserved grandeur, that have witnessed the rise and fall of empires, and whose walls, hoary with age, would frown with contempt at the boasted antiquity of our petty relics.



PORTICO OF OLD SPANISH RESIDENCE, ST. AUGUSTINE.

The cities of St. Augustine and Santa Fe have long divided the honors of priority, being the oldest settlements by whites in the United States, that on the Floridian coast having been settled by the Spaniards in 1565, and Santa Fe, an Indian pueblo, occupied by Mexican Spaniards, sent out by the Viceroy of Mexico, in 1595 In St. Augustine we find the oldest public buildings, and in Santa Fe the oldest American house.

Among the most interesting of these constructions of times long past, is the old fort of St. Augustine — Fort Marion, called by the Spaniards the Castle of St. Mark. It was over one hundred years in building, and completed in 1756, although our Government has made some additions and repairs. There still stands the foundations of an old Franciscan convent, the residence of one of the Spanish governors (now used as the custom-house), and the remains of a light-house on the little island that separates the town from the ocean, while the old bell in the crumbling cathedral tower (burned but a year ago) bore date 1682. Traces of ditches and embankments — ancient defenses — also still exist, and of the breakwater which the Spaniards began in 1690, to resist the further encroachments of the sea. It was formed of shells cemented by shell lime — a natural composition called coquina stone. The Government has built a substantial wall, partially of granite, to take its place, and it is a favorite promenade of the hundreds who flock there annually, seeking as vainly as

OLDEST HOUSE IN AMERICA, SANTA FE.

did Ponce de Leon, on those very shores, the fabled fountain of youth and vigor.

Santa Fe, St. Augustine's venerable rival, is also a resort for the invalided, its altitude of over 7,000 feet, the highest of any United States town of size, insuring a dry and salubrious atmosphere, much sought by those with pulmonary afflictions. And the curious health-seeker ofttimes combines pleasure and profit searching among the old Aztec fragments and adobe ruins with which the place abounds The church of San Miguel, built, according to tradition, shortly after its occupation by the Spaniards, is the oldest church standing in the United States, if not the first erected. This, too, is built of adobe, — sun-dried brick, — as is also the oldest house on the continent, a low little hut, in this respect like all the other native buildings, and like them, having little chance for light and less for ventilation. The homes of the native half-breeds (sort of conglomerations of Mexican and Indian), literally swarm with vermin and children, and are simply dumping-grounds for indescribable filth. The streets are narrow and crooked, but in true Spaniard style there is an open square, or *plaza*, about which the town is huddled. And here, on the sunniest side, the tourist may any day see swarms of dirty boys, shriveled and blanketed old men, and hideous crones vending various native indigestibles — *temales*, *tortillas*, mutton, onions, candies, all hot with red pepper, and strings of the fiery little vegetables themselves. And as one gazes on the scene, it is not hard to credit the local proverb that the region is so healthful that its aged inhabitants never die, but dry up and blow away, so like veritable withered and wrinkled mummies do they all appear!

OLD GATEWAY OF ST. AUGUSTINE.

THE WELLS OF MOSES.

(See Frontispiece.)

Just across the Red Sea from the straggling collection of houses answering to the name of Suez, about seven miles distant, and two miles inland, are the Ayun Musa (Wells of Moses). The spot has great attractions for the devout traveler, and many a heart has thrilled at the glimpse of distant palm trees silhouetted against a desert sky; for it is more than an oasis; it is the spot where the Israelites emerged from the walled waters of the Red Sea, and Miriam struck her trimbrels, while Israel sang praises to God for deliverance from the overwhelmed Egyptians. Here they quaffed for the first time the waters of the strange land, — waters which, so the tradition runs, broke from the earth in answer to the touch of Moses's rod. And hence the name, — *Ayun* (springs) *Musa*.

The wells are seven in number, — brackish springs bubbling up through the hot sand, and surrounded by a grove of palm, tamarisk, and other trees, with here and there a quaint Arabian hut gleaming white against the green. The oasis is the usual starting-point of caravans for the Sinaitic Peninsula, and forms a picturesque setting for the groups of dark-skinned Arab guides, with their patient camels, lounging in the shade, or squatted around the brinks, perhaps filling their leathern bottles for refreshment on their journey; for many a weary desert mile stretches beneath a burning sky before another oasis is reached.

Because of the peculiar clearness of the atmosphere, the oasis is in plain view from Suez, and in absence of better attractions, the people of that town have elevated this scanty bit of greenery into the rank of a fashionable watering place. There is a hotel there, with a fairly good restaurant attached. Most of the fresh vegetables eaten in Suez are grown around the springs, and formerly the town was supplied with water from these wells, brought in goat-skins and casks by camels, along the shore-path route, though now the popular way of reaching the springs is by sail or row-boat. The opening of the fresh-water canal at Suez has put an end to water-carrying, no doubt to the comfort of the inhabitants, as the water at the wells, springing through calcareous deposits, has a disagreeable flavor, though far more palatable than any other in the region. S. I. M.

TEMPERANCE NOTES.

It is credibly quoted that a Massachusetts firm has a contract with a firm in London to supply 3,000 gallons of rum per day to the Congo region, Africa, for seven years.

We see that a Presbyterian clergyman in Dakota was recently suspended from his pastorate for drinking a glass of beer in a saloon. We vote for suspension in all such cases.

The W. C. T. U. women believe thoroughly in the "ounce of prevention" theory. By their earnest and persistent efforts they have lately been the means of preventing liquor-selling upon the grounds of the District Encampment of Militia at Fort Washington, D. C.

During the late fire at Seattle, W. T., nearly ninety saloons were burned, and those which remained were prevented by he mayor from re-opening. Meanwhile lemonade and numberless other simple temperance drinks have taken the place of the intoxicants, with most salutary results.

According to the statistics of California, alcohol makes each year, two persons insane for each week-day, and three for each Sunday, in that State. A terrible showing!

An excellent field for mission work of the churches and of the W. C. T. U., is the lumber village of Duncan's Mills, Cal., which contains not a single church or school-house, but is overflowing with saloons.

The American Institute of Homeopathy, which lately met at Minneapolis, Minn., passed resolutions against the use of alcoholic remedies, excluding all preparations into which alcohol entered as an ingredient, but, queerly enough, making an exception in favor of whisky for snake bite.

The virtues of oatmeal water as a summer drink for laboring men, taking the place of harmful and intoxicating beverages, and quenching thirst so thoroughly as to leave no desire for the latter, has been demonstrated this season in numberless instances where gangs of several hundred men are employed.

POPULAR SCIENCE.

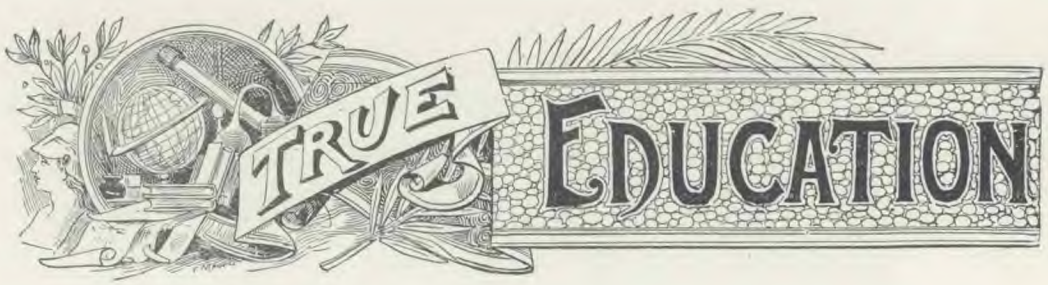
The natives of the Lower Congo poison their arrows with a preparation made of red ants, dried, ground, and steeped in palm-oil. Ants contain formic acid in large quantities.

The manufacture of cloth from wood is made possible by the Mitscherlich process, which disintegrates the fiber so that it can be spun and woven. Corn husks have also lately been utilized in the manufacture of both cloth and paper. An excellent quality of heavy linen cloth is made from the longer fibers, while the shorter ones furnish material for an unlimited variety of papers.

A New Cave. — It is said that a cave of rare beauty and immense proportions has lately been discovered in Ohio. So far as explored, it lies at a depth of about one hundred feet, and is reached through an aperture varying from three to thirty feet in diameter. It consists of a series of immense chambers with dome-like roofs, hung with masses of stalactite and stalagmite of most beautiful formation. There is a lake of pure cold water, apparently over fifty feet deep.

Swiss engineers have in contemplation a novel convenience for tourists, which is to connect mountain peaks by means of wire ropes, upon which cars will be made to slide from one to the other.

The Mausoleum System. — A plan of dessication for dead bodies has recently been laid before the Medico-Legal Convention. It consists of a scientific process which deprives the tissues of moisture, and keeps them in a state of complete preservation, without discoloration of the surface, though greatly emaciated. The bodies are placed in a sepulcher affording a current of dry air, which absorbs the moisture and carries off the escaping gases, which are consumed by a furnace. Thus no offensive odors can reach the outer air. The time occupied in the process is about ninety days. After it is accomplished, the bodies are placed in an air-tight compartment, but can be viewed at any time through a glass door. The mausoleum system, as it is called, has the approval of many prominent medical men, and an organization has been perfected in New York City, by which the plan may be extensively carried out.



THE EDUCATIONAL NEEDS OF TO-DAY.

BY E. L. SHAW.

THE end and aim of all education is to teach us to think. Whatever course of mental training secures this result is a grand success; that which fails, although sought amid the classic shades of the stateliest of *alma maters*, has been, so far as regards its efficiency in shaping lives, pursued in vain.

We have mere mental automatons in plenty; in truth, we are sometimes afraid that they are, nowadays, the rule instead of the exception. If not, why then are the ranks of the average laborer overcrowded, while those who possess the power to manufacture from the materials of their environment stepping-stones by which to rise, are "few and far between"? It is a fact, lamentable as it seems, that the bulk of mankind seems huddled in an inglorious heap at the foot of the ladder, while the upper rungs are sparsely filled, or empty.

Every employer knows how it is, — that ninety-nine out of the one hundred men in his employ work as any machine might, under a certain rule or set of rules, "wound up," as it were, to do certain things, but limited, like other automatons, to do them in a certain way; beyond this all is doubt and uncertainty. All goes smoothly so long as the primal conditions remain the same; but by and by these become varied — an emergency arises. The one hundredth man comes to the rescue with the plainest sort of common sense, so simple and so plain, in fact, that everybody sees the point at once, — that is to say, after it has been pointed out to them. But this ability to aid, this very simplicity, this admirable "common sense," if you will, has been evolved by countless hours of hard, consecutive, systematic thought, and of the incisive self-propounded questioning which forces exhaustive answer.

The ninety-nine men continue on in the daily groove; but the one hundreth man is made their overseer. Surely, then, it is only a question of time when a real machine will be introduced which shall, without wages, do the work of these ninety and nine!

The properly developed mind, trained to look at a subject on all sides, in all lights, particularly in its interdependence with and relations to other objects, is always, without exception, an orderly mind. Some of the apparent advantages of an orderly mind must present themselves to the most superficial thinker; but as all objects possess a value established by comparison with other objects of less or greater importance, perhaps we may best put it in this way: although the mind is the master of all matter, in one sense it is a servant upon which we call in our need, and upon which we must depend; and what sort of servant is that, who, when asked to produce certain articles over which he had special charge, should reply, "I feel sure they are here somewhere, but just where I do not know;" or, "I have these things, but they are not in suitable shape or condition to bring to you;" or, worse still, "There are plenty of odds and ends of these things lying about, but nothing available." An unprofitable servant, indeed!

An orderly mind renders whatever career in life to which its fortunate possessor may be called, a comparatively easy one. The olden fable of the hare and the tortoise, wherein the tortoise got the best of it, — as he generally will, — still obtains; for while other minds may be quicker, possibly, in their operations, this one is at the mercy of no whim of its owner, and is never obliged to waste precious time in awaiting any so-called mental "inspiration." Is there work to be done? there are no excuses, no dilly-dallying. Why, indeed, should there be, when all the material is ready, placed, ticketed, labeled, each in its appropriate niche, shelved, catalogued, as it were, and ready to one's hand? When to these admirable conditions are superadded a lofty ambition and an indomitable energy as the motor-power which drives the whole, we call the creation by a name which all men recognize and bow down before; namely, *genius*.

Wholly corroborative of the criticism on popular educational methods which we meet at every hand, is

the following from a late writer in the *Popular Science Monthly* : " Not only were the eyes and hands of the pupils from fifteen to twenty years who came to me, untrained, but their brains were in a pathological condition which rendered independent thinking impossible. The inaccuracy of the observational and manual work done by them, the indefiniteness of expression, the lack of system, and the inability to do comparative and inferential work, were so many revelations of the true aims of science teaching."

And another : Miss Mary F. Seymour, the head of the Union School of Stenography and Type-Writing in New York City, with an Employment Bureau in connection, — the largest establishment of the kind in the country, — says : "Teachers of stenography find the present imperfect system of education the greatest difficulty to contend with in preparing their pupils for positions. While there are few who cannot learn to *write* short-hand, two-thirds of those who take up this study are obliged to abandon it because their reasoning powers, and consequently judgment, have not been sufficiently trained to enable them to *read* their notes intelligently."

In the education of the past, the sense of wonder has perhaps been appealed to overmuch ; so, too, with memory. In its proper sphere the latter stands an unrivaled factor in education ; it is only when it arrogates to itself the place and the prerogative of thought, that it is pernicious. Manifestly the educational need of to-day lies in a process which shall stimulate to its utmost both interest and curiosity, and bring into constant play the reflective powers, the power of concentration, and the power of taking pains. At any cost of time, expense, or effort, a longing should be awakened in the pupil to know *everything* relating to a subject. O ye who have the young in charge, count no time nor effort too great which is spent to this end. This mighty force needs but to be set in motion ; for as more is learned of a subject, more will constantly be discerned by the student to learn, so true it is that proportionate with the development of mind do the possibilities in all objects widen. Class recitations will consume more time in that golden age, perhaps, and the names of fewer text books may appear in the curriculum ; but does not herein lie the peaceful solution of many a labor-problem for the coming generation ?

Well for us had this model training process begun in every village, hamlet, and country school district a score of years ago ; for we need this style of education here and now, — alas, so much ! For, not the on-coming army of men out of work, whose vanguard we have already seen, can persuade us that there is no longer any work to be done. The truth is, the call for laborers will soon be louder than ever, only they will be wanted in a different sphere, for different work. The inventions of our day have in their economic plan closed up certain of the old avenues, but the inventor himself, busy with brain and hand, still toils on in his work-shop, creating for us other needs in the room of the old, almost in the ratio of ten to one. But, as a rule, the new work will lie higher up the ladder, and we need the new education to enable us to climb up to it.

CORNELL University has the finest library building in the country, with a capacity for 475,000 volumes.

A NOVEL but permanent library is to be opened in Paris, composed solely of books written by women.

SOME ASPECTS OF EDUCATION. — Education is the training received in childhood which makes us the kind of men and women we are later. It may be orderly, systematic, thoroughly scientific, and practical. Too frequently it is a mere matter of chance, without method or ultimate aim. In either case the impressions of childhood remain during life. More than all the universities, more than all the schools and books, companions educate and help on in the progress of self-evolution. Children, when brought together, learn to love one another ; and through love they are taught self-control and self-sacrifice. Were their own selfishness to conquer always, they would soon be left without playmates ; so mutual concessions are made, and some of life's greatest lessons learned during play. The child is but the product of its conditions. It can not rise higher than the sum of excellence expressed by parents, home, companions, and school ; or, in other words, character mounts no higher than its source. The aim of all education is power; power over ourselves, over others, over the forces of nature. Human welfare and human happiness are the natural outgrowth of disciplined power. How to live, in the widest sense, how to bring up a family, how to use all our faculties for ourselves and others — these are the real functions of education. The proper fulfillment of these duties includes all there is of mental, moral, and physical development possible to mankind. It is the ideal of humanity ; for to education belongs the task of training the child for his future duties in their rational order of subordination. — *Louise Fiske Bryson, M. D.*

PERNICIOUS BOOKS.

BY J. H. KELLOGG, M. D.

NOTHING else than a vacuum can begin to approach in emptiness and diluted nothingness the average novel. How any well-organized brain can find satisfaction in the perusal of the trash which fills the book-shelves of the school and circulating libraries, and, we are sorry to say, occupies quite too large a place in the libraries of Sunday-schools and of many so-called Christian homes, it is indeed difficult to understand. Certainly it is only a taste which has become in the highest degree vitiated and perverted that can experience any other sensation than disgust in reading the nauseating descriptions of the idiotic performances of the human imbeciles who are made to be the chief actors in these delineations of what is called real life, but who are as far removed from real or genuine human living as the imagery of Dante's "Inferno" is by contrast removed from Milton's picture of "Paradise Restored."

We said these books are empty as a vacuum. So they are, as far as properties of value are concerned; but they are pregnant with mischief the most virulent. The simpletons, the sycophants, the liveried apes, the rakes and the rascals of deepest dye, who figure in these unwholesome, noisome books, are made to speak and act in so lifelike a manner that the reader is impressed almost as vividly as if he had been in their immediate presence, and the effects upon him are not far different than if he had actually associated with them. Do fathers and mothers often think of the character of the personages with whom their children associate in the seclusion of their sleeping-rooms, when they may perhaps be supposed to be fast asleep?

A modern writer has given the following as a *resume* of the average novel, and we have no doubt of its substantial accuracy: "Moonlight night — shady grove — two lovers — eternal fidelity — young lady rich — young man poor — great obstacle — young man proud — very handsome — very smart — sure to make a fortune — young lady's father very angry — won't consent — mother intercedes — no go — rich rival — very ugly — very hard-hearted — lover in a very bad fix — won't part — die first — moonlight again — garret window opens — rope ladder — flight — pursuit — too late — marriage — old man in a rage — won't forgive them — disowns them — old man gets sick — sends for his daughter — all forgiven — all made up — young man getting rich — old man dies — young couple gets all the money — live in the old mansion — quite comfortable — have little children — much happiness. Finis."

Now this is all insipid enough to an unperverted or well-organized brain; but, unfortunately, all brains are not so well-organized or unperverted, and the possessors of such find infinite pleasure, of a very low grade, it is true, in tracing this formula through the labyrinth of verbiage which the modern novel-writer strings out, at so much a line, for the edification of that vast army of shallow-brained individuals who spend a good part of their lives in devouring this senseless twaddle, with an appetite which must be insatiable, if one may judge by the vast quantities of unhealthful literature consumed.

We often hear offered as an apology for some book of this sort, a remark like the following: "Oh! this is not a bad book. It is hardly a novel; indeed, it is founded on fact." No excuse could be more transparently flimsy than this. All novels are founded on facts. Every writer of novels seeks to make his personages act as much like real, live human beings as possible. The complaint against the novel is not that it is untrue, nor yet that it is unreal. At any rate, this is not the chief complaint. The story is a recognized and legitimate means of conveying information or moral instruction. It does not matter essentially that the particular incidents recorded never occurred, provided that a wholesome lesson is taught in a wholesome way. The Bible contains allegories and parables. Christ used these forms of rhetoric as a most successful means of conveying the choicest instruction. Our complaint against the novel is that it steals the livery of Heaven to serve the Devil, in that it makes language, one of the most divine of human faculties, the means of teaching evil instead of good. It often pretends to a high purpose. It will teach

morality. It will teach social reform. It will expose the heartlessness of fashion, the hypocrisy of cant, the weakness of a weak woman, the meanness of a mean man, the complications arising from a single misstep.

All this, and more, these self-appointed teachers claim as the purpose which they have in view in the product of their works. With rare possible exceptions, this is all pretense. The author is not a philanthropist. He or she writes books for a living, for fame, or for the pleasure of writing; rarely, indeed, is a novel written with a purpose to make men and women better. A book written with such a purpose, conscientiously carried out, would, we dare say, do no harm, even if it were a novel. The lack of sincerity of purpose naturally leads to a method of developing the asserted purpose of the book, which is productive of no end of mischief. Vice is painted in such colors that it ceases to be repulsive, even becomes attractive to the unsophisticated, especially to the young whose characters are yet unformed. Folly is made to appear less foolish than it really is. Black, if not made white, is certainly painted several shades lighter, and white is given such a sickly hue as to be absolutely unattractive, if not positively nauseating.

We unhesitatingly pronounce against all this trash as an unmitigated evil. The little possible good that the few not positively pernicious works of this class might accomplish, provided they might fall into just the right hands at just the right moment, is vastly more than counterbalanced by the amount of mischief which is certainly wrought by the wrong coloring, the graphic portrayals of vice and shame, the education in the ingenious devices of intrigue, the distortion of principles and confusion of motives exhibited, to say nothing of grosser influences resulting from the perusal of books which emanate from the erotic brains of authors whose lives are not less sensual than their books.

There is enough good literature still unread, to make unnecessary the resorting to this class of books for either entertainment or instruction.

WOMAN'S SOCIAL SECURITY.

It is said that when great numbers of the homeless and bereaved from Johnstown, Pa., were leaving the scene of their suffering and going out into the world to find employment, many of the younger females were approached on the trains by foul procuresses, who in the role of kind and sympathetic friends, sought, by the offer of "comfortable homes in their families," to get possession of these poor girls for their dreadful purposes.

What a state of things in the social life of this great and enlightened country does this reveal! Horrible as this statement seems, yet the story which it tells us by inference is more horrible still, for it presupposes a regular traffic in the virtue of innocent girls, regulated, as is other traffic, by the law of supply and demand.

While many feel that such things may be true in particular instances, doubtless very few of us have any idea how general this traffic has become, and how boldly and shamelessly its base agents seek to introduce it everywhere. It is time that good and earnest men and women bestirred themselves as never before, and with burning tongues and pens took up the burden of warning their weaker brethren and sisters. Women should be plainly told that, with all the world's crying need of workers for its suffering and its lost, there are other ways in which to spend their time than in mere time-killing frivolities, which lower their own standards of purity, and place temptation in the way of others; and man should be taught that woman is given as a sacred trust to him, a trust which, whether under the name of mother, wife, sister, or fellow-being, rightly comprehended, will prove an infinite blessing, but betrayed, will lead him down to death. Men should be made to understand that, by the very relations which God has created between the sexes, he has given the weak in charge of the strong, and every man is thereby made of God the champion and defender of every woman, and not the less so, if, through his own fleshly weakness, he may sometimes seem to be called upon to defend her from himself.

Aside, then, from the qualities of mind and heart in which each sex finds its complement in the other, and since woman was plainly given to man *because* she was physically weak, and he was physically strong, what shall be said of the utter misapprehension and abuse of this sacred trust which to-day causes many a lone woman to feel, often, that she treads some jungle-path, at the mercy of all beasts of prey, rather than a peaceful highway in company with, and under the protection of, her *brothers*, the sons of the same Father?

We long to make a burning appeal to that native chivalry in man which from the nursery and the playground on to the broader walks of life, stigmatizes by the ugly name of *coward*, him who trespasses upon the smaller and the weaker; for this, could it be once aroused in her behalf, would be woman's bulwark and defense.

E. L. S.

GOOD HEALTH
J·H·KELLOGG·M·D·EDITOR·
BATTLE CREEK·MICHIGAN·

A MONTH IN LONDON.

ALTHOUGH Birmingham was the Mecca of our pilgrimage abroad, we have found time to spend a few very profitable weeks in London, and possibly our readers may be interested in a sort of a brief abstract of what we have seen and heard. Of course we are chiefly interested in what concerns the physical well-being of men and women, as the pursuit of studies of this kind was the chief object of our visit to this country. With this purpose constantly in view, we have sought to visit such places and to make the acquaintance of such persons as seemed likely to render us valuable assistance. Outside of this particular line, we have seen almost nothing of the world's metropolis, only as we have caught glimpses of people and places from the top of a "bus" or the inside of a cab, as we have hastened from one appointment to another, in true American style; for every moment has seemed to us so precious, and we have had so many things in mind to study and investigate, that we dared not be diverted even momentarily from the special object which led us to leave at home interests the most important and work the most pressing.

From a health stand-point, London seems to be no different than when we left the great city six years ago, — the same fogs, the same overhanging cloud of smoke, the same million sunk in poverty and vice in the East End, the same sick multitudes thronging the doors of the hospitals and dispensaries, the same interminable lines of vehicles in the middle of the streets, and the same jostling thousands on the pavements. There seems to be a sort of sanitary paradox in the fact that although statistics claim it to be one of the healthiest of all the large cities of the world, it has more hospitals in proportion to the inhabitants than any other city. With few exceptions, too, its hospitals are supported by voluntary contributions,—small sums given chiefly by "subscribers," who pay so much each year toward the support of these worthy enterprises. There is no city in the world so well provided with hospitals as is London. Indeed, the fact that many of the hospitals have a large number of empty beds would seem to justify the remark made to us by a very intelligent English physician, that there are quite too many hospitals; so many, in fact, that there is almost a strife among the managers for patients. In spite of the best effort one can make to keep himself in a wholly philanthropic frame of mind, when thinking of London hospitals it is almost impossible to repress the impression that many of them are run for some other, and less humane, purpose than the relief of suffering and the cure of disease.

Nevertheless, there are many great hospitals in London, and the oldest, and perhaps justly the most renowned, is that of St. Bartholomew, which was founded hundreds of years ago, and was placed upon an independent footing, so that it is in no way dependent upon casual contributions for support. We frequently visited the clinics of this hospital, through the kind invitation of Mr. Marsh, one of its most distinguished surgeons, and saw many wonderful operations, one of the most interesting of which was the operation known as gastrotomy, by means of which an artificial opening is made in the stomach, so that food can be introduced without passing down the throat. The operation was made necessary in the case we saw, by a cancer of the esophagus. A rubber tube takes the place of the gullet after this operation, and the patient's life is thus greatly prolonged, when death from starvation would otherwise occur in a short time.

Speaking of surgical operations reminds us that we should say a word of the remarkable work which has been done by Professor Horseley, in the cure of epilepsy. The discovery was made many years ago, by Ferrier and others, that each group of muscles in the body is represented by reflex centers located in the gray matter of the surface of the hemispheres of the

brain ; and careful study of the effects of stimulating this part of the brain in monkeys and other lower animals, has shown that each little fold or convolution has charge of some special group of muscles. Professor Horseley has achieved world-wide renown by making practical use of these facts in the treatment of cases of epilepsy, hitherto regarded as incurable. In one form of this dreadful disease, the convulsive attack begins with a twitching of the muscles of one side, as the jerking of the muscles of a hand or an arm, or the turning of the head to one side, or the drawing of the mouth. By means of these muscular disturbances, the surgeon is able to say at exactly what part of the brain the disease is located, and by removing a small portion of the skull by the trephine, he removes the diseased portion of brain tissue, and in due time the patient recovers. This method of treatment has been found marvelously successful in cases in which the disease is the result of some accident in which the patient has received a severe blow upon the head. Persons have been cured by lifting up from the brain a depressed portion of skull, years after the injury was received. We had the pleasure of making the acquaintance of Professor Horseley at the American Medical Congress, and were glad to improve the opportunities which he kindly gave us to become better acquainted with this remarkable method of treatment for one of the most hopeless of maladies.

We spent several very pleasant and profitable hours with Dr. W. B. Richardson, one of the most widely known, and one of the most remarkable, of medical men in England. Dr. Richardson is a man who is eminent in so many ways that it is difficult to say to what he chiefly owes his great renown. He has all his life been a working physiologist, and has made many remarkable discoveries, which have been incorporated into the great body of scientific facts ; and he is still as busy as ever with original work of this kind. He kindly showed us through his laboratory, and repeated interesting experiments by means of which he has demonstrated various unique facts relating to the functions of the blood and the circulation. He also showed us a number of ingenious instruments for use in the diagnosis of obscure diseases, which showed great mechanical ingenuity. Dr. Richardson is well known wherever the English language is spoken, as an investigator in sanitary science, to which he has added many most important and interesting facts. He filled the president's chair at the Sanitary Congress held in Great Britain the present year.

The temperance cause owes more to Dr. Richardson than to any other scientific man of the present century, and there was no such thing as scientific temperance a hundred years ago, nor even much more recently than that. His investigations of the alcohols showed that they are all of the same class as regards their effects upon the human body, and that they are alike poisons, unusable, and wholly mischievous in their effects. Although once a smoker, he long ago renounced the use of the weed, and has become a vigorous opponent of the practice, which is certainly far more prevalent in England than in America. Dr. Richardson is also eminent as a writer and lecturer. His thoughts are always embodied in the choicest English, and his books have had an immense sale wherever the English language is spoken, and some of them have been translated into other languages. We were glad to learn from him that he is about to undertake the preparation of a new work on alcohol, which will undoubtedly receive a warm welcome in both England and America.

We have just said that smoking is much more general in England than in America. This is true of other European countries in a still greater degree. But what astonished and shocked us the most was the discovery that the smoking of cigarettes by women is a growing custom here. On two occasions we have seen women who belonged to the most select social circles, puffing cigarettes with the air of connoisseurs. In one instance, a very cultivated, and in other respects apparently refined woman, smoked two cigarettes while her husband and his guests, with the exception of the writer, smoked cigars at table after dinner. The reader will, we are sure, share in our astonishment when we add that the lady in question was the wife of a leading London physician, whose name we forbear to mention. We are informed that this is not at all an uncommon thing in England, and we are also sorry to be obliged to credit that it is a custom by no means unknown in America, although we must believe that in the United States indulgence in the filthy weed by women is confined to those social circles ordinarily termed "fast."

But we find ourselves running on at too great length for the space to be devoted to this article. We cannot now speak of the Parkes Museum of Hygiene, and the wonderful biological laboratories which abound in the metropolis. To one interested in science, London has a fascination which is almost irresistible. It is really difficult to tear one's self away from the admirable opportunities for study and research which are here afforded.

We had the pleasure of forming many pleasant acquaintances in London, meeting, among others, Rev. A. H. Lewis, of Plainfield, N. J., who is spending a

short vacation abroad. We also had the pleasure of renewing our acquaintance with the Rev. Wm. Jones, an eminent scholar in Oriental languages, and for many years a missionary at Jerusalem, now a settled pastor in London. We are indebted to his son, a student at St. Bartholomew's hospital, for many courtesies. We were pleased to meet, just before leaving the city, our old friends and former patients, N. P. Clarke, Esq., of St. Cloud, Minn., and his niece, Mrs. D. B. Searles.

We are glad to find GOOD HEALTH well represented in London, and growing in popularity. The English people are a reading people. Judging from the prosy leaders in the daily journals and the heavy articles in the magazines, they must be the most patient readers in the world. It is good to see that there is so great an interest in the subject of hygiene, which we think is more general than in America. The few English works devoted to this subject seem to be readily taken, although their mode of treating the matter is most inadequate. We feel assured that there is destined to be a great sale in this country of publications on health topics which deal with the subject in an interesting manner.

WHAT THE MIND-CURE DOCTORS PROFESS TO DO.

[Abstract of a Lecture by the Editor.]

THIS morning I have brought in a volume entitled "Science and Health, with Key to the Scriptures," by Mrs. Glover Eddy, and I will read you a few passages to substantiate what I said in my lecture the other day. One could be easily pardoned for discrediting such statements without positive evidence. Take these as specimens of the contents of the book : —

"Anatomy makes man structural. Physiology continues this explanation, measuring human strength by bones and sinews, and human life by material law. Phrenology makes men thieving or honest, according to the development of the cranium ; but anatomy, physiology, and phrenology do not define the image of God or immortal man. To measure capacities by the size of the brain, and limit strength to the exercise of a muscle, would place intelligence at the mercy of organization, and make mind dependent upon matter. . . . . *Is civilization but a higher stage of idolatry, that man in the nineteenth century should bow down to a flesh-brush, to flannels and baths, to diet, exercise, air ?* Nothing is able to do for him what he is able to do for himself with omnipotent aid. *The idols of civilization* (flannels, baths, etc.,) *are far more fatal to health and longevity than the idols of older forms of heathenism.* They call into action less faith than Buddhism in a supreme governing intelligence. Even the Esquimaux restore health by incantations as effectually as civilized practitioners by their modus operandi" ! ! !

If we are to cast aside the "flesh-brush" and "baths" as objects of fetish worship unworthy of nineteenth century civilization, we shall soon return to such a state of affairs as existed in mediæval times, when, according to historians, for a thousand years not a man, woman, or child ever took a bath except by accident. Some one has said that soap is a symbol of civilization, but that could not be, according to Mrs. Eddy. Her statement, too, would convey the idea that an ignorant Esquimau was just as competent to set a broken bone as a civilized surgeon ; or that "incantations" in an air-tight Esquimau hut were just as efficacious in restoring health and strength to an invalid as all the remedies of the modern practitioner, coupled with good ventilation and proper dietetics. Fresh "air" and "diet" are classed in with the "flesh-brush" and "flannels," as forming part of our "higher idolatry" ! What could be more absurd? Hear again : —

"Physiology is anti-Christian. It teaches us to have other rulers before Jehovah. The good it is supposed to do is evil, for it would rob man of a God-given heritage. Truth is not the basis of physiology."

I believe in physiology, and that makes her declare me an infidel.

"Putting on the whole armor of physiology, and obeying to the letter the so-called laws of health, so the statistics show, have neither diminished sickness nor lengthened life. Diseases have multiplied and become more obstinate. Their chronic forms have become more frequent ; the acute more fatal. There are more sudden deaths since our man-made theories have taken the place of primitive truth."

It is hardly necessary to say that this whole statement is deliberate falsehood. This woman probably never saw a statistic in her life ; and if she should, she would call it another "idol" ! In Geneva one hundred years ago, the average length of life was only twenty-one years ; now it is forty-two years. In every large city since sanitary regulations have been understood and enforced in regard to cleansing the streets of filth, and the protection of the water-supply, there has been a falling off of the death rate. Since small-pox, diphtheria, and other contagious diseases

have been subjected to rigid quarantine, their prevalence has been greatly diminished. A clerk in the office of a State Board of Health wrote to all the large cities of the world in regard to the relative prevalence of cases of typhoid fever, dysentery, and kindred diseases, before and after the adoption of proper sewerage, and the securing a well-guarded water-supply, and the universal response was that the effect of the modern improvements had been greatly to diminish disease. Again: —

"We cannot serve two masters, or reach divine science through material sense. The source of all life and perfection is not matched by drugs and hygiene. If a man is constituted both good and evil, he will end in evil. An error in the premises must appear in the conclusion. To avail yourself of the power of the Spirit when healing the sick, you must depend upon no human reliance."

Hygiene and drugs are classed together by this abstruse science. If we are to depend upon no human reliance, then of course it must be pure spirit. Here follows a thrust at massage and similar treatment: —

"When you manipulate patients, you are trusting in electricity and magnetism more than in truth; and so you employ matter more than mind. You weaken your power when you resort to any except spiritual means. It is useless to say that you manipulate patients, but you lay no stress on manipulation. If this is the case, why manipulate? Really you do it *because you are ignorant of its baneful effects*, or are not sufficiently spiritual to depend on Spirit."

This is an attempt to teach that hygienic agents are not only useless, but pernicious, baneful, and fatal.

"You say that indigestion, fatigue, sleeplessness, cause distressed stomachs and aching heads. Then you consult your brains in order to remember what has hurt you, when your remedy lies in forgetting the whole thing; for matter has no sensation, and human mind is all that can produce pain."

It is pernicious to think over what you have eaten that interfered with your digestion; you can go without sleep, disregard all the laws of health, and then if you suffer the consequences, the remedy lies in forgetting all about it. Is it possible to concoct anything which has less sense in it than this doctrine of so-called Christian science? Again: —

"The so-called laws of health are simply laws of mortal belief, the premises of which are erroneous. Therefore the conclusions are wrong. Truth has made no laws to regulate sickness, sin, and death; for these are unknown to truth. Belief produces the results of belief, and the penalty it affixes is as sure as the belief itself. The remedy lies in probing to the bottom, finding out the error of belief that produces a mortal disorder, and never honoring it with the title of law, or *yielding obedience to it*."

Then these so-called laws of health are all based upon false premises, and consequently the proper thing to do is never to honor them with the title of law, and deny that they have any possible claim upon our obedience. This is directly antagonistic to all the results of human experience in all ages, in relation to the matter of health. The scientific labors of learned men and women in this direction have all been entirely unnecessary and fruitless, and the way to be healthy is to totally disregard all these laws. Here is an instance which Mrs. Eddy gives of her wonderful power in exorcising "so-called" disease: —

"A lady whom I cured of consumption always breathed with great difficulty when the wind was in the east. I sat silently by her side a few moments. Her breath came gently. The inspirations were deep and natural. I then requested her to look at the weather-vane. She looked, and saw that it pointed due east. The wind had not changed, but her difficult breathing was gone. The wind had not produced it. My metaphysical treatment changed the action her belief had produced on the system, and she never suffered again from east winds."

She admits that the wind had not produced this difficult breathing, — that it was a case of pure imagination, — and that when she occupied the patient's mind so that the lady did not know when the wind changed, she breathed all right. This lady was only cured of the "east wind," then, according to Mrs. Eddy's own admission. Probably inquiry would show that the woman either had nothing worse than the "east wind" malady, or that she died, notwithstanding. Here is another case: —

"A student visited his home in Boston, and requested my counsel in a difficult case that he was treating, but not curing. I examined the case, and told him the difficulties were produced by a fall several years before. Lingering belief made the trouble. When he returned to his practice he wrote me the following letter: —

"'April 2, 1880.

"'Last Saturday, when I was at home and you examined my patient, she had the most wonderful experience that I ever heard of. She was sitting, talking with some ladies, and felt a little faint. Her head ached, and she said she would go to bed, when she felt a crash just as if she were thrown from a carriage, and knew nothing for four hours. Great black and blue spots, just where she was bruised years ago, appeared, and she acted and talked like a person under

the influence of morphine. After the discoloration was gone, the cuticle came off in scales. She is better than ever now; walks with a cane, and has been out to ride to-day. What can it mean? What does it mean? G. D. CHOATE.'"

It will be observed that although the name of the student is given, neither the name of the patient nor any clew to her place of residence appears. Nothing is given by which the experience could be verified, if one were disposed to look it up. All through the book are citations of the marvelous things which she can do which are impossible to her "students." In this particular case she would have us see the extraordinary power her mind produced over that of the unknown lady, who by simply undergoing "mental" examination at some unknown distance, felt this great "crash," which caused four hours' insensibility, to say nothing of the "black and blue spots" from which the skin peeled off later. One would not want to undergo an examination like that every day. Think of actually skinning a woman alive, by simply thinking about her!

(To be continued.)

STARVED NERVES AND FAMISHED TEETH.

IT may not be generally known that the same elements required to nourish the bones, are also equally necessary for the maintenance of the nervous tissues of the body, the brain, and the nerves. Bad nerves and bad teeth are neither an infrequent nor an accidental combination of ailments. The same conditions of body which lead to lowered nerve tone, lead to decay of the teeth, whether the cause be a disturbance of digestion which prevents the proper assimilation of the "salts" (the bone and nerve building elements of the body), or a deficient supply of these important elements in the dietary. Premature decay of the teeth is an ominous outlook for an individual; it means premature decay of brain and nerves as well; it means an early loss of the energy and bouyancy of youth. In view of these facts, there is a sad future before the American people. The condition of the teeth of the average American is such that it has been asserted that a hundred years hence, at the rate at which deposits of gold in human teeth are now taking place, there will be found more gold in the cemeteries of the United States than in the mines of Colorado. However this may be, certain it is that the young man or woman of twenty who has thirty-two, or even twenty-eight, sound teeth is an exceptional individual. Plenty of boys and girls of sixteen or seventeen years are wearing artificial teeth.

It is worth while to inquire into the cause of this premature decay. There are, doubtless, two important causes, overlooking several minor ones. These are, first, the introduction of superfine preparations of the grains in modern times; and second, the general physical decline of the race. That portion of the grain which until within a few years the farmer fed to his hogs, contains in largest proportion the elements needed for the nourishment of brains and bones. It is no wonder, then, that the farmer raised fine hogs and puny children. The accumulated effects of this starvation of the body, as regards the class of elements needed for teeth and nerves, for several generations back, is now seen in the premature decay of these structures. Dentists and lunatic asylums flourish and multiply beyond all precedent. The peripatetic dentist is no longer seen. He finds work enough at home. The victims of crumbling grinders are not widely scattered through communities, but constitute the majority.

The remedy for this state of things, so far as food is concerned, is to be found in the use of whole-grain preparations. Oatmeal, unbolted wheat flour, known in this country and Germany as graham flour, whole-wheat flour, rye and corn bread, and the legumes, peas and beans, afford salts in abundance. But these foods must be digested and assimilated as well as eaten. The American disease, dyspepsia, is doubtless largely dependent on the general lowered nerve tone of the American people, which is a natural result of a century of high-pressure living, and is a serious obstacle in the way of the improvement of our famished teeth and nerves. Salts cannot be assimilated until they have first been digested. A first step toward improved digestion will be in the abandonment of tea, ices, pastry, greasy foods, and the adoption of simpler habits in diet. Then we must have more out-of-door exercise, more muscle work, and less excitement of brain and nerves. We do not say less brain work, but less excitement, less worry, less indulgence in such nerve-exhausting recreations as balls, theaters, horse-racing, and progressive-euchre parties.

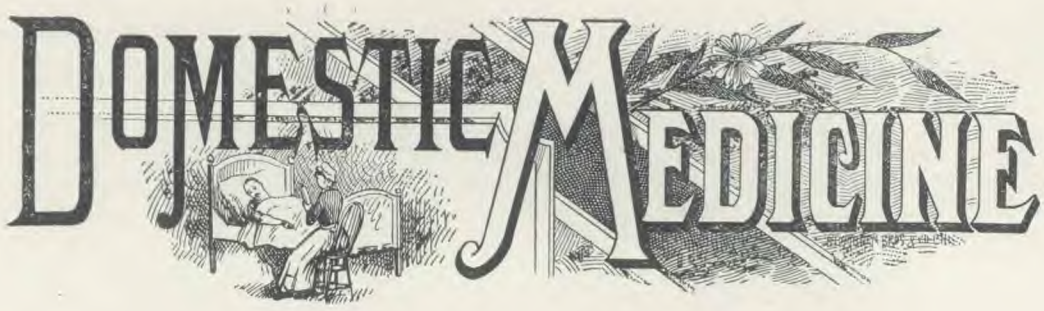
We are often told that "the world moves." Assuredly it does. It moves too fast. It rushes, it whirls, it gyrates like a western cyclone. We should be grateful if some one would tell us, and support the assertion by facts, that "the world pauses"; at any rate, that its headlong destructive speed is slowing

down a little. Our teeth are crumbling to atoms under the pressure of our bad habits, dietetic and otherwise; our nerves are snapping with the tension of our stimulated life; our brains are reeling with the intoxication of excitement. It is time for us to pause, and give attention to the requirements of nature's simple laws, before we become a soft-brained and toothless race.

Bad Livers and Heart Disease. — An English physician points out the important fact that those diseases of the heart which occasion sudden death are primarily due to disease of the liver. The preventive measures which he very sensibly suggests are naturally such as relate to the liver, and include the avoidance of the free use of animal food, especially flesh food, which is coming to be generally recognized as the most potent cause of disease of the liver, and the production of gouty or rheumatic diathesis.

Stomach Poisons. — This may not be an appropriate name for that to which we shall apply it, but in the absence of any better, we shall venture to use it. Modern investigations have shown more and more conclusively that the processes of fermentations which take place in the stomach are the cause of the development of various poisonous substances, some of which are of the most deadly character; and the conclusion is inevitable that these poisons are the cause of many of the symptoms which accompany the class of maladies commonly known as dyspepsia. A recent investigator finds in the contents of the stomach of persons suffering from flatulent dyspepsia, accompanied by vertigo, a poison closely allied to prussic acid, and other poisons which are capable of producing this symptom even in very small doses. These discoveries ought to make us careful to keep our stomachs as free from germs as possible; for it is well known that these poisons are wholly due to the action of germs upon the food elements. One cannot hope to have a clear head without a clean stomach, and he who who has a regard for the sanitary condition of his alimentary canal will establish a rigid quarantine against such germ-laden substances as old cheese, sauer-kraut and other decomposing or fermenting substances.

The Summer Slaughter of the Innocents. — It is about time for the annual rise in the mortality of small children to occur, and we deem it to be the duty of all physicians who are themselves informed upon the subject, to call attention to the fact that most, if not all, of these deaths are clearly preventible. Ignorance or neglect, and not Providence, is responsible for the annual decimation of the little ones during the hot months. Without going deeply into the subject, we wish to call attention to one factor in this terrible mortality of small children, by avoiding which, it is probable that at least three-fourths of the deaths which occur might be prevented. We refer to the influence of food. The increased mortality of young children during the hot months is almost exclusively due to bowel disorders. Careful inquiries into the nature and causes of these maladies show that they are not so much due to the direct influence of the heat upon the child, as to the use of fermenting or decomposing food, and especially of stale milk. In the very hottest weather it is extremely difficult to keep milk perfectly sweet for more than a few hours. Refrigerators often become, at this season of the year, germ-breeders of the most effective kind, and milk placed in them becomes worse contaminated than if it had been left exposed to ordinary conditions. Nursing bottles become sour, and milk may even sour in the bottle if not taken promptly by the child. Neglect to cleanse the mouth of the child after it has nursed or taken food from a bottle may result in the development of a luxuriant crop of germs in its mouth, which the next feeding will carry down into its stomach, there to set up the processes of fermentation, by which poisons will be formed and the life of the child placed in jeopardy. All of these points must receive the careful attention of the mother or the nurse, if they would carry the child through the hot months without serious illness. One of the most efficient of all precautions which can be taken at this season of the year, is the boiling of all milk fed to young children. The milk intended for the child should be boiled as soon as received from the milkman, then quickly cooled by placing in ice-water, and should then be boiled again, and cooled in the same manner to the proper temperature for feeding, just before it is given to the child. This precaution alone, if faithfully carried out, would save the lives of two-thirds of the children who will die in the next two months. We earnestly urge this matter to the attention of all who have the care of small children; and the plan is by no means a useless one for adults, as well. In the writer's family, milk which has not been boiled is not allowed to come upon the table. If, in addition, all drinking-water is boiled, and the use of iced drinks of any sort is avoided, the hot months may be passed with scarcely more danger from illness than at any other season of the year.



For Nettle-Rash. — Bathe the parts with water which has a teaspoonful of carbonate of soda to the pint. It may be either cold or hot.

For Rheumatic Pains.— Make a strong solution of soap, to which add one-third its bulk of turpentine. Rub on affected parts, afterwards covering with flannel.

Constipation in Children.— The state of the bowels in infants and young children should be most carefully looked after, as constipation, so to be dreaded in its results to adult sufferers, is a still more deadly foe to the younger and weaker ones. The system of a young child is very susceptible to morbid influences, and hence suffers most profoundly by any disturbance of the eliminative process which is carried on by the bowels. The condition of general poisoning thereby induced is indicated by the peculiarly offensive breath of a constipated child. Constipation is at the root of a host of evils, for the poisonous matter which should be carried off at once, remains to be re-absorbed by the system, and thus every tissue is clogged, and every function disturbed.

Treatment.— In the first place, the food must be carefully regulated. Oatmeal gruel, well boiled, with milk added, is an excellent food. Barley and graham gruel are also useful, especially in cases in which there is acidity of the stomach. Such treatment should be given as will improve the general health of the patient, as habitual constipation is sometimes due to a low state of the nervous system and general weakness. A tepid sponge-bath should be employed daily, a little salt being added to the water on alternate days. Each day the body should be thoroughly rubbed, the bowels receiving the most careful attention, being kneaded faithfully for fifteen or twenty minutes twice a day. A fomentation should also be applied to the bowels once a day, and more frequently when there is pain, as is usually the case when the bowels are hard and swollen with gas.

When the bowels cannot be made to move at least once a day, by these measures, an enema of warm water should be used in ordinary cases. Two or three teaspoonfuls of glycerine, or a little castile soap, or a small quantity of olive-oil may be used, sometimes advantageously.

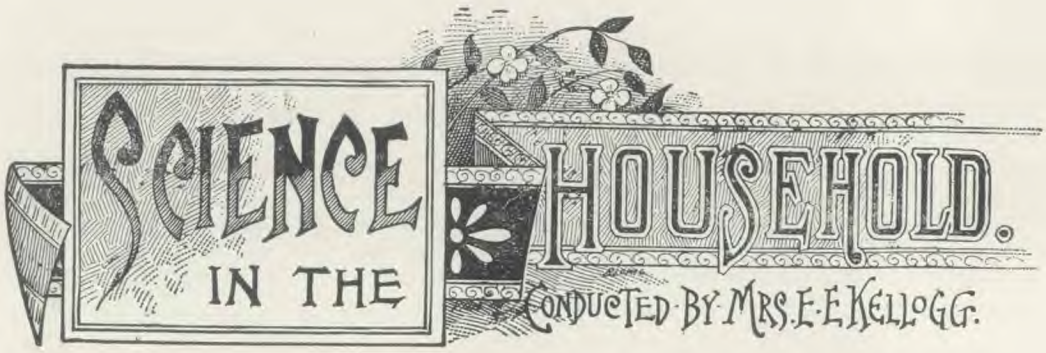
Abdominal Surgery.— Thanks to the indefatigable labor of such men as Dr. Lawson Tait, of Birmingham, England, and other European surgeons, thousands of cases of disease of the various organs of the abdomen, which were once considered hopeless, are now curable, by means of proper surgical operations. Tumors and other diseases of the stomach, intestines, liver, kidneys, and other organs, once thought to be wholly beyond the reach of human skill, are now treated with the same degree of success that attends the treatment of similar tumors in other parts of the body. Among the most hopeless of these cases have been those in which the lower opening of the stomach had become closed as the result of cicatricial contraction, subjecting the patient to a process of slow starvation. These cases are now successfully, and we may almost say safely, treated by opening the abdomen and stretching the pyloric opening to the necessary extent. This operation is the device of an Italian surgeon who has been very successful in it. These sufferers should be no longer left to their unhappy fate when there is so favorable an opportunity offered, by means of which life may be not only prolonged, but freed from the miseries of a lingering death. Another class of cases, now most signally relieved by surgical means, is that of biliary obstruction due to gall-stones. Many of these cases may be relieved, and even cured, by appropriate medical treatment; but the process is not infrequently a long and tedious one, and one which is only temporarily successful, for the reason that one can never say when the last stone has been expelled, and it is always possible that there may be left in the gall-bladder calculi

which are too large to be expelled,. By means of an operation which is attended by small risk when performed with proper precautions, it is possible to remove at once from the gall-bladder all the calculi which it may contain, and thus to free the sufferer from his disease at once. When the disease of the liver, to which the formation of the calculi is due, is properly treated after an operation of this sort, the patient may be assured that he is permanently cured of his distressing malady. Another boon which has been conferred upon the race by abdominal surgery is the successful treatment of gunshot wounds of the abdomen. In the majority of cases these wounds are certainly fatal. By means of a proper surgical operation, the perforations of the intestines may be closed, and the patient's life may be thus saved. It is important that a knowledge of these facts should be disseminated as widely as possible, so that persons who may be in need of surgical assistance of this sort may be apprized of the fact that relief is possible, and may thus be led to seek it before strength has been so reduced by delay that relief even by surgical means has become impossible.

CONTAGIOUSNESS OF CANCER. — Dr. Arnaudet, a French physician, has recently called attention to facts which seem to point very strongly toward the correctness of the view that cancer is a contagious disease which may be communicated in a variety of ways. The eminent professor of skin diseases, Alibert, inoculated himself with cancer to prove that it was not contagious, and died of the disease, thus proving the very theory he combatted. There is a certain district in Normandy in which the disease is so prevalent that it is to be accounted for in no other way than by the view that it is directly contagious A nurse contracted cancer from the patient for whom she cared, dying from the effects of the disease, which appeared in her hand, and extended to the arm and the body. Dr. Arnaudet thinks that the disease may be communicated by water. Agreeing with these observations are those of Mr. Alfred Haviland, who has made a map of England showing the distribution of cancer, from which it appears that the disease is almost confined to low-lying districts which are often flooded, and in which the soil is never well drained, and is almost wholly absent from high and dry localities. It seems probable, indeed, that future investigations will show that cancer, like consumption and many other maladies, is due to the development of a morbid germ, and that it is contagious in the same manner that consumption is contagious. It may possibly appear that the occurrence of the disease in families is much more often due to contagion than to heredity. These facts should at least lead to the greatest caution on the part of those who have the care of persons suffering from this disease, and also those who are the victims of the malady. All discharges, and cloths or garments soiled by the disease, should be disinfected by some good disinfectant, or by means of boiling water, and great care should be taken by nurses that nothing of this character comes in contact with raw or abraded surfaces.

RHEUMATISM. — The effects of rheumatism are much more generally known than its causes, and while few escape its twinges, the average individual is dumb and helpless before it, not knowing where or to whom to go for aid. The cause of rheumatism is excess of uric acid, which gets into the joints, and sets up an acute inflammation ; and this urid acid is the product of that condition of the body commonly known as "biliousness." August is pre-eminently the month for rheumatism, or at least the month when it is most liable to be contracted. At this season of the year, there is little or no fatty material needed by the system, and all meats and rich, greasy, highly-spiced foods do but over-stimulate and overload the stomach, and so clog the liver in its work that it is unable to throw off the waste matter through its usual channels, the bowels, the kidneys, and the skin. Thus the poisonous secretions are to a great degree retained in the body, ready to work all kinds of mischief. Nature, always on the alert to defend the vital points, — brain, heart, and lungs, — works hard to eliminate the poison, but failing this, sends it as far away as possible, to the joints, where it produces no end of suffering for the unhappy victim, but no immediate peril to life. Without any question, the remedy is, first, to go to bed, absolute rest being required to prevent the formation of more waste matter. We must assist Nature in every way possible. To this end we must drink water in large quantities. Water will dissolve the uric acid, and carry it off. Water, water, — no food ! For two to four days at least nothing but water should be taken into the stomach.

To recapitulate then : The remedial agencies for rheumatism are rest, water, and starvation. Three days of starvation will do more to cure a case of rheumatism than anything else on earth. During this time, wet-sheet packs should be employed, prolonging them for hours, even twenty-four hours not being too long in some cases. Packs of this duration have been made use of in New York City hospitals in severe cases of rheumatism, with excellent success.



SEASONABLE BILLS OF FARE.

DINNER NO. 1.

Corn and Bean Soup.
Baked Potato.
Summer Squash. Cauliflower with Tomato Sauce.
Pearl Wheat with Cream.
Oatmeal Bread. Peach Tapioca.
Blueberries.

DINNER NO. 2.

Oatmeal Soup.
Mashed Potato. Macaroni with Tomato Sauce.
String-beans.
Graham Grits with Peaches and Cream.
Whole-wheat Bread.
Gooseberry Tart.

BEAN AND CORN SOUP. — Cold boiled or stewed corn and cold baked beans form the basis of this soup. Take one pint of each, rub through a colander, add a slice of onion, three cups of boiling water or milk, and boil for ten minutes. Turn through the colander a second time, to remove the onion and any lumps or skins which may remain. Season with salt if desired, and half a cup of cream.

OATMEAL SOUP. — Put two heaping tablespoonfuls of oatmeal into a quart of boiling water, and cook in a double boiler for one hour, or longer. Strain as for gruel. Add salt if desired, and two or three stalks of celery broken into finger lengths, and cook again until the whole is well flavored with the celery, which may then be removed with a fork, a half a cup of cream added, and the soup is ready to serve.

CAULIFLOWER WITH TOMATO SAUCE. — Boil or steam well-washed cauliflower until tender. In another dish, prepare a sauce, by heating a pint of strained stewed tomatoes to boiling, and thickening with a tablespoonful of flour. Salt to taste, and pour over the cauliflower.

OATMEAL BREAD. — Mix a quart of oatmeal mush with a pint of water, and after beating it smooth, add a teacupful of lively yeast, and flour to make a stiff batter. Put in a warm place, and let it rise. When well risen, add sufficient flour to mold; let it rise again, and bake. In making this as well as other yeast breads, knead as soft as possible.

PEACH TAPIOCA. — Soak a cupful of tapioca over night in three pints of cold water. In the morning turn into a double boiler, and cook until it appears clear. Add a cup of sugar and a dozen ripe peaches, pared, stoned, and divided into thin slices. Put in an earthen pudding-dish, and bake an hour. Serve cold, with whipped cream.

STRING-BEANS. — To prepare the beans for the table, pull off the strong fiber, or strings, as they are called, from the back of the pods, and breaking off the stem end and points, cut them into inch lengths. This may be quickly done by taking a handful of the pods together, laying them upon a chopping-board, and drawing a sharp knife across them. Boil until tender, usually from twenty to forty minutes, according to their age and condition. Drain, put in a hot dish, and season with salt and a little hot cream.

GOOSEBERRY TART. — Fill a pudding-dish with well-prepared green gooseberries, adding a tablespoonful or two of water. Cover with a crust prepared in the following manner: Into a cup of thin cream stir a gill of yeast and two cups of flour; let this become very light, and then add sufficient flour to mix soft. Knead for fifteen or twenty minutes very thoroughly, roll evenly, and cover the gooseberries; put in a warm place until the crust has become very light, then bake in a moderately quick oven. Cut the crust into the required number of pieces, and dish with gooseberries heaped on top. Serve with sugar and cream.

CARE OF CLEAN CLOTHES.

If in a household there is one influence which more than another produces benign results, it may be summed up in the little word *order;* and if in one direction more than another this influence makes for the comfort of every member of the family, it is in the careful putting away of the freshly laundered clothes. Whether each one has standing in his own room his own particular bureau for his personal belongings, or whether "mother" keeps the under-clothing for all in the great bureau standing in her room, the fact remains the same that there is no one bit of household economy which we will get so much comfort out of as the orderly arrangement of its drawers, so that we can at once lay our hands upon any article wanted.

The garments should be folded and carefully pressed, then laid in compact piles, — never promiscuously, but blouses, waists, aprons, drawers together, — being careful to place the folded edge of each toward the front, that *that* may be what you first lay hold of in your search, and thus may not undouble every one as you draw it from the pile. This last seems like a very small thing for one's comfort to hinge upon, but after a trial, we feel sure that you will not be disposed to under-value its importance.

When the ironed clothes for the family are kept together, separate drawers should be devoted to certain kinds, and the arrangement once made should *never* be broken up. Determine at first just what things shall go in each drawer, and next decide upon the precise spot in each drawer in which they shall always be found, forcing yourself to strict system in the matter, even to the numbering of the drawers with a memorandum of the contents of each, and a diagram too, if necessary, carrying the book in your pocket until you have it all "learned by heart." When the arrangement finally crystallizes into habit, you will find it a comfort almost past belief.

Smaller articles — handkerchiefs, collars and cuffs, etc.— should, for convenience, be kept in boxes, each in its regular place.

Hose should be neatly and tightly rolled together, and placed in their particular corner, socks being turned, the feet into the leg, wrong side out, and laid, mated, in a pile ready for drawing on.

Mending.— "A stich in time saves nine," and nothing is truer. As you iron, sort out carefully all garments needing mending, even though some may need but a stitch, and hang by themselves upon one side of the clothes-bars; the stockings, of course, going into the stocking-basket, which should be furnished with balls of yarn, needles, scissors, thimbles, and all conveniences.

The family mending would be divested of, at least, half its disagreeable features, if a drawer or trunk were kept solely for neatly tied rolls of pieces, and a rule was made, that regularly, when a garment was finished, the roll of pieces left should be brought and placed in it. It is the neglect of these small details which occasions the endless running and hunting for things in the average household, and which, in its unsatisfactory and time-and-strength-consuming searches for "the pieces like Tommy's trousers," has brought mending into ill-repute in the family.

When once the standard of housework is raised, and the order and system brought to it which is required in other work, there will eventuate an era of home comfort for all the family, for those who help about the housework as well as those who do not, such as, save in exceptional instances, has not been known.

To clean straw matting, wash with a cloth dipped in clean salt and water; then wipe dry at once. This prevents it from turning yellow.

Papier mache, after being washed in clear, cold water, should be dusted with flour, and rubbed with chamois-leather.

If a dish gets burned in using, do not scrape it; put a little water and ashes in it, and let it get warm. It will come off nicely.

Is your pantry damp? A small box of lime will absorb the moisture, and keep the air dry and free from a disagreeable odor.

Instead of putting fresh blacking on the kitchen stove so often, rub the covers and top well every day with newspaper. This will brighten it up much.

Old broom handles make very good, inexpensive poles for scrim or muslin curtains. The hem in the top of the curtain should be just deep enough to slide over the broom handle. The poles may be supported by driving a tack firmly in each end, to rest upon large nails driven into the casing.

QUESTION BOX.

[All questions must be accompanied by the full name and address of the writer, as it is often necessary to address by letter the person asking the question.]

ELECTRIC BELTS. — J. D. H., Mich., inquires, "What is your opinion of electric or magnetic belts?"

Ans. — They are of very little account.

WORMS. — W. H., Mass., wishes know to what it is best to do for children who have worms.

Ans. — It is necessary to ascertain the kind of worms before an appropriate remedy can be employed.

TURPENTINE. — Mrs. R. M. B , Mo., inquires if turpentine is injurious to apply outwardly.

Ans. — When applied too freely, turpentine is quite likely to set up inflammation of the kidneys. Have met a few cases of this sort.

JAUNDICE. — J. B., W. Va., wishes a remedy for jaundice.

Ans. — There is no one remedy for jaundice. A fruit, grain, and milk diet, abundance of hot water, fomentations over the stomach and liver, daily, will be found beneficial.

WILD HAIRS. — G. W. B., Ind., asks, "What will stop wild hairs from growing in the eyelids?"

Ans. — For temporary relief, the hairs may be drawn out with a pair of tweezers. Probably you need a pair of glasses. You ought to have your eyes examined by a good oculist.

CORSETS. — J. C. K., Minn., asks what a person who has been accustomed to wearing corsets should do when, upon leaving them off, they feel pain in the side, and loss of strength?

Ans. — Simply stop wearing the article, and adopt such exercise as will strengthen the weak muscles.

FRICTION AFTER BATHING. — Another inquirer wishes to know whether vigorous rubbing is essential and beneficial after bathing.

Ans. — It depends upon the kind of bath. If a warm bath, rubbing is not best, because it would tend to increase the heated condition of the surface; after a cold bath, vigorous rubbing is beneficial.

A READER wishes us to state what toilet-soap we would recommend for a delicate skin.

Ans. — There is no better soap than the old-fashioned mottled Castile. Iron is the mottling matter. Most of the so-called toilet soaps are ordinary laundry soaps made over, perfumed and colored. Castile soap is the material used for the best of these. Pure soap is made of olive-oil combined with an alkali.

GRITTING THE TEETH. — A. J. M., Ind., inquires for a remedy for the habit of gritting the teeth at night, and also for pain in the spine, just below the waist line.

Ans. — We know of no remedy except to place a bit of rubber between the teeth, so they will not come in contact. The rubber should be attached in some way so it will not be swallowed in the sleep. 2. The trouble is spinal irritation. You ought to visit a sanitarium for treatment.

BUNIONS. — Mrs. J. W. B., Conn., wishes to know what to do for a bunion.

Ans. — Remove the thickened skin as in corns, by soaking in hot water, applications of acetic acid, and alkaline washes; then arrange some sort of a harness about the foot which will tend to straighten the deformed great toe. A very efficient way is to place upon it a cot of some soft material, the free end of which should be attached by means of a strong rubber ribbon to a strip of adhesive plaster applied around the heel, and extending along the side of the foot.

PERSPIRATION OF THE FEET — SORENESS IN CHEST AND BACK. — R. H. W., Ind., asks the following questions: —

"1. Will you kindly give advice concerning the treatment for the cure of excessive and offensive perspiration of the feet. 2. What is indicated by deep-seated soreness on both sides of upper chest, and on both sides of the back, — just below and back of the armpit. Pain is felt most severely on awakening in the morning."

Ans. — 1. Frequent bathing with alternate hot and cold water will be beneficial. A saturated solution of boracic acid is also good. Another remedy is borax water. Boracic acid sprinkled inside the shoe, has sometimes proved beneficial. 2. The cause of the pain is spinal irritation. A hot-water bag applied to the spine one hour twice daily, will be likely to give you relief.

LITERARY NOTICES.

"MAY WOMEN SPEAK?" A Bible study by Rev. Geo. P. Hays, D. D., LL. D. 88 pp., paper. Price, 25 cents. Woman's Temp. Pub. Ass'n., Chicago, Ill.

A strong argument, well sustained by the Bible, for the public work of woman in the capacity of religious teacher, missionary, etc.

THE *Philanthropist*, published monthly for the promotion of social purity, the better protection of the young, the suppression of vice, and the prevention of its regulation by the State. A strong and sympathetic friend of the weak and the oppressed. Subscription price, 50 cents a year. Address, *The Philanthropist*, P. O. box 2554, New York City.

The August number of the *American Agriculturist* fully sustains its well-known character as one of the leading agricultural journals of the country. It is ably edited, carefully arranged, and neatly printed, — full of just the information for a farmer. Premiums furnished with each single subscription, and special offers to clubs. Send for club terms. $1.50 per year. Orange Judd Co., 751 Broadway, New York.

"CATECHISM on Alcohol and Tobacco," 24 pp., paper. For terms per 100 or 1,000, address the author, D. H. Mann, M. D., Grand Chief Templar, 200 Clinton Street, Brooklyn, N. Y. A primer of brief question and terse answer, which places before the people the information needed by all beginners in temperance work. Especially adapted for juvenile classes, as well as profitable home drill.

"PROCEEDINGS and Addresses at a Sanitary Convention" held at Hastings, Mich., December, 1888, under the direction of a committee of the State Board of Health, and a committee of citizens of Hastings. Many able papers of practical value were read, and much radical discussion was held at this convention by the best medical talent of our State. This matter has made a worthy and valuable pamphlet, which should be widely scattered. Obtained upon application to the Secretary of the State Board of Health, Lansing, Mich.

"RIGHT SELECTION IN WEDLOCK: Marriage not a Failure," by Prof. Nelson Sizer. Number 8 of the Human-Nature Library. 31 pp., paper. Price, ten cents Fowler & Wells, Publishers, New York. Strongly, clearly written, full of reason and common sense.

THE July issue of the *Missionary Review of the World* is fully up to the high standard which it maintains. The articles in the Literature Department are all of them timely, and several of them of great interest. The general missionary intelligence is of rare scope and interest, showing the progress of missions everywhere. We know of no magazine that is more carefully and thoroughly edited in all its details, and that gives from month to month such a fund of informing and inspiring matter on missionary subjects.

Published by Funk & Wagnalls, 18 and 20 Astor Place, New York. $2 per year; 25 cents for single numbers. In clubs of ten, $1.50.

THE articles in *Demorest Monthly Magazine* for August are of timely interest, including an account of the Paris Exposition, giving a view of the whole grounds; "In Central Park," beautifully illustrated in water-colors and in black-and-white; "The Pleasures and Pains of Amateur Photography," by Alexander Black, illustrated with numerous pictures taken by amateurs; besides numerous other articles on subjects interesting in the family circle, including the health, happiness, amusement, and decoration of the household; and there are over one hundred illustrations. In fact, the August number is worth a careful perusal. Published by W. Jennings Demorest, 15 East 14th Street, New York.

THE *Atlantic* for August has a note-worthy poem by James Russell Lowell, — "How I Consulted the Oracle of the Gold-fishes," occupying nearly six pages. "The Background of Roman History" — the half mythical, half historical period of the travels of Æneas — is interestingly treated by H. W. P. and L. D., H. W. P. being the disguise of Miss Harriet Waters Preston. Mr. Paul Lafleur has a paper on a poet of French Canada. The poet is Louis Frèchette; and the paper is interesting as a sketch of the attempt at a French Canadian literature in which Frèchette seems to be the chief figure. "The German Boy at Leisure" shows that the lad in the German gymnasium is not quite so overworked as one is accustomed to think. John Fisk has a remarkably good historical paper on "The French Alliance and the Conway Cabal." These are perhaps the most salient features of the number, but it also includes other valuable papers, and a review of Emerson's Concord life by his son, which will be read with interest. Houghton, Mifflin & Co., Boston.

PUBLISHERS' PAGE.

THE publishers are pleased to note a steady increase in their list of foreign subscribers, especially in England, Cape Town, and other English colonies. They take this fact to be an indication that there is a lively interest in hygiene and sanitary reform in these distant parts of the world, which leads to an earnest inquiry after truth in the direction of better living.

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DR. KELLOGG'S new book, "Ten Lectures on Nasal Catarrh, Its Nature, Causes, Prevention, and Cure," is rapidly finding its own place in the estimation of the people, and supplying a long-felt need in thousands of households. We will venture to say that never before upon this subject has there appeared a treatise so admirably adapted to the popular wants as this little work; so comprehensive as to include all that is latest, freshest, and most valuable,—the very cream of scientific investigation; so concise as to place all this matter in such small compass that it can be carried in the coat pocket; so clear and direct that there can be no possible misinterpretation of the author's meaning; and yet so simply written, withal, that a child can understand it. The Doctor has prepared a book which is, in the most empahtic sense, a work for *the people*. The large edition recently published will soon be exhausted. Agents find this an easy little book to sell. In fact, it sells itself.

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A RECEPTION was tendered Dr. J. H. Kellogg, on the evening of his return from Europe, July 23, by the managers, physicians, and helpers of the Sanitarium. In response to invitations, the Doctor's friends and the patrons of the Institution, to the number of over a thousand, assembled on the lawn of the hospital, beneath the west balconies of which a staging had been erected for the accommodation of those taking part in the exercises. The guests were made comfortable by chairs arranged on the grounds, and were well prepared to listen to the interesting program which followed,—addresses of welcome, speeches, songs, and a poem, all of a congratulatory nature, and original with the occasion. Dr. Kellogg replied in befitting and feeling words, thanking his colleagues and friends for their kind and flattering demonstrations, and giving a brief account of the origin and aims of the Institution, and the hopes of the managers for its future as a philanthropic and educational enterprise, and particularly insisted that any success which may have attended his efforts in connection with the work of the Sanitarium, was due to the truth and soundness of the principles upon which the enterprise was founded, and not to any exceptional skill or wisdom of the managers. The lawn was beautifully decorated with mottoes and illuminations, and the balconies were bowers of evergreens and potted plants. The program was interspersed with music by a fine band on the upper balcony. Altogether, the occasion was a thoroughly enjoyable one.

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THE Sanitarium kindergarten, long an attractive feature of this Institution, is at present located in a large cottage situated upon a slight elevation near the Sanitarium, in a grove of trees surrounded by a pretty lawn, which is laid out in playgrounds for the children. Swings, swinging-rings, and various appliances for exercise, sport, and amusement are provided, and the children are supplied with everything which can contribute to their health,—healthful diet, proper care and nurses, abundance of outdoor exercise, and every attention which their physical, mental, and moral well-being require. The nursery at the present time is occupied by about thirty little people with their corps of nurses, and a considerable larger number of children might be received if the accommodations were sufficient. The kindergarten, which is a perfect paradise for little people, is more prosperous at the present time than at any previous period of its history. Nearly half a hundred little folks may be seen in it any day, engaged in their various games, exercises, and such occupations as stick-laying, paper-cutting, clay-modeling, etc.

The managers of the Sanitarium have recently determined to enlarge the accommodations for this department, by the erection of a commodious building on a commanding site close by the Institution. The building will be three stories with a basement, 44x80 feet, and besides sleeping accommodations for about fifty children, it will contain a gymnasium, workshop, and school-rooms for the kindergarten. The plans are already completed, and it is expected that the building will be ready for occupancy the first of November, at the latest. It will be heated by steam, and ventilated in the most approved method, and will be supplied with all sanitary appliances and conveniences. Undoubtedly it will be the most perfect home for children ever erected in this or any other country.

THE Sanitarium family recently spent a delightful day at the Sanitarium Villa at Goguac Lake, a lovely sheet of water located on an elevated site about half an hour's ride by street-car from the Sanitarium. The Sanitarium was almost wholly emptied of patients after 9:30 A. M., when a long procession of street-cars, supplemented by large carry-alls for the kindergarten and nursery children, and hacks and easy carriages for the feeble patients, left the main building for a day's outing at Goguac. Five of the physicians, with nurses and medical attendants by the score, were on hand, joining with the patients in their entertaining exercises, and doing everything possible to add to their pleasure and comfort.

Matched games of croquet, lawn tennis, excursions on the steamer, with songs and games by the little ones of the kindergarten, took up the time until dinner, which was a right-royal repast of seasonable vegetables, infinitely varied preparations of grains, and all obtainable fruits. Pleasant after-dinner speeches were made by Capt. H. A. Ford, of Detroit, Hon. H. A. Wheeler, of Nebraska (guests of the Sanitarium), Rev. A. P. Greenleaf, of this city, and Eld. McCoy, resident clergyman at the Sanitarium. Excellent music was given by Prof. and Mrs. Barnes, Mrs. Gage, Mrs. W. T. Gould, Mrs. D. J. Wile, and Mr. Fred. Russell. Mrs. Wile—a patient at the Sanitarium—executed a piano solo with fine effect and exceptional skill. The afternoon was pleasantly interspersed with band music, boat races, steamer rides, and impossible-to-understand-how-he-does-it feats of dexterity by Mr. Bradford (Nelton).

Excursions of this sort are usually tiresome and exhausting, especially to feeble persons; but the Sanitarium managers have learned the art of making these occasions most enjoyable even for the feeblest of their invalid guests who are able to obtain from their physician permission to attend. The program of exercises left no room for *ennui*. Every moment was occupied with various and pleasant exercises.

At 5:00 P. M. the long procession of street-cars and carriages, with the band ahead, was making its way along the streets of one of the prettiest little cities in the West, back to the Sanitarium, bearing several hundred sick people who for at least one day had been charmed into a state of happy forgetfulness of their aches and pains, each one declaring that it was the most delightful occasion of the sort he had ever experienced.

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*

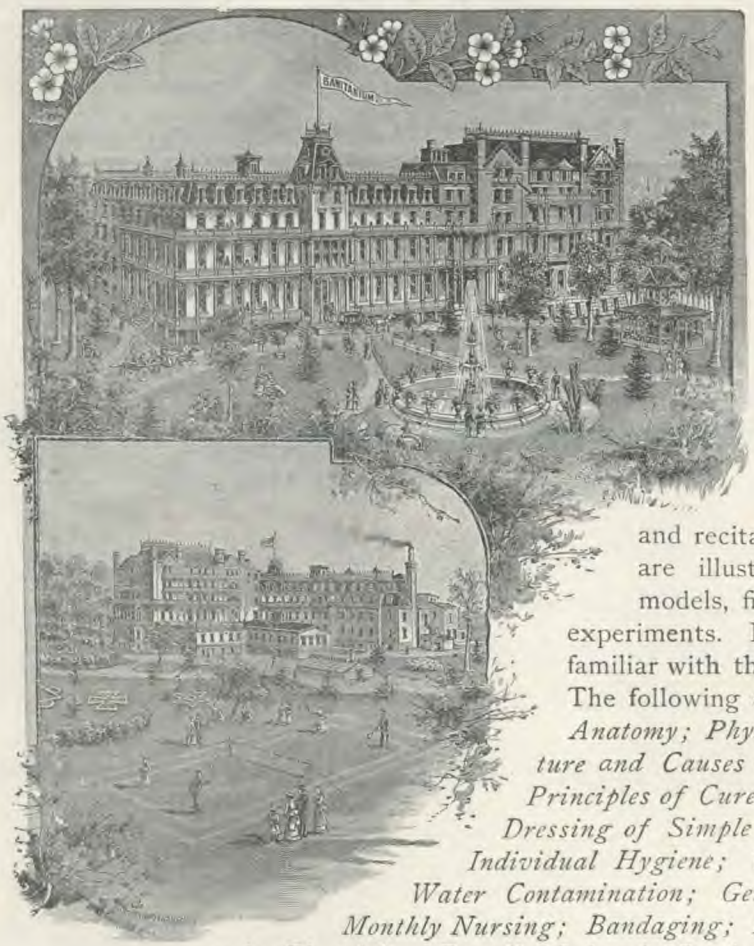
SANITARIUM FREE BATHS.—Among the most conspicuous of the ruins of ancient Rome are the remains of its magnificent free baths. Every city of any size in the time of the Cæsars was provided with baths at which the humblest citizen could obtain a first-class bath, either gratuitously, or by the payment of an insignificant sum. One of the first things which the conquering Romans did for the barbarians of Great Britian, whom they conquered two thousand years ago, was to teach them the value of the bath, and to provide for them every convenience for the enjoyment of this healthful luxury. The best-preserved ruins of ancient Roman times now to be found in England, are the ruins of these ancient baths. It is a most curious fact that when Rome embraced Christianity, or at least confessed to become a convert to the new faith, its interest in baths and cleanliness, and indeed all matters pertaining to health, seems to have ceased. For a thousand years, during the Middle Ages, according to some historians, the bath was absolutely unknown. One writer says that for a thousand years no one in Europe took a bath, except by accident.

At the present time, public baths are to be found in most European cities of any size. In this country, however, public baths, and especially free baths, are conspicuous by their absence. Indeed, such a thing is rarely found in the United States, In but one or two small towns, and in certain quarters of New York City, have public bathing-places been provided, and these only by the munificence of philanthropic gentlemen who have appreciated this conspicuous lack in the sanitary administration of our cities. With these few exceptions, however, free baths are practically unknown in this country. The managers of the Sanitarium propose to make an innovation, by establishing for the citizens of Battle Creek (a town which has now reached nearly 20,000 in population), a free bath, which will be carried on in connection with the Sanitarium. At this bath any person in limited circumstances can obtain a warm or cold bath at any time absolutely free, soap and towels being furnished on the payment of the small sum of five cents. It is hoped that these baths will be ready for use the present season.

Those who are acquainted with the management of this Institution have doubtless long since observed that it is the settled plan with the managers to extend its charities and philanthropic work in various directions as fast as the profits of the Institution will permit, the total income of the institution being annually devoted to improvements, payment of debts, and charity work,

Sanitarium Training School FOR NURSES.

Regular Terms begin Nov. 1. **Students Received at Any Time.**



This School has now been in operation for five years, with constantly increasing patronage and success.

Course of Instruction.

The course of instruction comprises two series of lectures, recitations and practical instruction, continuing through two years.

Methods of Instruction.

The instruction is both theoretical and practical. Several lectures and recitations are given each week. Lectures are illustrated by means of colored charts, models, fine French Manikins, and numerous experiments. Each student is required to become familiar with the subjects taught, by actual practice. The following are among the leading topics taught: *Anatomy; Physiology; Elementary Chemistry; Nature and Causes of Disease; Language of Disease; Principles of Cure; Management of Common Diseases; Dressing of Simple Wounds and Injuries; General and Individual Hygiene; Ventilation; Disinfection; Air and Water Contamination; General Nursing; Surgical Nursing; Monthly Nursing; Bandaging; Hydrotherapy—theoretical and practical; Electricity—Faradic, Galvanic, Static; Diet for the Sick; Massage; Swedish Movements; Calisthenics; What to Do in Emergencies.*

Special Advantages.

The advantages offered by this school are in many respects superior to those offered by any other, not excepting the older schools in the large cities.

TERMS.—Students pay board and tuition in labor the first year; wages are paid the second year.

For Circulars giving full information, address,

SANITARIUM, Battle Creek, Mich.

The : Sanitarium : Steam : Inhaler.

FIG. 2.

THE above cut represents one of the simplest, cheapest, and most efficient steam inhalers ever advertised. It consists of an outer cup for holding hot water, and an inner cup in which is placed a small quantity of hot water, to which the medicament is added. The construction of the inhaler is shown in Fig. 1. As will be seen, the air passes down through the cover and over the top of the inner cup through the liquid, and is drawn up through the innermost cup into the tube, thence into the mouth, as shown in Fig. 2. All kinds of volatile remedies for throat ailments, such as the essential oils, balsams, etc., may be used with this inhaler. There is no simple remedy so effective in relieving sore throats, either acute or chronic, throat coughs, bleeding from the lungs, chronic catarrh of the bronchial tubes, and allied affections. Every family should possess one of these inexpensive and most effective appliances. In the treatment of croup and diphtheria its use is indispensable.

Price, including directions for use, 50 cents. When ordered by mail 15 cents extra should be added for postage.

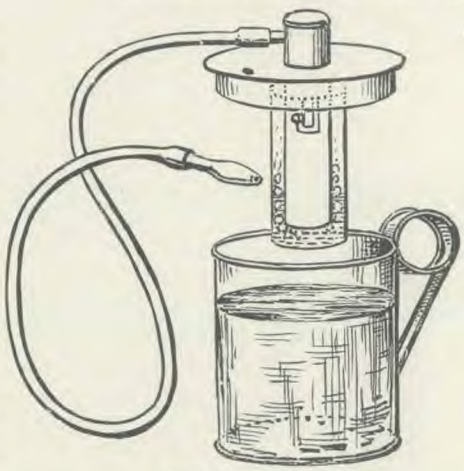
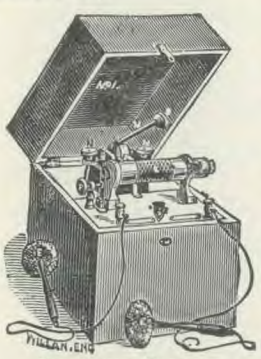


FIG. 1.

The Sanitarium Battery.

THE utility of electricity in the treatment of paralysis, general debility, and a great variety of common chronic ailments has become so well recognized that an electrical battery is considered in many households almost as indispensible as any ordinary article of furniture. One reason for this is probably to be found in the fact that while often effective for great good, the gentle electrical current furnished by an ordinary electrical battery is hardly capable of doing any serious injury.



SANITARIUM BATTERY.

The popular faith in electricity as a curative agent is to be seen in the enormous sale of electrical belts, brushes, and so-called magnetic and electrical garments of various descriptions which are being constantly effected through liberal and deceptive newspaper advertising. It is well enough known to scientific physicians that the majority of these appliances supply either no current at all, or a current so feeble as to be absolutely worthless as regards results.

The battery shown in the engraving is manufactured expressly for us, and is one of the most efficient, durable, and easily managed family batteries ever offered for sale. Many hundreds of these batteries have been sold, and the great satisfaction which those who have used them have expressed, warrants the belief that future purchasers will be equally well pleased with this very efficient and convenient electrical apparatus.

Full Directions for the use and care of this Battery accompany each instrument.

Price, { By Express, Carefully Packed. } **$10.**

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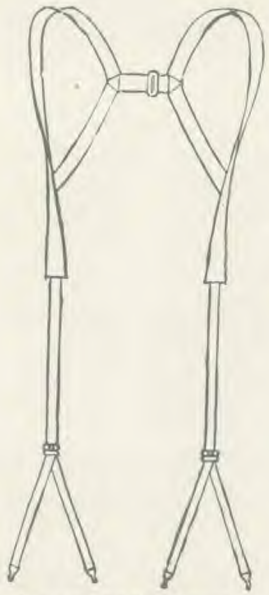
WOMEN AND GIRLS.



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Peerless Corset-Waist.

Sanitarium School of Domestic Economy.

THE necessity for scientific instruction in cookery and the various arts connected with housekeeping and and home-making, has long been recognized. In foreign countries, particularly in England and Sweden, successful efforts have been made in this direction, but there is yet a very evident and urgent demand for this kind of practical education. In this country, especially, very few attempts in this line have been made, and those have been but partially successful. In view of the great need of a school of this sort, the managers of the Sanitarium have opened a SCHOOL OF DOMESTIC ECONOMY. The attendance at this school is already very large, but more can be accommodated.

COURSE OF INSTRUCTION.

The course of instruction continues through twenty-five weeks, and consists of daily LECTURES, RECITATIONS, DEMONSTRATION LESSONS, and PRACTICAL DRILLS in the following subjects:—

SCIENTIFIC COOKERY, in all its branches, LAUNDRYING, DRESS-MAKING, GENERAL HOUSEWORK, HOUSEHOLD HYGIENE, PERSONAL HYGIENE, and MISCELLANEOUS SUBJECTS.

Including Household Conveniences, Economical Housekeeping—the Keeping of Family Accounts, Selection of Carpets, Dress Goods, Etc. The study of these subjects will be pursued under competent teachers in each department. Instruction will be given chiefly in the form of lectures accompanied by practical training. The course is exactly what every young woman needs to make her an efficient and economical housekeeper, competent to make a home and its inmates comfortable and healthful, conditions which form a good foundation for happiness. **Diplomas** given those who pass a satisfactory examination at the end of the course.

TUITION AND BOARD, INCLUDING ROOM AND WASHING, $100.00.

Deserving persons, who are well recommended, will be given a chance to pay their way. For Circulars, giving full particulars, address,

SANITARIUM SCHOOL OF DOMESTIC ECONOMY, Battle Creek, Mich.

New Temperance Charts.

BY J. H. KELLOGG, M. D.,

AFTER a careful study for several years of the Physical Effects of Alcohol and Tobacco upon the human body, with unusually favorable opportunities for observation through post-mortem examinations, chemical analyses, and microscopical investigations, the author has prepared, by the aid of the best artists to be secured, a series of **TEN COLORED PLATES,** which depict in the most graphic manner possible, the ravages of alcohol among the delicate structures of the human body. The following is a list of what is exhibited by the several charts:—

PLATE 1. The Alcohol Family.
PLATE 2. A Healthy Stomach.
PLATE 3. Stomach of a Moderate Drinker.
PLATE 4. Stomach of a Hard Drinker.
PLATE 5. Stomach in Delirium Tremens.
PLATE 6. Cancer of the Stomach.
PLATE 7. *A.*—Healthy Nerve Cells. *B.*—Fatty Degeneration of Nerve Cells. *C.*—Healthy Blood. *D.*—Blood of an Habitual Smoker. *E.*—Blood of a Drunkard. *F.*—Blood Destroyed by Alcohol. *G.*—The Drunkard's Ring. *H.*—Healthy Nerve Fibres. *I.*—Fatty Degeneration of Nerve Fibres. *J.*—Healthy Muscle Fibres. *K.*—Fatty Degeneration of Muscle Fibres
PLATE 8. Smoker's Cancer. A Rum Blossom. A Healthy Brain A Drunkard's Brain. A Healthy Heart. A Drunkard's Heart.
PLATE 9 *A.* A Healthy Lung. *B.*—Drunkard's Consumption *D.*—A Healthy Kidney. *E.*—Enlarged Fatty Kidney of Beer-Drinker. *F.*—Atrophied Kidney of Gin-Drinker. *G.*—Healthy Liver.

H.—Liver of Drunkard, Showing Nutmeg Degeneration. *I.*—Magnified Section of Fatty Liver of Drunkard. *J.*—View of an Eye Diseased from the Use of Tobacco and Whisky. *K.*—View of the Interior of a Healthy Eye.
PLATE 10. Alcoholic Drinks, showing the percentage of Alcohol contained in the common Alcoholic Beverages. Adulterants of Alcoholic Drinks, showing a list of poisons used in adulterating the various liquors. Sphygmographic Tracings of the Pulse, showing the effects of Alcohol and Tobacco upon the pulse. *A.*—Pulse of a Healthy Person. *B.*—Pulse of a Moderate Drinker. *C.*—Pulse of a Drunkard. *D.*—Pulse of an Old Tobacco-User. *E.* Pulse of a Young Smoker.
Statistics of Stimulants and Narcotics. A diagram exhibiting in a graphic way the fact that the annual cost of Alcoholic Drinks, Tobacco, Rum, Tea and Coffee, exceeds the cost of Bread, Meat, Clothing, Education and Missions.

Nothing so Complete in this line has ever been attempted before. These ten charts constitute a most powerful temperance lecture, the impressions of which will not be easily forgotten.

The accompanying cut illustrates a novel arrangement for exhibiting charts, which is now furnished with this series of charts when desired. It works to a charm, and is just the thing for lecturers. It is only necessary to set it on a stand or table, and in two minutes it can be made ready for operation. It can be operated in either direction equally well. Each set of charts is accompanied by a Key and a stenographic report of a lecture from the charts delivered by Dr. Kellogg at the Lake Bluff Temperance Convocation.

Price of Charts on common rollers, $12.00; Case extra, $1.25; Charts with Exhibitor, $15.00.

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ADVERTISEMENTS.

A MARVEL OF COMPLETENESS

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The Home Hand-Book tells in plain, every-day language, how to preserve health, and if lost, how to regain it. It is by far, the most important medical work for domestic use that has yet appeared, and is rapidly making its way into the homes of the United States. It is written in the light of the most recent scientific investigation, by a physician of large experience and acknowledged ability, and contains the most approved methods for the treatment of more than 600 diseases. It contains nearly 1700 PAGES, over 500 ENGRAVINGS, about 30 FULL-PAGE COLORED PLATES, and an ELEGANT PAPER MANIKIN.

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By all known remedial agents, is employed in this Institution. With these natural and acquired advantages, pleasant and desirable surroundings, thorough and judicious treatment, and wholesome diet, most invalids who avail themselves of these agreeable facilities, rapidly recover. Patients have the care of a regularly graduated physician of experience, who is assisted by well-trained and courteous gentleman and lady assistants.

All Invalids and Tourists may feel assured that they will be courteously received, and kindly cared for.

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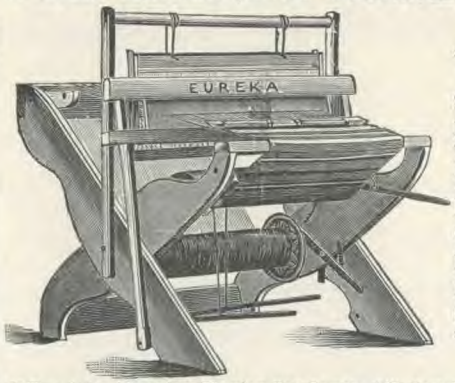

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It can be folded up in a few moments (with or without the carpet in it, and without taking it apart) small enough to pass through a common door. The warp is put on the beam directly from the spools, better than it is possible to do it the old way, thus doing away with the cumbersome warping-bars. It requires but a moment to let off the warp and wind up the carpet, and is done without leaving the seat. The Loom, with all its attachments, can be operated in a room 6 x 8 feet. The Quill-wheel that belongs with the outfit has an attachment for reeling warp, and can be used for twisting rags. **Steel Reeds, Wire Harness, Quill-Wheels, Spinning-Wheels, Shuttles, Spools, and other Weaver's Supplies,** all of the best and most improved make, can be furnished by the wholesale and retail at lowest prices. Send for descriptive circular, price list, and terms.

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STATIONS.							
Chicago	am 7.55	am 10.35	pm d3.10	pm d10.10	pm d9.10	pm 4.50	
Michigan City	pm 10 08	12.28	4.54	am 12.23	11.27	6 58	
Niles	11.4	pm 1.30	5.49	1.5	am 12.55	8.17	
Kalamazoo	1.12	2.45	6.58	3.35	2.27	pm 10.00 / am 7.3	pm 5.30
Battle Creek	1.55	3.20	7.33	4.25	3.15	7.5	6.25
Jackson	3.35	4.39	8.49	6.15	4.45	9.35	8.20
Ann Arbor	5.04	5.43	9.41	7.50	6.00	10.43	
Detroit	6.30	6 50	10.45	9.20	7.30	11.50	
Buffalo	3.3	am 4.25	am 7.15	pm 5.55	9.05	pm 8.05	
Rochester		6.50	9.1	8.00		11.45	
Syracuse		9.30	11.35	10.15		am 2.15	
New York		pm 7.00	pm 8.50	am 7.20		11.15	
Boston		10.00	10.50	9.55		pm 2.50	

WEST.	†Mail.	†Day Express.	*Chicago Express	*Pacific Express.	‡Evening Express.	†Kal. Accom'n	†Local Pass'gr.
STATIONS.							
Boston		am 8.30	pm 3 00	pm 9.15			
New York		10.03	6.00	11.30			
Syracuse		pm 7.40	am 2.10	am 9.0			
Rochester		9.55	4.20	11.30			
Buffalo	3.30	am 12.15	6.15	pm 1.30			
Detroit	am 9.00	8.00	pm d1.2	d 1.15	pm d .00	pm 4.00	
Ann Arbor	10.27	9 02	2.24	11.35	9.15	5.22	
Jackson	pm 12.05	10.03	3.27	am 12.54	10.5	7.10	am 6.25
Battle Creek	1.55	11.36	4.38	2.15	am 12.7	8.52	7.55
Kalamazoo	2.4	pm 12.13	5.15	3.07	1.20	pm 9.45 / am 6.00	8.40
Niles	4.20	1.30	6.27	4.32	3.6	7.37	
Michigan City	5.42	2.5	7.32	5.43	4.3	9.00	
Chicago	7.55	4.35	9.30	7.45	7.00	11.20	

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

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Time Table in effect February 17, 1889.

GOING WEST. Mixed Train.	Mail.	Day Exp.	Pacific Exp.	B. Crk Pass.	STATIONS.	GOING EAST. Mail.	Lmtd Exp.	Atlte Exp.	Sun. Pass.	Pitt'n Pass.
.....	am	am	pm	pm	Dep. Arr.	pm	am	am		am
.....	5.55	7.15	8.00	4.10	..... Port Huron	10.20	1.15	7.35	.....	10.50
.....	7.28	8.31	9.31	5.40	.....Lapeer.....	8.40	11.58	6.17	.....	9.17
.....	8.03	9.10	10.10	6.20	.....Flint.....	7.55	11.27	5.40	.....	8.38
.....	8.43	9.45	10.58	7.15	..... Durand.....	7.15	10.58	5.03	.....	8.00
.....	10.00	11.30	12.0	8.26	.....Lansing	5.20	10.07	4.00	.....	6.35
.....	10.37	11.00	12.0	9.03	..... Charlotte.....	4.42	9.37	3.25	.....	6.02
a m	11.30	11.45	1.1	10.05	A { BATTLE CREEK } D	3.45	8.55	2.35	.....	5.15
6.40	am	12.05	1.20	pm	D } A	3.40	8.50	2.30	.....	am
7.55	.....	12.50	2.21		.....Vicksburg	2.52	8.11	1.44	.....	
8.12	.....	1.00	2.32	VAL.	.....Schoolcraft.....	2.40	.....	1.33	.....	VAL.
9.31	SUN.	1.50	3.19	ACC.	.....Cassopolis.....	1.50	7.26	12.45	.....	ACC.
10.50	PASS.	2 30	4.07		..... South Bend.....	1.05	6.50	12.00	.....	
.....	am	3.41	5.30	am	Haskell's.....	11.54			pm	pm
.....	7.20	4.00	5.50	6.55	.... Valparaiso.....	11.40	5.30	10.30	3.40	7.00
.....	10.00	6.25	8.10	9.45	.... .Chicago.....	9.05	3.25	8.15	1.15	4.25
am	am	pm	am	am	Arr Dep.	am	pm	pm	pm	pm

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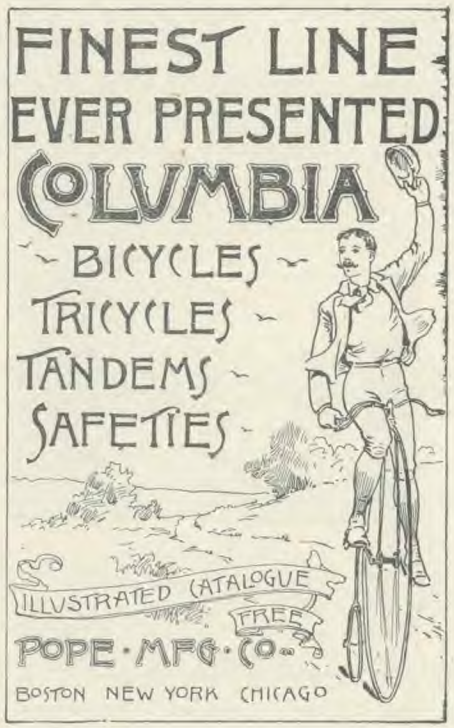

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