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INTERNATIONAL HEALTH STUDIES.

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

15. — Central Asia.

DURING the recent geological survey of Western Texas, a professional naturalist procured a boxful of fossil bones which some miners had unearthed in a canon of the Washita Mountains. A few weeks later the explorers pitched their tent in the suburbs of a prosperous railway town, and in the course of the afternoon a number of idlers strolled in to inspect the antediluvian treasure-trove.

"Say, Professor, do you really think that can have been anything like a stout animal?" inquired one of the visitors. "I wonder how it could walk on such legs; why, those bones crumble if you just touch them."

"The only wonder is that they have not crumbled long ago," said the professor. "How many of *our* bones do you suppose would stick together if we had been underground for that length of time?"

A similar reply would often answer the disparaging remarks on the present condition of the empires which so long led the progress of Eastern civilization. Their political glory has been buried for centuries,—often for thousand of years,—and it would be well for some of their Western neighbors if, a thousand years hence, the relics of their national vigor should be found in an equally fair state of preservation. The Persian empire, for instance, had passed the zenith of its power at least a century before its fatal encounter with the warriors of Greece; but the countrymen of vanquished Darius never descended to that depth of national degradation which, under the sway of the Byzantine despot, overtook the native land of his conquerors — the land where manliness became a stigma, and free inquiry a capital offense. The perfidy, the sensuality, and the mental prostitution of monk-ridden Byzantium, never found a congenial soil in the birth-land of Cyrus the Great; and to this day, the natives of Persia can physically rank among the finest tribes of the Caucasian race.

Their ethnological affinity to the great Aryan family of nations is fully established, both by linguistic proofs and the evidence of historical records; and it is a significant circumstance that the natives of Iranistan escaped the contagion of the land-blighting pestilence of Buddhism, which for centuries had a seed-plat of its propaganda in the immediate vicinity of their eastern border. The doctrine of antinaturalism was repudiated by the Asiatic Aryans, even in the birth-land of its world-renouncing apostle; and for the last eleven centuries, the natives of Persia have remained faithful to the manlier gospel of Islam, or have even improved it by the tenets of a "Mohammedan Protestantism" that accepts the sanitary precepts, but rejects many idolatrous dogmas of the orthodox Moslem.

Like their fellow-Mussulmen, the Persians abstain from wine, and are religiously scrupulous in their attention to personal cleanliness, but decline to credit the speed of El Borak, the sky-rocket steed of the Prophet, and do not think it necessary to observe the Rhamadan fast to the verge of starvation. Altogether, their theory of life approaches more nearly to that of the earth-loving Greeks, so much so, indeed, that they have been called the "Frenchmen of the East." They

are fond of social recreations and good cheer, of music and poetry, especially of minstrel poetry in its less expensive forms; still hardiness and physical vigor have never ceased to be ideals of their male population.

A few years ago, a member of the Boston *jeunesse doree* invented an evening amusement now known as a "donkey party." On the parlor-wall of the hospitable manager a paper effigy of a donkey is fastened by means of stout pins; the tail is then detached. One by one the invited guests are blind-folded, and the problem consists in trying to pin the tail as nearly as possible to — the place where it belongs. That in-

PERSIAN NOBLEMEN.

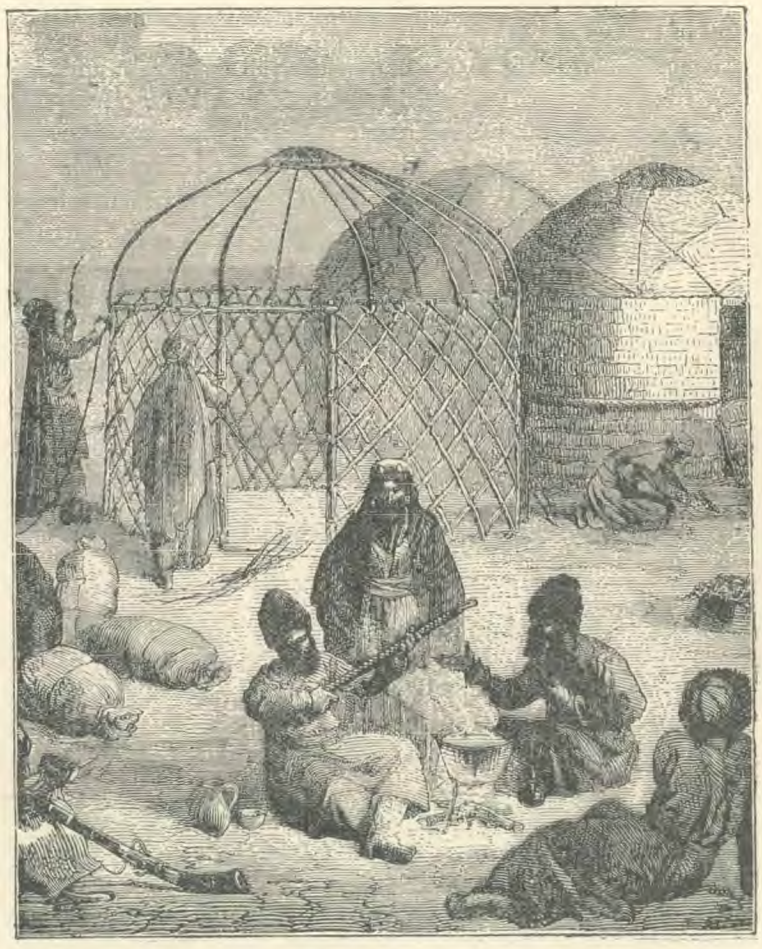
tellectual pastime soon became popular in other centers of Anglo-American culture, and it would be worth knowing how many Western critics of Asiatic effeminacy would appreciate an invitation to a donkey-party *a la* Eastern Persia. The highland borders of Beloochistan are still haunted by troops of wild asses — animals as different from their bag-carrying Western relatives as a wolf is from a pug-dog. They are fleeter than deer, and if cornered, will deliver a storm of kicks transcending the grandest exploits of our professional trick-mules. Yet the favorite sport of the young Persian nobles consists in chasing those long-eared imps of the wilderness through the rocks of their native hills, across clefts and cliffs, boulder-heaps and briar-jungles, and past the brink of beetling precipices.

Those same nobles, it must be admitted, are capable of passing whole weeks in absolute idleness; yet they are fond of skill in all its forms, have a Yankee-like faculty for appreciating at first glance the merits of a new mechanical invention, and have achieved supremacy in the art of making their homes warm-weather proof. With or without the implements of artesian exploration, the proprietor of an attractive building-site manages to connect his premises with a ditch of running water, conducted in pipes to the stone-paved central hall, and thence to an adjoining yard, for the benefit of domestics and thirsty horses. That yard and the walls of the basement are always constructed in a way to give the summer-hall the benefit of a through current of fresh air, and Persia is perhaps the only quasi-civilized country of the world where the idiotic dread of "draughts" is entirely unknown. On receiving a visitor, a Persian gentleman will first go through the formality of inquiring after the health of some two-score different relatives, and then deliberately conduct his guest to the draughtiest place in the sitting-room, and perhaps excuse himself that the wind is so slack to-day, and his fan-boy absent, — all provided the weather is not abnormally chilly, in which case the visitor is often treated to the luxury of a warm shawl. House-warming by means of stoves is only rarely practiced, for two cogent reasons: chimney-flues are seldom seen outside of the houses of foreign residents, and fuel is too scarce to be much used for anything but cooking purposes.

Count de Gobineau, author of "Journeys in Persia," tells us that city-dwellers, as well as rustics, are remarkably free from eye-disorders, an immunity which, perhaps, cannot be wholly explained by the illiterate condition of the natives. Their deserts are as subject to sand-storms as those of ophthalmia-cursed Egypt, and the heat of the midsummer months becomes often very oppressive; but eye-diseases, like certain nervous disorders, are often a symptom of general organic debility, and the Persians, with all their indolence and consequent poverty, are physically still one of the most vigorous races of the Eastern continent.

The vast table-lands of their eastern border have thrice sent forth a deluge of hungry freebooters, who by sheer dint of physical prowess managed to turn the fortune of war against the superior science and the more perfect arms of the industrial West; and

the Turcoman nomads have retained many characteristics of their adventurous forefathers. They are members of the Mongol ("Turanian") race, but unlike the cowardly, sensual Chinese to a degree which we can credit only if we remember that the freedom-worshiping Britons are the Aryan cousins of the knout-adoring Moscovites. The poverty of their soil compels them to forego the comforts of a permanent home, but they are not nomads in the Hottentot sense of the word. Whenever the favor of the season enables them to prolong their sojourn on any special pasture-ground, they plant corn, dig irrigation-ditches and rifle-pits, or construct rope-maker yards; and their encampments are far more home-like than the perennial habitations of the Egyptian fellahs. Practically they are monogamists (though their chieftains sometimes contract plural marriages, from motives of political advantage), and their wives enjoy a greater share of freedom than those of any other Mohammedans, the Europeanized merchants of Constantinople hardly excepted. They weave, spin, dye wool, manufacture ropes rivaling the rawhide lariats of our Mexican neighbors, and besides pay a good deal of attention to the education of their children. Men and women seem, in fact, constitutionally unable to pass a single waking hour in idleness. If other resources fail, they collect a number of neighbors and make up a purse for the victor of some sort of competitive athletics, and as a modern traveler informs us, "spend often whole days in trying to understand books of poetry which come from Khiva or Bokhara, where the dialect is a little different from their own."



TURCOMAN ENCAMPMENT.

They are passionately fond of music, and will often deprive themselves of necessaries to contribute their mite to the fee of a popular minstrel. In their intercourse with strangers they are frank and unaffectedly polite, and it is certainly a pity that many tribes of that noble race have gradually, and in spite of their industry, been reduced by war and droughts to a ruinous degree of indigence. For nearly three centuries now, their neighbors, the predatory Afghans, have wasted their productive lands with fire and sword; the Russians harrass them from the west, and their former wealth of cattle has been so reduced that a morsel of fresh meat is now considered a holiday treat. Poverty has taught them to utilize every scrap of animal food. "When they kill a sheep or goat," says the author of "Fourteen Months' Captivity among the Turcomans," "the bones are reserved for broth, and the meat is cut up and salted; some of it is dried, and acquires that high flavor so much liked by nomad Tartars; the rest, cut into smaller pieces and placed in the animal's pouch, is kept to make soups out of. They collect the bones and other leavings, and stew them down in a pan, so as to have some broth to offer on festive occasions to their friends and neighbors. The intestines fall to the share of the youngsters, who broil them on the coals, and often spend whole days in sucking and pulling about that half-cleansed offal."

It is certainly difficult to realize the fact that those children of misery are the descendants of a race which once ruled a territory as large, and twice as populous, as the entire area of our United States,

and which only three hundred years ago produced such men as Zehr-ed-din Muhammed, the conquerer of Hindostan, and the Henri Quatre of the Moslem world, a man of chivalrous hospitality and munificence, a skillful poet, a scholar and liberal promoter of learning. His countrymen have shared the fate of their impoverished soil, but their health and longevity in the midst of barren steppes, prove to what degree the high standards of manhood can be maintained, even without the favor of political fortune.

(To be continued.)

BEER AS A TONIC.

[Abstract of a lecture by J. H. KELLOGG, M. D.]

THE question is often asked, Is beer beneficial for persons weak from old age or other causes, and for those troubled with insomnia, as often recommended by physicians? We know that the use of beer is often recommended in such cases by members of the medical fraternity; and we have heard of people who take beer to make them sleep, and beer to keep them awake, take it in the winter as a protection against the cold, and in hot weather, to avoid feeling the heat. Alcohol is recommended as a general panacea for everything; whereas, if we study carefully the principle upon which it acts, we shall find that it does nothing that is claimed for it. Alcohol claims to be a good stimulant, but it really makes people weak; it claims to build a person up, when it really undermines his constitution. It is recommended to put people to sleep, but it does not remove the cause of sleeplessness; it only acts as an anodyne.

It is a fallacy very commonly held that alcoholic liquors are excellent for old people, although it is admitted that it is bad for the young. The same argument might be used, and often is used, practically, in favor of the tobacco habit. Nearly every one says that tobacco is very bad for boys, and there is hardly a tobacco-user so depraved that he will teach his own boy to smoke; yet middle-aged and old men think they need it, or at least that it does them no harm.

Now, what change takes place between youth and old age which makes a thing which is harmful and poisonous in youth — for alcohol is a poison — beneficial and strengthening in old age? In old age there is a natural lessening of the bodily vigor, and a lowering of the vital powers. Fatty degeneration of the tissues begins to creep on. By means of it the walls of the blood vessels are weakened, and especially there is a fatty deposit in the small blood vessels of the brain, which robs them of elasticity as well as of strength. A sudden rush of blood to the head from any cause — excitement, passion, or stimulation — may prove immediately fatal, or at least hasten dissolution.

The physiological effects of alcohol in any form, are to quicken the action of the heart, flush the face, and overcharge the brain with blood. The danger of apoplexy then is very great, to say nothing of other serious consequences. Alcohol accelerates the degeneration of tissue which is incident to old age; consequently, an aged person needs specially to abstain from stimulants; he needs to be more careful than a young person to avoid anything which taxes or overloads his system. The advocates of alcohol for an old person say that the bodily machinery is slowed down too much, and needs quickening. Nature has purposely put on the brakes, because there is always danger in high pressure upon an old machine. Certainly no engineer would take a nearly worn out engine to run a lightning express train. Nature puts the brakes on the human machine when it becomes enfeebled through the taking away of some of the natural energy, by making the muscles so weak that there shall be less temptation to work hard, or to run, or to do any violent thing which would quickly bring on heart failure. Then is it wise to take off the brakes which nature has put on? That is exactly what alcoholic stimulation does. It paralyzes the nerve centers of the brain which control and regulate the blood vessels, and they relax, and the heart runs away at too rapid a rate. It is like a clock from which the pendulum weight has been taken; it will soon run down.

Then what alcohol really does for an old person is to hasten the day of his death, driving the human machinery at a rate incompatible with safety. His resistive powers are already low, and he needs to conserve his forces by well-regulated, peaceful habits of life. His food and drink should be of the simplest kind, and he should avoid all manner of excitement, and all overtaxing of the mind or the body.

WATERMELON seeds were found in an Egyptian tomb that was 3,000 years old. There was no doubt about their being watermelon seeds, because the mummy was all doubled up.

SHORT TALKS ABOUT THE BODY, AND HOW TO CARE FOR IT.

BY A DOCTOR.

The Truth about "Liver Medicines."

PROBABLY no organ in the body is so much medicated as the liver, and between bad diet and bad medicine, it has a pretty hard time of it. Among patent nostrums, those for the liver outnumber all others about two to one; their name is legion. What do medicines which are supposed to help the liver do? —They do nothing, but the liver is forced to do something with the medicines. When a person takes an emetic, we say it acts upon the stomach, when, in fact, the stomach acts upon the medicine. Suppose a reptile entered a room, and the persons present drove it out; would we say that it was the reptile that acted? It is the same when the stomach, or the liver, or any other organ of the body, finds some intruding substance likely to work mischief; it goes to work to drive it out, or dispose of it somehow. A liver medicine is one which comes within the province of the liver to dispose of. It is a liver whip. We talk as if medicines had brains and intelligence to hunt up certain organs or tissues, and fix them over. The organ which is the most capable of getting rid of the foreign substance, is the one which is said to be acted upon. If it is something that the stomach cannot act upon, very likely it will pass into the domain of the liver.

What is the philosophy of liver medicines?—They help the liver just as a whip helps a tired horse. Take a liver which is worn out and exhausted with too much hearty food, too much butter, fats, and sweets, and it needs just what a tired horse needs—rest, and proper food and drink. Lighten its load, instead of putting on the whip. But the ordinary treatment is to use the lash, and put on the brakes at the same time,—to increase the burden and use the goad. The result of this kind of treatment is premature exhaustion of the liver. The man who treats his horse in this way, must after a while hunt around for another horse; and the man who constantly abuses his liver, will be hunting a new liver.

This principle applies to all classes of medicines, but very few of them really act upon the liver or are acted upon. For instance, there is that "giant remedy,"—mercury, blue mass, or calomel,—which most people suppose has a powerful effect upon the liver; there is such a change in the individual who has taken it, and so much bile discharged, that they naturally think the liver has been helped. Dr. Bennett, of Edinburg, made some interesting experiments to ascertain the real influence of mercury upon the liver, using a dog for a subject. The microscope shows very little difference between the liver of a dog and that of a human being, and he reasoned that if mercury would touch up the liver of a man, it would touch up the liver of a dog, since the functions are the same in each. He performed an operation upon the animal so that the bile was discharged outside the body through a silver tube, instead of taking its natural course. The quantity of bile secreted was weighed, measured, and evaporated daily. When the dog recovered his usual health, and Nature had adapted herself to the new order of things, mercury was given in varying doses, and it was found that its influence invariably was to diminish the amount of bile secreted instead of increasing it. This experiment was repeated numerously by Dr. Bennett, and afterward by other physicians, and always with the same result. Still calomel continues its hold with many; and one professor of a medical college in New York declared that he would use calomel when the liver needed touching up, "in spite of Dr. Bennett and all the dogs in Edinburg."

How is it, we may ask, that there seems to be so much apparent effect from the use of liver medicines in the discharge of the bile? The explanation is this. The bile is not simply an excretion; its chief office is to help digest the food. It is poured out in the upper part of the alimentary canal, where it helps digest the fats, stimulates peristaltic action, preserves the food while digestion and absorption are going on, and other work previously explained. The amount of bile has been variously estimated as from three to nine pints daily; the average will probably be four or five pints every twenty-four hours. The most of it is re-absorbed, by going into the portal circulation, and so is ready for the next day's use. It does not go into the general circulation at all. Now when a person takes mercury, the effect is to so poison the bile that it is not absorbable, and so instead of being used again, it is hurried out of the body as waste material. Thus although the actual amount of bile secreted is less, the amount discharged is greater. That is why mercury seems to make the liver act. This is true of some other liver medicines. But there are some medicines which do excite the action of the liver; salts are the very best whips of this kind, but they are nothing but whips.

But suppose we want to increase the activity of the liver, what shall we do? Here is a horse struggling

up a steep hill with a heavy load; would a whip be the best thing for the horse? would it not be better to lighten the load? The analogy holds good with reference to the liver. Lighten its burdens of fat, sugar, condiments, and big dinners, and encourage it with plenty of hot water, which will dilute the bile, and cause it to move more rapidly along its course, and do its work easier. If a person is suffering from the immediate effects of overeating, and the alimentary canal is full of germs, the best thing is a dose of salts, to relieve the alimentary canal; but it will be of no real help to the liver. Increasing the supply of water in the system is increasing the pressure upon the blood-vessels, and this will help to drive the waste material out, and save the liver much work.

Sometimes the most mischievous results come from wrong treatment of the liver. A gentlemen over seventy years of age came to me for treatment, who had been using liver whips all his life. It was the custom of the family to treat every member to a dose of salts every two weeks, it being the mother's idea that a general housecleaning in the body was necessary periodically. Of course the dose had to be increased continually, until at the time of his visit to me, he told me he could take a pound of salts without its producing any effect upon his alimentary canal. His liver had been whipped and whipped until it would not go any longer. In like manner, the skin may become so hardened by repeated applications of Spanish flies and croton-oil that these substances will produce no more effect than so much water. A liver that is continually excited and irritated, becomes so benumbed that it will not respond to a sharp goad.

Many livers are ruined by the free use of patent medicines. The mystery which surrounds them adds to their potency, and it may not be amiss to remove the veil from a few which are very popular. I took pains, a few years ago, to secure careful analyses of a large number of patent medicines, and published them. For instance, Brandeth's pills are largely used and very popular. Each box of twenty-four or twenty-five pills contains ten grains of the root of May-apple, ten grains of the extract of the same, thirty grains of the extract of poke berries, ten grains of powdered cloves, two to five grains of gamboge, besides traces of Spanish saffron and a few drops of the oil of peppermint. The quantity given of the root of the May-apple, or mandrake, alone would give a very large purgative dose of that powerful remedy; but in addition there is the same quantity of the extract, which is still more powerful, to say nothing of the effect of the other ingredients. Such a pill is very likely to bring on a catarrh of the bowels, which if continually repeated, will become chronic.

Ayer's cathartic pills consist of aloes, compound extract of colocynth, gamboge, Spanish pepper, and the oil of peppermint. They are violent cathartics.

Then there is Warner's much advertised "safe" remedy, which is simply a mixture of the worst cathartics and the worst diuretics known — the most stinging whips for both liver and kidneys. Its bad effects are very severe upon organs already inflamed and irritated. Here are the ingredients: Fluid extract buchu, fluid extract pareira brava, fluid extract mandrake, fluid extract leptandrin, spirits of niter, oil of juniper, bi-carbonate potassa, and syrup of orange peel.

The enticing P. P. P.'s — Pierce's Pleasant Purgative Pellets — owe their cathartic effect solely to podophyllin, the resin of the root of the May-apple.

The majority of analyses of patent medicines are equally interesting.

Nothing but a disturbed condition comes about through the use of stimulants and tonics. They tone the nerves up, and make us feel well when we are not well, and make the liver behave as if it were strong and doing good work, when it is not strong and is not doing good work. What the liver needs is less work and an easier time.

IT'S OFTEN FATAL. — Full many a man, both young and old, is sent to his sarcophagus, by pouring water, icy cold, adown his warm esophagus.

A PROSPEROUS quack was asked by a doctor how it was he had so many customers. The quack took him to his window overlooking a crowded street, and said: "What proportion of the people passing do you think are sensible persons with well-balanced minds?" "Perhaps one in ten," was the rejoinder. "Just so," said the quack, "and I get the nine."

BACILLI. — The conception ordinary persons entertain of the discoveries of science, is well expressed by the following conversation between an ice-dealer and a lady customer: —

"I shan't want any more ice of you, Mr. Stubbs, as I 've been informed that it is full of bacilli."

"Wot ever is that, mum? Wot 's backely?"

"Well, judging from the size of your bill and the exceedingly small pieces of ice you have been leaving, I conclude it is something you put in the ice to make it weigh. Good morning."

SOME GOOD RESULTS OF PHYSICAL CULTURE.

PHYSICAL culture as a subject for Government care is a strange thought to many minds; and yet, when the influence of physical recreation upon the entire being is considered, why should the gymnasium and the athletic ground be the exclusive possession of the children of wealth or opportunity? It has been thought until recently that for the working classes, overwe ried with compulsory exercise, there would be neither profit nor attraction in athletic pastime; but the establishment in one of our large cities of an open-air gymnasium, has proven that public thought has been altogether mistaken upon this subject. As Americans, the care of the body has always been with us a secondary consideration. Would it not be well to study for a time the moral possibilities of athletic training-grounds, and the power of parallel and horizontal bars in some open-air gymnasium, to keep men from acquaintance with bars of a more formidable character and questionable influence? European nations are far in advance of us upon this subject, for in Germany, France, and other countries, physical exercise and gymnastic training are made compulsory in the educational code, and both clergy and medical faculty testify as to their good effect upon mental, moral, social, and physical being.

The following from one of the professors in a well-known university, shows to what extent physical development may be made the lever for the up-lifting of humanity to a life in accordance with the laws of nature, since men will thus be brought to recognize, of themselves, by practical demonstration, that all infraction of these laws are paid for in physical deterioration:—

"At present I do not know in my acquaintance with the students, which extends perhaps to half the members of the university, a single case in which the young man can be called a drunkard. I believe this gain to be due in large measure to the sense of pride in a physical state which affects by far the larger part of the students. Their experience in training, which is undergone in one way or another by a very large part of the young men, gives them by experiment a clear understanding as to the influence of hygienic conditions.

"In a similar way the use of tobacco has diminished. Between 1865 and 1880, it was not uncommon to find men so sodden with tobacco that they were unpleasant subjects to have in a small lecture-room. In this decade I have found but two or three persons affected to this extent by tobacco. Even the use of tea and coffee, on the whole undesirable with youth, but extremely common in former years, has remarkably diminished. I am informed that only about one half the students indulge in these beverages. In fact, the ways of the trained men in a college, like the customs of any army in a State where the military arm has great importance, are effective upon the body of the folk. Reasonable living is necessary to athletic success, and the habits of these men become in a way a pattern for the school life."—*Selected.*

A VALUABLE REMEDY.— *Gentleman* (to village cobbler): "What's that yellow powder you are taking so constantly, my friend?"

Cobbler: "It's snuff—catarrh snuff."

Gentleman: "Is it any good? I'm troubled somewhat that way myself."

Cobbler (with the air of a man who could say more if he chose): "Well, I've had catarrh for more 'n thirty years, an' I've never took nothin' for't but this."—*Epoch.*

NOT SUPERSTITIOUS HERSELF.—"So you would n't move into your new house yesterday because it was Friday? Fie, fie, Mrs Baldwin! I thought you were superior to such little superstitions."

"I know it was foolish in me, Mrs. Rambo, but we all have our weaknesses, you know."

"But that 's such a ridiculous notion. The idea that there can be anything in the mere—why, Mrs. Baldwin! That's an awful looking wart on your knuckle. Why do n't you rub it with a piece of ham rind, and then bury the rind under a stone and walk from it backwards? I 've taken off dozens of them that way."

WHAT EDUCATION IS DOING FOR US.—By comparing modern skulls with those of the same race in an old monastery in the Kedron Valley, Dr. Dight, of the American College of Beirut, Syria, has shown that thirteen centuries have added two inches to the circumference, and three and a half cubic inches to the capacity, of the Caucasian skull. The brain has developed in the parts presiding over the moral and intellectual functions, growing higher and longer, without increase of the lower portions, which give breadth to the head, and in which the selfish propensities are centered. This goes to show that brain as well as muscle, is developed by use.

TOURISTS' DRESS.

BY E. L. SHAW.

It is an exceedingly nice question for the inexperienced feminine traveler, about to set out upon a European tour, to decide just how to attire herself so as to get the greatest possible good in health, comfort, and convenience, out of the trip. And notwithstanding that, for years, she may have looked forward to an ocean voyage with bounding pulses, it will prove sadly disappointing unless she should choose very wisely indeed as to what she will wear, and the necessary articles to be taken along.

In the first place, the dress in which to cross the ocean, should throughout, both in fashion and material, be simplicity itself. The feet should be clothed in worsted hose of some dark, solid color, and the boots should be very easy, and possess good thick soles; for it must be borne in mind that the deck of a ship is always apt to be wet, or at least damp, and rubbers here would be superfluous. Even for a midsummer voyage one should not fail to clothe herself warmly, for the nights and mornings at sea are always cool, even though the middle of the day be warm and sunny. Union undergarments should be worn, and leglettes, also of wool, together with a skirt of soft, firm goods. Starched white skirts are not once to be thought of, for obvious reasons. The gown itself should be dark in color, and of some serviceable but clinging material. There is nothing more appropriate for this purpose than some one of the pretty flannels now in vogue. It should be made in some simple way,—into a jaunty outing suit with shirt or blouse for the quite young and slender, or fashioned in some style of half-fitting sacque and skirt, or some variety of princess, for the stouter and more elderly. This latter style is especially to be commended by reason of its compactness. Each garment should be complete in one piece, both for health and comfort, and that it may be gotten into quickly; the blouse should be put into a band and sewed fast to the skirt, the shirt and the half-fitting sacque should be hung upon gown forms, and so on.

But be it fashioned as it may, one principle should run like a silver thread through its design from veil-secured turban to boot and glove-tip; it should be easy to put on, easy to adjust. This for more reasons than one; dressing in a rolling state-room amid-ships, is quite a different affair from that operation performed in the quiet and security of one's own room at home; and here, too, emergencies may arise when one needs to slip into her clothes in a moment, if at all.

A bit of ribbon, velvet, or a silk handkerchief tied about the throat, and a good water-proof cloak surmounting the costume already indicated, a warm shawl and a railway rug at hand, and one is comfortably equipped for the vicissitudes of any ordinary sojourn upon deck. When occupying a steamer-chair, however, there will be needed, in addition, some kind of soft, pretty hood. For her comfort in her state-room, a lady will need to provide herself with a couple of woolen night-gowns, a pair of wool-lined slippers, plenty of towels, soap, and a dozen or so of soft, cheap handkerchiefs, sufficiently inexpensive that their sacrifice, after their purpose has served, may occasion no regret.

As there is but one state-room trunk allowed each passenger, space must needs be carefully economized, for this must contain a complete outfit for traveling upon land, and when about to go ashore, and these are donned, it must in turn receive everything worn or used upon shipboard.

A plain, neat costume for land traveling is always the hight of good taste; but the fabric itself may be varied to suit one's particular taste and the length of one's purse. For pedestrian tours, cave-exploring, and mountain-climbing, as well as general tramping and out-door sight-seeing, the lady tourist in the Old World or the New will need abridged skirts, as well as various other modifications of attire.

Ellen Osborn, in a late fashion letter, gives a description of a lady's mountain costume which seems to establish a pretty and serviceable precedent for the traveler. It has a straight full skirt, short enough to show the high-cut laced boots above the ankles, and

boasts a little waistcoat, and jacket full of pockets, finished off at the throat with a bright scarf tied in a pretty bow. The material is brown serge, and is trimmed with bands of leather. The opinion which the wearer of this unique costume entertained toward the old-style petticoat for outdoor wear, was expressed in the following off-hand manner: "Oh, I shouldn't think of wearing petticoats on such a jaunt, nor divided skirts, for that matter. Knickerbockers are the only things that won't get wet with dew and grimed with dust, and pongee silk knickerbockers worn directly beneath the dress, are my stand-by. In rough country, I shall wear leather leggins, buttoning from my boots to meet the knickerbockers at the knees."

Ladies with more conservative tastes, might still gather useful hints from the above. A dress reaching to the ankle, with a divided skirt worn under, and both supplemented by the English gaiter, would form an unexceptionable outdoor costume for feminine tourists.

PROPER ADAPTATION OF CLOTHING.

No one will deny the position, second to none, which dress occupies in the administration of necessity, comfort, and convenience to mankind, and yet one does constantly overlook it, by ignoring all its claims except as they are imposed by fashion. The idea of the real purpose of clothing enters little into the purchasing of material for, or the making of, a new gown. If it meet the demand of the times in fabric, texture, and color, it is taken, regardless whether or not its heat-conducive or non-conducive qualities are suited to the season or to the person's relative cold or warm "bloodedness"; and in the style advised by the *modiste* to set off a good figure or conceal a poor one, it is made, regardless of the health, comfort, or convenience of the wearer.

The absurdities of this custom will send one for an afternoon's promenade on a hot summer's day, in an *au fait* broadcloth street suit, heavily garnished, and in the cool of the evening to a lawn party, in the thinnest of thin mull draperies, half denuded of the underclothing, in the bargain, the better to show off the round whiteness of arms and throat, more than suggested through veilings of filmy lace. The appropriateness of the garment to the condition of the weather or the wearer, seems never to be taken into consideration; if it conform to the latest whim for the occasion, it is enough.

Now it does not signify that because a dress is suitable for one season, it is equally suitable for another; or even that a garment perfectly comfortable for one stage of a day's wear may meet the requirements of another portion of the same day. Changes in the clothing should be made in conformity to changes in the temperature, even in the course of a few hours; for it is no rare thing, in our climate, for a day to run the gauntlet of forty degrees' difference. Neither can thin, sensitive persons emulate with safety those through whose veins the rich blood warmly courses, in appropriating the coolest of materials, even in the hight of the heated season.

Persons who have a care for health and comfort, then, (and such are generally those who have a care for the exhibition of propriety and good sense, also) when they purchase material, will do so with a view to the uses to which it is to be put; and reference to these uses will be carried out in the making. Other considerations beside mere appearance will enter into the wearing of garments, and they will be changed as many times a day as the wearer's comfort and the state of the weather may necessitate. S. I. M.

THE president of the Chicago Board of Pharmacy asserts that the women of America spend $62,000,000 a year for cosmetics, most of which have for their chief ingredients zinc, oxide, calomel, water, glycerine, and perfumes.

A DRESS that weighs but three ounces is the curious relic handed down in a Connecticut family. It was the costume of a bride of about two hundred years ago, white and of filmy texture, with a pretty pattern of embroidery in the coarse linen thread of that date, sketched over its surface. The dress still does duty on occasion, and is extremely valuable. Doubtless the dresses of the present day, weighing anywhere from five to fifteen pounds, would have been regarded with as much curiosity by the original owner of this light-weight toilette, could she have seen them, as her own dainty garment is by us. If all her *trousseau* was constructed on the same principle, we will venture the assertion that the fair young bride did not die of a broken back, which is literally too true of many of the brides of the present generation.

A LITTLE HAND.

PERHAPS there are tenderer, sweeter things,
Somewhere in this sun-bright land;
But I thank the Lord for his blessings,
And the clasp of a little hand; —

A little hand that softly stole
Into my own that day,
When I needed the touch that I loved so much,
To strengthen me on the way.

Softer it seemed than the softest down
On the breast of the gentlest dove;
But its timid press, and its faint caress,
Were strong in the strength of love!

It seemed to say, in a strange, sweet way,
"I love you and understand;"
And calmed my fears, as my hot heart-tears
Fell over that little hand.

—*F. L. Stanton.*

THAT RUG!

BY S. ISADORE MINER.

"WELL, now, I wonder if Dr. Greene really expects me to destroy everything in this room! This germ theory may be all right in its place, but as to carrying it to such lengths as people do now-a-days, it is sheer folly. We never even heard of germs when I was a girl, and people were a great deal healthier then. It is enough to scare any one to death to hear tell of them, and they try to make out that the food we eat and the water we drink may be full of them. Why! Dr. Greene insists that even the milk fresh from our own particular cow must be boiled before using; and all the time you were sick, Anna, he would not allow me to give you so much as a drink of water without first boiling it."

"Why was that, mother?"

"Oh! some notion he has that disease may be communicated, or kept up after one is really ill with it, by germs in the food and drink. And he says they have been known to live for years in houses not properly disinfected, waiting for a favorable opportunity to seize upon a victim. I say, stuff and nonsense! Why it seems to me we would have to stop living to get rid of germs, and yet no one ever sees anything of them. Sometimes I think it is just an invention of the doctors themselves, to make game of us common people," and Mrs. Delmar rattled away as she made preparations to fumigate the room where her daughter had been confined with scarlet-fever.

Anna had had a light attack, but Dr. Greene had put the family in close quarantine, and would not give them release until everything had gone through a thorough course of disinfection, and Mrs. Delmar had to reluctantly submit.

First of all, the smaller articles used in close connection with her illness, were ordered burned, then the room must be made air-tight, by pasting strips of paper over every crack and casing of doors and windows. A large quantity of sulphur, amounting to two pounds for every thousand cubic feet of space, was then to be burned in the room, and at the same time a kettle of water was to be kept boiling in it, that the escaping steam might further facilitate the effects of the fumes of the disinfectant.

Now there was one particular article in that room which Mrs. Delmar did n't propose to sacrifice to the color-destroying sulphur-fumes, and that was a large worsted rug in process of construction, which had been brought in that Anna might while away some of the tedious hours of her convalescence setting a few bright stitches in its intricate pattern. That rug had absorbed a good deal of Anna's spare time for the last year, and had been the wonder and admiration of the whole neighborhood. Now that it was nearly completed, it would be such a pity to run the risk of its ruin by disinfecting it. Had she known what the orders of the Doctor would be, Anna never should have touched it; but as it was, Mrs. Delmar dared say that no great harm would be done, since she had little faith in these extreme notions, anyway. So the rug that Anna had worked over all through the

"peeling" period of the disease, and whose deep tufts caught and held the fine particles of skin that sifted down when she rubbed her irritated hands and face, was spirited into a back chamber, and Doctor Greene was none the wiser.

In the autumn the church Mrs. Delmar attended gave a fair. Anna's rug, now completed, and really a beauty, was besought by the ladies to hang in front of the main booth. It would surely get the prize for the most elaborate piece of hand-work, and should be given the place of honor in forming the front decoration for the flower-show.

So the rug stretched its handsome length before the flower counter a whole long week, and little children, among others, pressed its velvety surface with tiny, admiring fingers, as they crowded around the counter heaped with bunches of the beauties of nature, and wonderful imitations in French tissue paper, sold for the furtherance of the Lord's work, for the small sum of ten cents.

It certainly seemed a strange dispensation of Providence that a week or so later a regular epidemic of scarlet-fever should break out in the town, and that it should mainly confine itself to the households of the church of D—— who had been so zealous in good works. The doctors were at quite a loss to account for the outbreak, since but few cases had been known in town for a number of years, and the last one Anna Delmar's, early in the previous spring. But they went to work with a will, though calls came thick and fast. The schools were shut down, quarantine enforced, and the disease finally conquered without one fatal termination.

Whether or not Mrs. Delmar associated the phenomenon with Anna's rug (which, by the way, carried off the prize) will never be known; but it still retained its place fronting the piano in the parlor, and was not even exposed to the sunshine for fear of injury to its bright colors.

Not long after this a new comer came to gladden the household of the Delmar's — a beautiful but delicate baby boy. For seventeen years Anna had been the only pride of her parents; but now the attention of the whole family was centered upon this sweet little bud, that might at any moment be snatched away. But he lived, rather in spite of care than because of it, so fussed over and coddled was he. He was n't even given a chance to become robust, for the sun was always too hot, or the wind too cold, or the weather too wet, for Harry to be outdoors much. How he could have escaped the contaminating influence of that rug would have been past finding out, had not an accident befallen it, and it been banished to a place beside the spare bed, away off upstairs where Harry seldom went. So pre-occupied was Mrs. Delmar's mind by his constant care, that its unfortunate history had been entirely forgotten.

The winter Harry was five years old, the rug, now some the worse for wear, was again brought down, to do duty in the sitting-room. It at once became Harry's pet property. It was by turns a river to sail his boats in, a battle-field for his tin soldiers, Mount Ararat for the descent of his Noah's ark, a robber's cave, and various other endowments of his childish imagination.

But its true character as a veritable pest-house was never so thoroughly exposed as when Allan Rayne, his little neighbor playmate, spent the afternoon with him. They found the rug was just the thing for their favorite game of bear. The bear rolled up in the rug for a skin, and when his prey was finally secured, the wrestling and tumbling that went on inside its voluminous folds, would have shaken the true inwardness out of anything. The dust flew, and the children swallowed and breathed in as much as they could, and never ceased their fun till, exhausted, they curled up in the "bear skin," and were found fast asleep.

After that Harry did n't feel very well. His mother thought he had played too hard. A few days later his throat was sore, his head ached, and he had a high fever. The doctor was sent for, — good Doctor Greene, — but he would not express an opinion until the disease, whatever it was, had more fully developed. He said, though, that the symptoms were much like those of some contagious fever; but as there were no other cases in the village, and Harry had not been exposed elsewhere, it was hard to tell. Before he left the house, however, Mrs. Rayne came running over to have him call in to see Allen. He seemed to be breaking out all over in spots. He had had a sort of chill the night before, and she had given him a hot pack. He seemed better this morning, but was covered with a rash.

Dr. Greene went over, and pronounced it a decided case of scarlet-fever. He went back to the Delmars, and every effort was made to bring out the disease on little Harry. But his delicate constitution was against him, and he seemed to have taken a severe cold also — perhaps as he slept the sleep of exhaustion on the fatal rug. Do what they could, and everything was done, a week later the Delmars parted in anguish with their household treasure, and the home little Harry made bright with his childish prattle was indeed desolate.

Mrs. Delmar had now plenty of time for remembrance, and the pang that smote her heart when the

Doctor's thorough investigation as to the cause of these isolated cases, convinced her that in evading his orders years ago for a worthless bit of adornment, she had sacrificed her child, was like the smart of a poisoned arrow. But she had learned her lesson, and of all the many things that now shared a general destruction, and were not spared, that rug ranked first.

HOW TO TRAVEL WITH CHILDREN.

BY ELIZABETH A. DEWEY.

WHENEVER in taking a long journey, circumstances demand that children help make up the party, the pleasurable anticipations of the trip often lose their charm for the older ones, in the certainty that their young companions will make life a burden when once the novelty of traveling has worn off. As soon as they become tired, and every one knows how easily a child wearies even of pleasure, there will begin the inevitable restlessness, the persistent questioning, the whining and fretting, and even positive ugliness, that characterizes most children with nothing to do, compelled to confine their active limbs in the narrow limits of a car seat.

It is such trying experiences that deter many a mother from taking a much-needed change. Rather than incur the consequent trouble, and risk becoming a bore to others, she pursues her accustomed routine at home, while her husband goes off for a few weeks in the country, or joins some tourists' party. She knows, perhaps by experience, that, even could she find some one willing and competent to assume the responsibility of the children's care, she would get no real pleasure or benefit from a trip from home, because of the anxiety she would feel concerning the welfare of her darlings.

Did it ever occur to such mothers that, with a little forethought and pains on their part, the coveted recreation might be made possible for both themselves and children, and a general good time be had of it all around? Even children appreciate a change, and if rightly managed, prove a great deal better travelers than most persons suppose. Besides, traveling is educative, and may be made the means of acquiring much useful information. And then, too, the time will come when each will make his first journey alone. If they have been taught the responsibilities of traveling, how to avoid its dangers, and the care of their luggage and general belongings, their experience will materially lessen your anxiety for them in the future. So take the children with you, and try a plan whose enjoyment may include the whole family, and whose benefits may be shared by all.

In the first place, don't dress them in their best clothes. Their school suits are plenty good enough, and you will not be worrying yourself nor them with perpetual admonitions to keep their clothes clean and unwrinkled, a thing incompatible with railway travel. And knowing how easily you yourself suffer from *ennui*, and enjoy a good book or even a newspaper to pass away time, remember that an hour to a child is as long as two or three to an older person. Then fill a small bag or basket, so that each can carry his own, with a well-chosen mixture of work and play, — picture books, a whole family of small dolls to dress, with the wherewithal to do it, balls to cover, pictures to cut out, even toys to whittle out of a bit of soft wood, — and ten to one they will pass the time less irksomely than you. If these fail at last, invent some game of "guess" or puzzle, but never, as you value good behavior, try to buy it with peanuts, or candy, or pop-corn. Restlessness and perversity are only aggravated by sweetmeats and constant nibbling.

Provide a lunch-basket well filled with substantials. Fruits, and crackers of the various grains, make a lunch easily served and cared for. Time the meals as nearly as possible like those at home, and give the baby its customary nap in as comfortable a spot as you can arrange.

Never allow the car to become close and overheated from want of proper ventilation. Do not induce colds in the head and cinders in the eye by direct draft from the window, but open wide the ventilators. If a child has become feverish from confinement and weariness, do not allow it to drink unlimited quantities of ice-water from the tank. Give it a few sips now and then from your individual water-cup.

We hope the time will come when we shall see more family pleasure-parties, as we do in England, — father, mother, and half a dozen children taking a summer play-spell together, their rosy, contented faces joyful with the keen zest any pleasure can give if shared by all the loved ones.

OUR grand business is not to see what lies dimly at a distance, but what lies clearly at hand.— *Carlyle.*

TRUTH, and a soul that is ready for truth, meet like the fuel and the flame. — *Phillips Brooks.*

THE SAMOAN ISLANDERS.

BY S. ISADORE MINER.

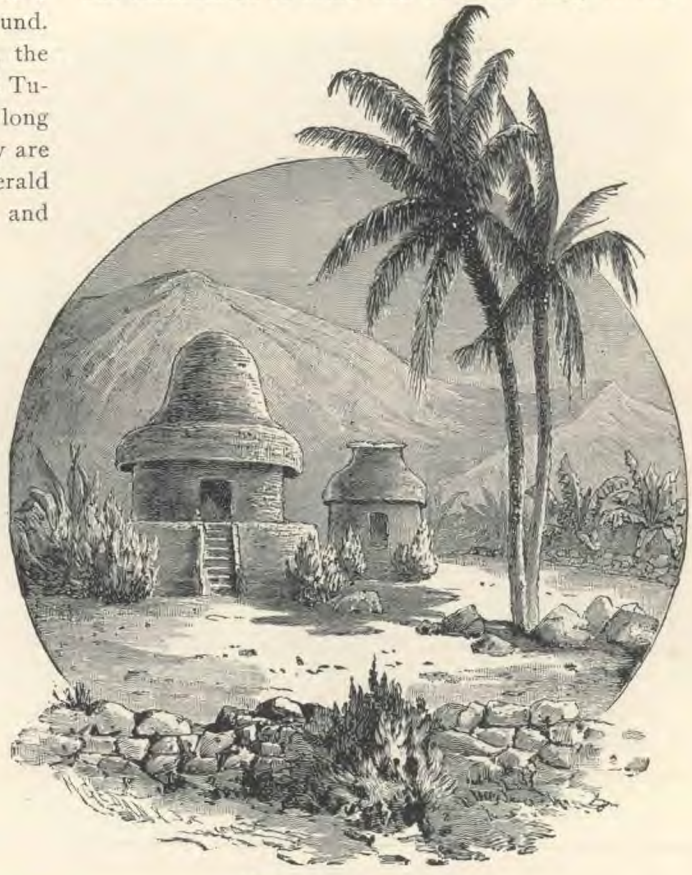
Of all the inhabitants of the various groups of islands that so thickly dot the South Seas, none are by nature so gentle and refined, so readily susceptible to the influences of civilization, as the simple, light-hearted people of the Isles of the Navigators. Possessed of superb physiques, perfect health, few and easily satisfied wants, and uncursed by the vices of continental life, they present as true a picture of a happy, innocent existence as may anywhere be found.

The islands of Samoa are eight in number, the most important of which are Savaii, Upolu, and Tutuila; and Savaii, the largest, is only forty miles long and twenty miles wide. But though small, they are beautifully diversified by mountain peaks, emerald valleys, fruitful coast plains, rivers, waterfalls, and pool-like lakes. The harbors are magnificent, and almost inclosed from the wash of the sea by reefs of the abundant coral.

The government of the islands is vested in a king and a vice-king, whose power is limited by a parliament of chiefs, divided into an upper and lower house. The people are fine-looking, much lighter in color than their island neighbors, and better featured. Their principal food articles are cocoanuts, bread-fruit, bananas, and taro, the latter a tuber of large size and some thirty varieties. The cultivation of the cocoanut figures most largely in the industries of the island, as the Samoan nuts are noted abroad for their tenderness, delicacy of flavor, and large size. The groves are some of the most beautiful in the world. Other industries are fishing, coral gathering, taro growing, and the making of tapa, or cloth from the inner bark of the paper mulberry tree. The coral is broken and used as flooring material for the Samoan huts, and the native churches are constructed entirely of the material, as are also the surrounding walls. Of tapa, the sole garment of the Samoan is made — the lava-lava, merely a piece of cloth folded skirt-like around the loins.

The homes of these children of nature resemble nothing else so much as an old-country bee-hive. The foundation is a circular row of posts set about four feet apart, with two or three longer posts in the center for roof support. Rafters are laid, and these are lashed together by sennit, or ropes of twisted cocoanut fibers; then a thick thatching of sugar-cane leaves, entirely water-proof, completes the protection. The sides are inclosed when desired by curtains of woven cocoanut leaves, held in place by sennit, and mats of the same protect the feet from the coral-laid floor.

The Samoans were never a barbarous people, as were most of the South Sea Islanders. They believed in the worship of gods, and each individual, at birth, was consecrated to some one of their many deities.



SAMOAN CORAL TEMPLE.

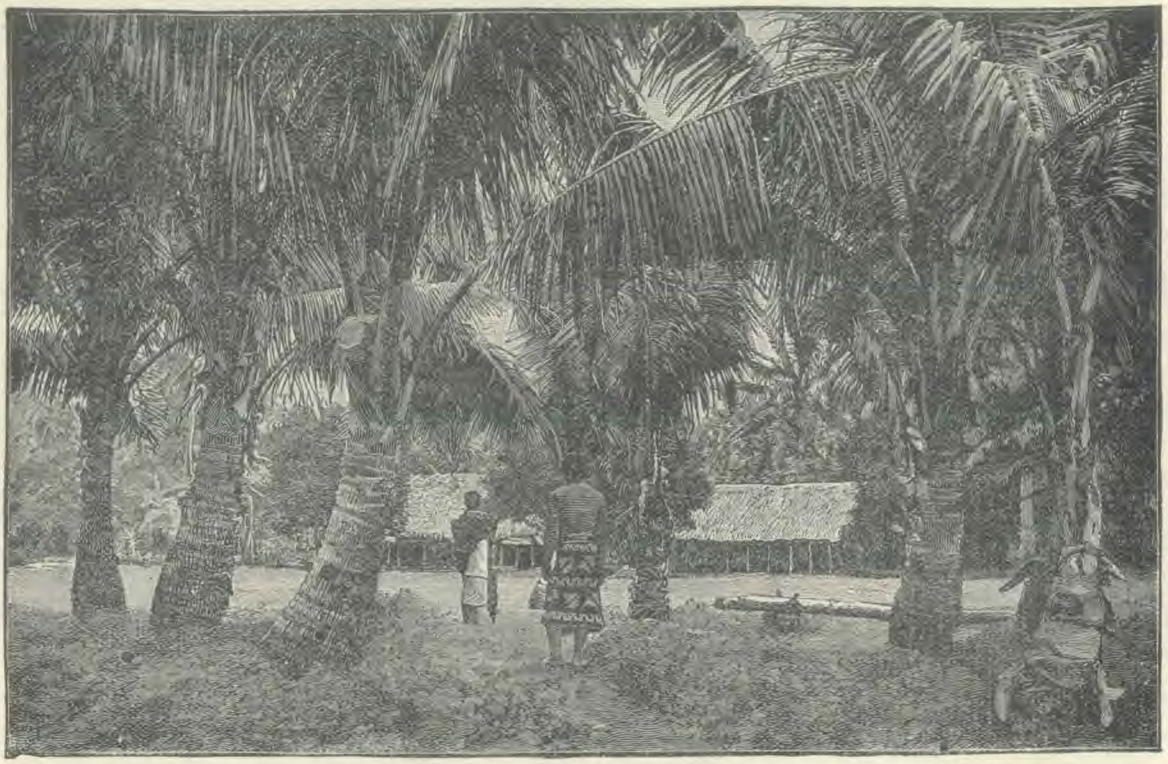
This and their strange mythology still leave an impress on their observance of the doctrines of the Roman Catholic Church, to whose tenets they are mostly converts. Several missions, for both sexes, are conducted by the monks and sisters of charity on the islands, and here the Samoan boys and girls are given much useful instruction.

The social and home life of the natives is a very pleasant one. They are extremely fond of festivity and sports, and every occasion for their enjoyment is eagerly seized upon. But no gathering is complete without the making and serving of kava, their only drink indulgence. Its process of manufacture is so

peculiar that a brief description may not be uninteresting. Kava is prepared from a peppery kind of root. The implements used are a wooden bowl, a strainer, and a cocoanut cup. The chief maidens of the village preside; one or two of the number, according to the amount to be made, after first carefully washing their mouths, masticate the bits of root picked in pieces and handed them by their companions. The mouth is filled until the cheeks bulge out, the girls all the time chewing gravely, with downcast looks, when the huge mass is ejected into the hand, and by a graceful motion, transferred to the bowl. When sufficient is chewed, water is poured on and thoroughly mixed with the juice. It is then strained into the cup as fast as drunk, and passed to the males present, according to rank. The women are not allowed to imbibe. Kava is exhilerating in effect, and when used in excess is said to cause a sort of paralysis of the lower extremities.

Of their many sports, the favorite are aquatic, and the one most enjoyed by the native inhabitants of Apia, the capital of Samoa, is a day spent literally in the waterfall of Papaaseaa. The rock over which the torrent rushes, has an inclined surface, perfectly smooth for a distance of eighteen feet. Seated three or four behind each other, toboggan fashion, they start at the top, slide the whole distance swiftly through the descending water, and plunge deep in the pool far beneath, coming up dripping and laughing, and struggling to see which shall be the first to regain the bank for another trip down. The sensation produced is indescribable, fairly taking away the breath of the novitiate. At noon a picnic dinner, served on banana leaves, and cooked in true Samoan style, with hot stones, in the ground, is eaten, after which they return to the water until time to go home.

Not very many foreigners stop at Samoa, though it is in the direct steamship line between the Hawaiian and the Sandwich Islands (about 2200 miles southwest of the former), and boasts of quite a foreign population. Steamers merely slow up to the little vessel sent out from the town to receive and transfer the mails. However, the United States Navy has a coaling station there, and also some other interests. Germany and Great Britian, too, have treaty interests in Samoa, and it was when looking after these, a couple of years ago, while a large number of government ships of each nation lay in harbor, that the awful tidal wave arose, with such unprecedented and disastrous results, which for a time elevated this little-known group into first prominence in the attention of civilized people.



COCOANUT GROVE IN SAMOA.

TEMPERANCE NOTES.

DR. B. W. RICHARDSON declares that alcohol causes a mortality more enormous than even consumption.

LADY HENRY SOMERSET succeeds the late Mrs. Bright Lucas as president of the English W. C. T. U.

THE Secretary of the Treasury has issued an order prohibiting the sale of liquor in the new emigrant depot which takes the place of Castle Garden, in New York City.

BARON LIEBIG, the great German chemist, says that "as much flour as can lie on the point of a table knife, contains as much nutritive constituents as eight pints of the best and most nutritious beer."

NEWSPAPERS in the vicinity of military posts where army canteens have been established, state that there is four times as much drinking there as formerly, military canteens proving to be only another name for military saloons, where the Government, through its officers, retails beer and light wines to the soldiers.

THE National Temperance Society has memorialized Congress for the immediate passage of a bill to prohibit the importation and sale of intoxicating liquors in "original packages," in prohibitory States and localities.

SHOULD the tobacco-users of the United States abstain from its use for a period of five years, and place the amount so saved in a common fund, dividing equally, it would give the head of each family a sum sufficient to purchase an eighty-acre farm in the Western States or Territories.

THE *Union Signal* pays the following tribute to prohibition: "The Secretary of the National Prison Association estimates that the census of 1890 will show a prison population of nearly 100,000, an increase of about 30,000 in ten years. Kansas, Iowa, and Maine, the trio of prohibition States, are the only ones that have not contributed to this increase. In these States, crime has steadily decreased, and in many places the jails are empty."

POPULAR SCIENCE.

THE average distance of the clouds from the earth is about one mile.

IT has been estimated that the United States has enough telegraph wire in use to encircle the earth forty times.

THE oldest observatory in the world is that at Pekin, China, which was founded in 1279. Three of the original instruments are still in use.

THE gold-beaters of Berlin showed, at the Paris Exposition, leaves of gold so thin that it would take 282,000 to produce the thickness of a single inch.

AT a certain point in the Yosemite Valley, Cal., on account of the perpendicular hight of the surrounding mountains, the sun is said not to rise until 11:30 in the morning.

THE highest railroad in the United States is the Denver and South Park, a branch of the Union Pacific. At one point, near Alpine Tunnel, it reaches a hight of 11,596 above the sea level.

AN incandescent lamp is reported to be able to burn 10,608 hours.

THE hottest region on the earth is in the vicinity of the Persian Gulf, where the thermometer is said to have been not lower than 100° for forty consecutive days and nights during the months of July and August.

IN the Russian law court at St. Petersburg, there is now being tried a case which has been in progress for the last 500 years. It is in regard to the confiscation by the municipal authorities of vast estates belonging to a Russian nobleman, and the written testimony in the case is said to weigh forty-five tons.

IN a certain section in California, there is said to be a portion of railroad exceedingly unique in its construction. Where the railroad passes through a deep ravine, the trees have been sawed off on a level with the surrounding country, and the road-bed has been formed upon their stumps. At the very bottom of the ravine stand two immense redwood trees, which have been sawed off at a hight of seventy-five feet.

WORK AS A MEANS OF EDUCATION.

BY PROF. G. H. BELL.

THERE was a time when the training of the hand and eye was not supposed to have any connection with the improvement of the head and heart. Especially was this true with reference to the culture which may be obtained through common labor. But with respect to this, the world's thought is advancing. Kindergarten methods, the slöjd, and the numerous industrial schools springing up in all parts of the land, are evidences of a forward movement.

What we now need is an application of these principles in home life; for it is in the home that education must begin. Much has been said with reference to early religious impressions, yet many parents still look forward to the time when their children can be sent to school, as the point from which their education is to date, forgetting that the educational process begins as soon as the child opens its eyes upon the world, and goes on from that moment, whether we will or not. Education begins with the senses. The eye has to be trained to see, the hand to feel, the feet to walk, and the tongue to speak. These are all educational processes, not only for the organs, but for the mind as well. How children may be aided in this stage of their development has been noticed in a former article. Our present purpose is to show how this same kind of training may be continued by means of work. By work we do not mean the imposition of irksome tasks. Advantage may be taken of certain instincts, so as to lead the child gradually and imperceptibly into the doing of useful things that may be termed work, and which will at the same time furnish, in part, the very culture needed at that age.

Children have a strong desire to do whatever they see older people do. This tendency may be easily encouraged into a wish to be useful. The slightest indication in this direction should be promptly met, and fostered with the utmost care. Never mind, though the work you have in hand may be much hindered; the child's education is of far greater importance than any piece of mechanical work can be. It is the child's *desire* to help, not the help he really gives, that is to be appreciated. In this way, work may become a means of educational training at an early age. The picking up of a spool, the pushing back of a chair, the bringing of a slipper, — these are great things for a little one to do in the effort to please, and should be recognized as such. Who is there that cannot recollect the joy and satisfaction felt in having some little act of his appreciated as a real help? How precious was the sweet smile and the kind "Thank you," from the parent's lips! Do not forget that duty, not convenience, is what should ever be kept in mind. It is not for our own profit, but for the child's good, that we teach him to work.

The utmost care should be exercised, that the duties required be not too difficult, too often demanded, or too long continued. The child needs frequent change, and must have it. An hour seems longer to him than three or four hours to a person in middle life. As he grows older, the work may gradually become more difficult, and be continued longer at a time. If possible to avoid it, never let the work be presented as a task. If properly alternated with play or other amusement, the work may become as truly a recreation as play itself.

A child will tire of continued play, or of a never-ending round of amusement. *Ennui*, restlessness, gloom, or some morbid state of the feelings, is sure to follow, unless useful employment comes in to fill the gap. Work is a necessity of our nature — a part of God's plan for our well-being; it is only the excess of it that becomes irksome. Work was ordained for man before the fall, and is essential to his highest happiness — not alone in his maturity, but also in his childhood.

Work, properly managed, is a powerful agent in the formation of character. In promoting a desire for usefulness, it serves as one of the best antidotes for selfishness. It awakens worthy motives, and gives a healthy tone to the mind. Little by little it prepares the growing child for the practical duties of life, and brings him in contact with them as fast as he is qual-

ified to discharge them. Thus the duties that might at some time fall heavily, become enjoyable when taken on in this way, and the character of true manhood or womanhood grows up with the growth of the child. Work comes to be welcomed as a blessing instead of a hardship, and is made honorable in being honored by those who do it.

But work affords an excellent mental discipline, as well as a means of developing character. It gives the mind control of the muscles, bringing them into complete obedience to the will. It promotes accuracy and precision. No very long experience is required in any kind of work, if well directed, to show that carelessness gives bad results, and that a slight error may cause a thing to be worthless that otherwise would have been valuable. When it is thus seen that inaccuracy or a want of precision may result in the entire loss of all the time put upon a piece of work, the tendency is toward cautiousness and painstaking. The forms and uses of things will be carefully studied, the operations of skillful workmen will be closely observed, and in some minds there will spring up spontaneously a desire to improve upon even the best methods. It is thus that a spirit of invention is fostered, and the way opened for future discoveries in the arts and sciences. Through work, children acquire the habit — the power, we might well say — of continued application. Not that a child should be required, or even allowed, to toil on in weariness; but that after suitable rest he should resume his work, and continue to do so until the job is finished. Never let a piece of work be abandoned till it is completed. It matters not whether the work is in itself very important or not. It is the formation of correct habits that is ever to be kept in mind.

As the child grows older, he will see that it is necessary in difficult work to keep the mind centered upon it. Thus he will gradually learn to bring the thoughts and the imagination under control of the will.

No good educator can fail to appreciate the advantages that such a training affords. What better preparation for successful study could be given? Any teacher who will take the trouble to observe it, may notice the better advancement made by children who have been brought up to work. But right here let us consider a prevalent error, — the overdoing of a thing in itself good. Tasks too heavy for their years are often put upon children. Their young lives are sometimes almost worked out of them, and they become premature little old men and women, never having had a real childhood at all. Other parents, having seen this error, go to the opposite extreme, allowing their children to grow up in indolence. Happy, indeed, are the parents who can give their children the best educational influences of work, remembering that for every truth there may be two errors, and carefully avoiding either extreme.

One of the grossest errors that can be made is to suppose that a young child can work continuously throughout the whole day, like a person in mature life. A man of excellent parts was wont to say to his son, a lad of eight years, "Now I am going away, and I want you to work at this job steadily till I return, to-morrow night. You need not hurry, but you must keep right at it. I want you to learn to work like a man, to work alone, and stick to it all day. I don't want a boy of mine to grow up to be shiftless." Poor, misguided father! He loved his boy, and meant to be kind to him; but he could not have taken a surer way to make him hate work. That boy, live as long as he may, will probably never forget a certain field of potatoes that lay over the hill by the woods, out of sight of the house, and out of the sight of everybody. The great strong tops had to be pulled, enough to break the slender lad's back, and the potatoes to be dug from among sods, roots, and stones. The deluded parent, a man of prodigious strength, supposed he was taking a course to make his delicate boy strong and hardy! But the physical hardship was not the severest thing to be borne. If the father could have experienced for one hour the feelings of loneliness, of despair, that came over that lad as he realized the utter impossibility of fulfilling his father's expectations, he would have yearned with pity, if he had not been cured of his preposterous theory.

Work should frequently alternate with play or other amusement; and as the child gets old enough, with study, or mental instruction. Watch a little child. If he is allowed entire freedom, he will play for a time with all the energy and enthusiasm he possesses. But in a short time you may look out and find him asleep on the wood-pile or on the door-step. In a little while he is up and at it again, as fresh as the morning, and as joyous as though weariness were a thing he had never known. This is the way nature develops her offspring. Let us learn of her: she is a wise teacher as well as a kind nurse. In this way we may teach our children to work without making drudges of them. But let us beware of the niggardly motive that condemns children to a life of ceaseless toil merely for what they can earn. The tendency of such toil is to dwarf the nobler energies and promote stolidity. Only the hardy few can rise above its benumbing influence. But labor rightly taught is a blessing, and its importance as a means of education can hardly be over-estimated.

INTERESTING THE YOUNG IN SOCIAL PURITY WORK.

BY KATE LINDSAY, M. D.

It is to the future generation we look for the full fruition of all reformatory work. While we labor in hope for the men and women of to-day, it is so much easier and surer to banish wrong by preventing the innocent from its commission, than by converting the *habitue*, that it behooves us to lose no opportunity of reaching the young, and interesting them in all matters pertaining to the welfare of humanity. Of all the various branches of philanthropic work, none is more intimately dependent upon the young for perfect achievement than is the social purity movement. And yet how little is being done to interest them, as a class, in what will some day affect their future for good or ill, as their decision is in favor of, or against, the leading of pure lives!

People must be educated in regard to a subject in order to appreciate it, and that the young may become interested in this great work, they must be taught its importance as it personally relates to themselves; and their parents must rightly understand and teach the laws of individual and social purity. Unfortunately, the exposition of the seventh commandment, which is the embodiment and expression of virtue, in letter and spirit, is universally tabooed in the family. Children are taught that it is wicked to lie, steal, and swear, but no one gives them any practical instruction in regard to the scope of the seventh commandment, not only in its more open declaration, but in its implied relation to their own persons, manners, speech, and thought. With so much misconception on this subject in general, it is no wonder that children, and frequently older persons, think the purity commandment relates solely to those who contemplate an overt act, and in no wise conflicts with the less flagrant, but more common sins.

Virtually, this commandment is broken when seniors deal out some scandalous bit of news before young girls and boys. The newspapers are constantly breaking it, and so far as our boys are concerned, it is made a dead letter. Many physicians have, in its stead, devised what they call the law of physical necessity, and held this up in place of the seventh commandment as a rule of life for boys and men. But the great Lawgiver did not write one-sided commands, and there is no more necessity of its being broken by one sex than by the other.

The young should be taught that they violate the spirit of the seventh commandment whenever they gather in groups to talk about indelicate subjects, and that they break it in reading books containing passionate and impure suggestions. They must be taught to keep the mind pure and healthy by harboring only lovely thoughts and leaning only to the things of good report. They must be taught how much their happiness and usefulness depends upon this; how broad a place it occupies in their futures, and how much sin and suffering comes from the violation of it in any degree. They must know something of the snares and pitfalls spread for the feet of the unwary, if they are to see the necessity of heeding each step they take.

The best commentary on the seventh commandment, is that given by our Saviour in one of his discourses (Matt. 5 : 27–32), and this should always be referred to in teaching the scope of the law of purity, that the young may understand that its violation is not confined to overt acts. Impress upon them most strongly that their weal depends upon obedience, and direst woe follows, sooner or later, disobedience. Show them that if this command had been kept inviolate from the beginning, there would be no social purity work to do now, and that nine-tenths of the diseases that afflict mankind at the present day, would never have had existence. Teach them that if the standard of obedience to this command can be elevated to its proper position, in the grand, glorious future the social purity movement will have wrought its work, and that to them is intrusted the welfare of this crusade against sin. Then will our girls be strong to resist temptation, and our boys consider themselves the guardians of the honor of young girls, instead of their licensed betrayers.

LOOK AFTER THE GIRLS!

A WORD to you, fathers and mothers, about the way you protect and bring up your daughters. Girls are not to blame, in nine cases out of ten, if they are wild and reckless and good-for-nothing. If you buy a piano, you house it, and take excellent care of it. You never leave it out-of-doors, nor allow the children to cram its tuneful recesses with pins and pebbles. And yet it is only a piano, and represents merely a nominal valuation. It is not going to rise up and confront you one day in heaven, and demand to know, before God and high angels, why you did not take better care of it. It is not going to look at you with beseeching eyes from a dying bed, and ask you why you did not teach it to be pure and sinless and honest, that it might know whither it was going, out into the unknown dark. The girls will be troublesome witnesses to your neglect and indifferent care, when the piano is nothing but a heap of material wreck and ruin. You cannot slight your daughter, and find your loss only a loss of the pocket-book. There is something in the mechanism of a girl's soul that will outlive a thousand Steinways, and demands far more delicate care and handling.

You cannot let your daughter run the streets, or make promiscuous acquaintances, or hang around depots, or flirt with strange men, without footing up a terrible bill of damages, that must be paid in tears rather than in currency. Having done your best to make a pleasant home, see that the girls are kept within it, or, if not, know where they are. The streets are full of recruiting officers for Satan's army, and the commander in charge does not put arm-straps on his sergeants, either. Temptations do not always take personal form. A circular handed to a school-girl, the idle tale of a worthless companion, the suggestion of an impure novel, may recruit an innocent girl into the great company of the lost. It would be hardly less hazardous to send your daughter to the small-pox ward of the county hospital, than to leave her to the mercy of a companionship which you have not tested.

There is no use in watching and protecting your girl spasmodically; you cannot secure her from evil in that way, any more than you can keep your piano in tune by providing a tuner once in five years, and then allowing the baby to pound the keys with a hammer in the interim. Protection and care must be constant and enduring, like the roof above your head and the foundation beneath your house. Fitful, intermittent watch-care is like the guarding of a front door while the rear entrance is open to the street. Only such safeguards as surround and fortify each mode of ingress are of avail to keep out either burglars or the Devil.

The world is full of wolves thirsting for lamb's blood, and it behooves us to build a fold for the lambs, and see that we keep them in it.—*Sel.*

MEN pray for holiness as if it were something entirely apart from their every-day life — something that had nothing at all to do with conduct in their domestic, social, and business relations.

ONE person may not succeed in dispelling all the miasms of the earth, but if he can only cleanse one little corner of it, if he can but send through the murky air one cool, bracing, healthful gale, he will do much better than to sit under his vine, appalled by the greatness of the evil.—*Gail Hamilton.*

THE LICENSING OF VICE.—It is the hopeless view that vice is necessary that paralyzes all legitimate effort. It does not follow that because we recognize the impossibility of putting an end to it, that we should not adopt measures to discourage evil. Society does not expect to put an end to theft or murder, by any regulations, but it directs all its efforts to deter from or prevent them; it does not attempt to regulate them.—*Dr. Emily Blackwell.*

OUR war upon intemperance will be more effective when we make equal war upon social sins; for each grows and fattens on the other.—*Interior.*

THE Government has collected and made public the following appalling statistics concerning the enormity of the divorce evil: During the last twenty years 400,000 divorces were granted in this country. The States of Illinois and Pennsylvania took the lead in making up this figure, Illinois boasting no less than 36,000 divorces, with an increase of from two to three thousand a year, and Pennsylvania 16,000, with an increase of from one to two thousand. The statistics go to show that Colorado is fast displacing Illinois as the Mecca of divorce-hunters in the West, and that Nebraska is also doing a thriving business in that line. In all these States the evil is fostered by unrighteous tax laws, mercenary lawyers, and indifferent judges. Surely the handicap of wise and just legislation on the divorce question was never more needed.

GOOD HEALTH
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MEDICAL FRAUDS.—VII.

Exposure of the "Wilford Hall Secret" Humbug.

FOR months past a most brazen imposition has been perpetrated upon the public by a man styling himself Dr. A. Wilford Hall, who has advertised extensively what is claimed to be a secret method of curing disease and preserving health, and has flooded the country with agents peddling this so-called secret from house to house. The price charged for the secret, which is embodied in a cheaply gotten up penny pamphlet, is four dollars. Every purchaser is placed under the obligation of secrecy. As our opinion of the remedy had been asked for by so many former patients, and others, we finally concluded to investigate the matter thoroughly, and took measures to obtain a copy of the precious pamphlet referred to, which we finally accomplished without pledging ourselves to secrecy; consequently we are entirely at liberty to inform the public of the imposition practiced upon it.

What is this wonderful secret, for the sale of which the country has been farmed out to general agents and special agents, and for which four times the price of an ordinary physician's prescription is charged? The reader will doubtless be both astonished and disgusted when informed that the secret method of preserving life and curing disease which Dr. Hall claims to have discovered, and benevolently offers to the public at so modest a price, consists solely and simply of the injection of a quantity of water into the lower bowel, commonly known as an enema, or rectal injection.

Without stopping to discuss the question as to whether Dr. Hall is or is not the discoverer of this method of treatment, let us listen to what he says about it, and consider the probable effects of following the directions which he gives for the use of his precious secret. The author of this marvelous secret describes, in a ridiculous fashion, how after suffering for some years from constipation, and becoming dissatisfied from the continued use of laxatives, he resorted to the use of the enema administered with a bulb syringe, and gradually increased the quantity of water used from a pint to three quarts, to which he afterwards added a quart, making the amount of water taken by enema for the purpose of cleansing the bowels a full gallon. He proudly claims that he is "the very first man of all the millions present or past to inject a gallon of water into the colon." He describes, with the glowing rhetoric commonly used by the charlatan, with what thrilling interest, "curiosity," and "scientific ambition," he watched the last quart of water feeling its way along his distended alimentary canal, until the full gallon which he had determined to swallow after this back-handed fashion, was completed.

Our bold discoverer, however, seems to have been satisfied on ordinary occasions with a smaller quantity of water, an amount sufficient to wash out his torpid intestine. Another element of his discovery we have not yet mentioned; namely, the fact that a lesser quantity of water might be injected into the bowels and retained, to be absorbed and eliminated through the kidneys. This method of moving the bowels, and of supplying the system with liquid element, is recommended by Dr. Hall for all persons, whether sick or well. The claim is made that this is the only method by which evils resulting from "our present civilized modes of living can be prevented." He claims to have used the remedy upon himself more than five thousand times, and insists that it is perfectly harmless, arguing that "as certain as that the washing of the accumulated dirt from one's face, hands, feet, and body never itself produces injurious effects, so certain may the reader rely upon this flushing treatment of the interior structure as impossible to produce any

harm to the most delicate and fragile constitution." Not content with recommending the remedy for persons suffering with inactive bowels, or even disorders of any sort, this wily charlatan proposes to create a universal demand for his secret at four dollars *per capita*, saying, "As prevention is always better than cure, I most earnestly recommend this flushing treatment of the colon to persons in the most exuberant health, at least every third night before retiring. . . . In this way a sound constitution may retain youthful vigor almost indefinitely."

The absurdity of these claims is so manifest it seems almost an imposition upon the good sense of our readers to seriously undertake to point it out. For example, to reason that because washing the dirt from one's face and hands is a perfectly harmless and wholesome practice, that flushing of the colon may be practiced habitually without injury, is in the highest degree absurd. Washing of the outside of the body is a perfectly natural process. Nearly all animals are accustomed to bathe the exterior of their bodies; but nature has provided other means for cleansing the interior of the body. The various digestive fluids, the gastric juice, bile, etc., and even the intestinal mucus, are antiseptics by which the contents of the intestines are preserved from putrefaction; and in the lower bowel the mucus, which is abundantly secreted by the glands furnished for the purpose, forms a coating over the mass of fecal matter, and thus protects the mucous membrane against the absorption of poisonous substances. These natural protective agents are entirely sufficient under ordinary conditions of life. It is only when the bowels become inactive, or when through errors in diet the contents of the bowels become unnaturally poisonous, that other means are necessary. Then the enema may be properly used as a means of washing away offending substances, affording temporary relief; but the proper remedy is to be found in correcting the causes of an abnormal condition, by avoiding errors in diet or in other habits of life. Because Dr. Hall has been able to support the injection of three or four quarts of water in his colon every day or two for forty years, it is no evidence that the same practice would be beneficial to every man. Indeed, the idea that any man will be benefited by stretching his colon to the capacity of a carpet-sack, is too absurd to need serious demonstration.

But there is something still more important to be said. The practice of habitually introducing so large a quantity of water into the alimentary canal, has the effect to destroy the normal sensibility of the bowels, and to establish an abnormal condition, so that this large amount of water becomes necessary as a stimulus to provoke an evacuation of the intestines. It was long, long ago discovered by physicians that the habitual use of the enema as a means of stimulating evacuation of the bowels, is by no means free from evil consequences. Chronic constipation cannot be cured by this method any more than by the use of therapeutics. It is only a mechanical means of emptying the bowels, which is undoubtedly preferable to the retention of fecal matter; but at the same time it is not a cure of the morbid condition, and a person who habitually uses the enema, becomes as much dependent upon it as is the habitual user of mineral water or pills, upon these medicaments. For a healthy person, then, to adopt the employment of this so-called "secret," is to invite disease, and produce a condition of chronic constipation and absolute dependence upon some mechanical means of evacuation of the bowels. One can scarcely believe that any well-informed man would undertake to impose upon an intelligent public so absurd a notion, and one is compelled to consider the self-styled philanthropist who claims to have made this wonderful discovery, as suffering from mental deterioration in consequence of advanced age, or as deliberately perpetrating a dastardly outrage upon the people. Each reader must decide for himself which of these hypotheses is correct.

If any proof is wanted as to the paralyzing effect upon the bowels of this perpetual flushing, it is to be found in the case of Dr. Hall himself. He says, "If it be asked, as it frequently is, if this process does not necessitate its continuous use after it is once begun, we answer that we have never tried to find out, because after its first adoption, we have never once, for more than four days, in all that period of time, been without just such a flushing operation, with from three to four quarts of water, as described in the first edition of our pamphlet." "Whether we defer it two or four days, as our business necessities, engagements, and circumstances may seem to require, we never have a call or the slightest demand for a movement till we begin to feel oppressed, and are ready deliberately to wash the inside, just as we would prepare to take a bath at stated periods, and wash the outside. This is our experience, and has been for more than forty years."

Here we have the proof that in the case of the self-styled discoverer of this so-called panacea, after forty years' use of the remedy recommended, the patient is still suffering from the same obstinate constipation for which he first employed it. According to his own testimony, the natural demand for evacua-

tion of the bowels is entirely destroyed. Let the reader imagine what would be the condition of this unhappy man, if, while on a long journey, his precious little syringe should break down, or should be lost, or possibly be stolen by some convert in a similar predicament! If obliged to go on a voyage of discovery, or on any errand likely to take him away from the drug-store or a doctor's office, for any length of time, he would be obliged to carry along with him a stock of syringes, or keep most careful watch over his one precious instrument. If the Almighty designed that the alimentary canal should be emptied in this fashion, would he not have provided some sort of syringe attachment to the human body, by which the savage denizen of the wilderness, or the castaway on some island of the East, should be as well provided with the means of evacuating his bowels as Dr. Hall is with his little bulb syringe?

In the next number we will consider Dr. Hall's claims as a discoverer.

COFFEE TOPERS.

We quote from the *British Medical Journal* the following description of the effect of coffee-using at Essen, the home of the Krupps, famous as the manufacturers of ponderous cannon, now being sought after by all military nations: —

"The great industrial center around Essen includes a very large female population. Whilst the women of the working classes in this country are often addicted to dosing themselves with tea that has stood too long, it appears that the workmen's wives at Essen drink coffee from morning to night. Some consume over a pound of Ceylon coffee weekly, and one pound contains over sixty-four grains of caffeine. In consequence, nervous, muscular, and circulatory disturbances are frequent. The nerve symptoms are characterized by a feeling of general weakness, depression of spirits, and aversion for labor even in industrial subjects, with headache and insomnia. A strong dose of coffee causes the disappearance of these symptoms. The muscular symptoms consist of distinct muscular weakness, and trembling of the hands, even in rest. The circulatory symptoms are marked by small, rapid irregular pulse, and feeble impulse of the heart. Palpitations and heaviness in the percordial region are frequent. The hands and feet feel very cold, and the complexion becomes sallow. Dyspeptic symptoms, chiefly of the nervous type, are very common. Acne rosacea is seen in a large number of sufferers.

"These coffee-drinkers cannot be cured by simple abstention from their favorite drink, with substitution of milk as a beverage. They require rest from work, open-air exercise, and cold ablutions, followed by friction."

Significant Statistics.—The New York *World* has been taking a census of the children in one of the most aristocratic wards, and in another ward situated in the tenement district. The purpose of the *World* in taking this census is to ascertain which is most favorable to the production of progeny. According to this report, there were found in three hundred Fifth Avenue families taken consecutively, of children under ten years of age, 91; of children less than twelve months old, 6. Among the three hundred Cherry Hill families, the total number under ten was 680; while the total number of children less than twelve months old was 111. From this report it would appear that the conditions most favorable for the development of children are not those which prevail among the most highly civilized classes, but those which are found among the lower classes. Here is a problem of heredity which ought to receive attention.

Deaths from Soothing Syrup.—The *Journal of the American Medical Association* publishes the following, which ought to be widely circulated, as a warning against the use of this most dangerous nostrum: "Dr. A. G. Belleau has called the attention of the Quebec Board of Health to six fatal cases among children, following the use of a so-called soothing syrup, which upon examination showed the presence of opium in large proportion. It is supposed that a mistake was made in the compounding of the syrup, and four or five times the amount of opium required by the formula was introduced by the mixer. In the case of five of the children, the medicine produced convulsions, in which they died, so that their deaths were certified as due to that disorder. But when the sixth child fell ill, and had a coma, and not convulsions, this irregularity led to the discovery that this intensely soothing syrup had been used, and an inquest by the coroner was ordered. The ordinary soothing syrups of the shops contain more or less opium or morphia, and are essentially so dangerous that their sale should be forbidden by law, except under the same conditions as other preparations of known strength, sold and labeled as poisons, if indeed their sale cannot be interdicted altogether."

DISORDERS INDUCED BY WINE-TASTING.

According to a German medical journal, Drs. Donnet and Marandon have been studying the diseases of wine-tasters, and find that they frequently suffer from "disturbances similar to alcoholism, although the claret-tasters do not swallow the wine, but on the contrary, reject it, and even rinse their mouths afterward. In one case of Dr. Donnet's, a man thirty-two years old used to taste, every day, thirty or forty samples of wine, occasionally liquors and rum, without ever swallowing any part of them. After two years he became very excitable, lost his appetite, did not sleep well, and suffered with disturbances of sensibility, pains in the breast, a feeling of weakness, difficulty in breathing. He improved after abandoning his profession, although a nervous debility still remained, as noticeable by the facility with which he was set in tears. Another statement made by Dr. Donnet, is that there are a great number of apoplexies in Bordeaux, where many persons drink one and a half litres of wine with each meal. This number exceeds the number of apoplexies in any city of the world. Dr. Marandon did not notice any symptoms of intoxication in Burgundy tasters, although some of them would swallow the samples. He remarks that tea-tasters always swallow some tea, and this, he says, explains the nervous symptoms they are affected with."

Wine-tasters must certainly be considered as moderate drinkers, although they swallow very little of the wine; and hence the study of the physical condition of wine-tasters evidently has a very important bearing upon the question of moderate drinking. The accumulation of evidence against the use of alcoholic liquors, either moderately or immoderately, has become so great that it would seem that no ground whatever is left for those who still attempt to maintain their use upon scientific principles.

CONSUMPTION IN COWS.

Dr. Brush, of New York, recently read before the New York Medical society a paper calling attention to the close connection between consumption in human beings and the same disease in cows. The Doctor cites a number of instances in support of his view that the disease is communicated to human beings largely through their contact with cattle, and especially by the use of the milk and the flesh of diseased animals. He cites the interesting fact that in Algiers and Egypt, both the native cows and the native population are practically free from the disease, while in Australia and the Sandwich Islands, where inbred dairy cows have been introduced, the natives have become tuberculous. Tubercular consumption is especially prevalent in the dairy regions of England, Ireland, and Denmark. On the other hand, where dairying is little practised, the disease seems to be less prevalent. According to good medical authority, in China, the Tartars, who use milk freely, are quite subject to the disease; while the Chinese, who are vegetarians, making little use of flesh and rarely taking milk, are quite free from it. In Equador, the Argentine Republic, Columbia, and other portions of South America where cattle are raised by the million, but are not kept in dairies or used for milking purposes, consumption is almost unknown, among both cattle and human beings. The same is true in Morocco.

BAD HEALTH AND BAD MORALS.

A prominent journal makes the following observation upon the relation existing between the physical and the moral conditions: —

"There is one field of investigation which has in too large measure escaped the notice of the scientific spirit of this century, but which is likely, when properly studied, to yield very important results, perhaps altogether changing our treatment of criminals, and modifying current conceptions of human sinfulness. The relation of physical disease to immorality and crime is doubtless difficult to trace, but it is clear that, in large degree, it is that of cause and effect. We know that irritability, petulance, and many other forms of ill-temper are directly due to nervous disorders, and that they increase in direct proportion to the increase of their cause; perhaps it can be shown also that anger, hatred, avarice, lust, and most, if not all, other species of immorality are due to physical defects. If this is true in one case, it may be in all, and we may be forced to conclude that all immorality and sin are the result of disease of body, affecting both the mind, the moral sense, and the will, and predisposing the individual and abnormal action.

"There is no doubt that the cause is great enough to produce this result. Injurious methods of life have so long been pursued by the race that absolute

bodily health is unknown. Disease in one or the other form lurks in the system of every human being, resulting, if this theory is true, in the many immoralities and crimes which afflict the world. The real sin of man lies in neglect of the laws of health, which, disobeyed, force him into a course of action which is immoral and disastrous, and compel him to travel therein at an ever-accelerating rate. What we need is a physician, if one could be found, who has skill enough to discover the ancestral taints and weaknesses of our bodies, which cloud our mind, dwarf our moral sense, weaken our will, and cause our sins. The clergyman has tried his influence upon us, but it has been largely in vain. Those who possess the strongest spiritual influences grow only slowly better. No man was ever so thoroughly converted that he did not go on committing many of his old sins. Confinement and punishment rarely reform criminals. Nothing can reform them but to change their physical nature, eradicating the seeds of vice, which can but grow and bear their own fruit.

"It may be objected that an evident proportion of the immorality and sin of the world comes from those who are in apparent health, and that it is equally evident that some of the greatest beauties of character are shown by those in infirm health. But it is easy to show that these objections are specious. The virtues of the latter are usually negative, and may arise from weakness, or when not arising from weakness, be the proofs of a certain degree of actual health. Of the former supposition, it may be said that it is not usually true, and may not be in any case. Immeasurably the larger amount of wickedness comes from them whose ancestry and methods of life are such as to preclude the possibility of the existence of a normal physical condition."

Effects of Acids and Alkalies upon the Stomach.—An eminent Polish physician, Jaworski, has been experimenting to determine the effects of acids and alkalies upon the stomach. He finds that acids precipitate mucus, cause bile to flow into the stomach, increase the amount of pepsin in the gastric juice, but not its acidity, diminish the flow of gastric juice, and produce disturbances of digestion. Alkalies dissolve mucus and decompose pepsin. These facts explain the evil results arising from a continued use of vinegar, baking-powder, saleratus, soda, and similar substances commonly used in cookery.

Importance of Rest.—The necessity for an occasional vacation from labor, and especially out-of-door recreation, is shown by some interesting experiments recently conducted at Munich, which demonstrated that the system loses oxygen to the amount of one ounce, as the result of a hard day's work. "It has been found that the laborer does not recover during the night the oxygen he has thus overdrawn, but that an occasional day of rest, coming at just the right time, will serve completely to restore the equilibrium, and make him as good as new. It was also shown that the amount of exhaustion of the oxygen of the system — in other words, of the life power — by six days of labor, is the amount that can be supplied by a day of complete rest."

Diet vs. Summer Complaint.—The popular notion that the free use of fruit in the summer is likely to give rise to bowel disturbances, is wholly a mistaken one. The fact is that a diet composed of fruit and farinaceous foods, with the addition of milk properly preserved, is the diet best adapted to the warm season. Bowel diseases in the summer time are often due to the use of half putrid flesh. Flesh of all kinds decomposes rapidly, both within and without the body. The poison produced by this decomposition acts powerfully as an emetic and a purgative. Many of them also produce exceedingly poisonous effects upon the general system when they get into the venal circulation. Fortunately, the liver destroys a considerable amount of the poison of this kind which may be introduced into the body, but it is sometimes unable to do its work efficiently. In consequence of such functional disturbance, hot fever arises from overwork. Poison being thus allowed to pass directly into the general circulation, produces exceedingly harmful effects.

A German periodical contained, recently, an account of the results of meat inspection in Berlin during the years of 1883 to 1887. During this time nearly 12,000 animals were rejected as unfit for food. Of portions of animals rejected there were 164,000. Tuberculosis was observed nearly 18,000 times. From this statement it is apparent that portions of animals affected by tuberculosis were sometimes rejected, while other parts were allowed to be eaten, a practice which is certainly most reprehensible. An important lesson is also to be drawn from the fact that of the different articles inspected, beeves, calves, sheep, and hogs, there were more than six times as many hogs rejected as all the other animals put together. The hog is a natural scavenger, and wholly unfit for human food.

ALCOHOL IN DIGESTION.—Dr. Figg, of Edinburg, has been making some experiments upon dogs, to test the effect of alcohol upon digestion. He fed two dogs equal quantities of roast mutton. He then administered to one dog, by passing a tube into the stomach, an ounce and a quarter of alcohol. After five hours, both dogs were killed and examined. The one which had taken no alcohol was found to have digested his meal entirely; whereas digestion had scarcely begun in the animal to which alcohol had been administered.

IS VEGETARIANISM POSSIBLE.—On this question Dr. Noel Paton, an eminent Scotch physician, recently delivered a lecture in Edinburg, in which he maintained that an exclusive non-flesh diet is possible both theoretically and practically. He very wisely calls attention to the fact that the vegetarian must make a wise selection of foods of vegetable origin, as many vegetables are coarse in character, and contain a very small proportion of useful nutriment. Other vegetable foods, however, such as pulses and grains, contain an abundance of nutritive material in the most nutritious and easily digested form. Dr. Paton especially urged upon the attention of the poor the folly of spending so large an amount of their means for expensive animal food stuffs, when cheaper vegetable foods are of at least equal value.

CONSUMPTION OF DRUGS.—A writer in a recent medical journal calls attention to the increase in the consumption of drugs in this country, which he says "is assuming enormous proportions. Think of two hundred tons of bromides and one hundred and fifty tons of chloral hydrate being used annually! Among the causes of this may be reckoned the overcrowding of the medical profession, the multiplicity of drugs, the establishment of free dispensaries, patent medicine advertisements, and the desire of the people for medicines to work cures on derangements of digestion, while they maintain the cause of their trouble by overeating and drinking. The public should be instructed how to properly estimate drugs, and to regard every unknown medical agent as dangerous, if not positively endowed with harm."

NOT AN ANGEL.—Dominie H. was one of the old-time circuit-riders, whose rough exterior and non-society ways often obscured his real goodness of heart. One day he was caught in a sudden shower, and going to a rude cabin near by, he knocked at the door. A sharp-looking old dame answered the summons. He asked for shelter. "I don't know you," she replied, suspiciously. "Remember the scripture," said he, "Be not forgetful to entertain strangers, for thereby some have entertained angels unawares." "You need n't say that," quickly returned the other; "no angel would come down here with a big quid of tobacco in his mouth." She shut the door in his face, leaving the good man to the mercy of the rain and his own reflections.

A BOY'S ESSAY ON BREATHING.—The following extract from a small boy's composition on "breathing," is a sad commentary on the physiological teaching which the majority of children receive in our public schools: "Breath is made of air. We breathe with our lungs, our lights, our livers, and our kidneys. If it was n't for our breath we would die when we slept. Our breath keeps the life a-going through the nose when we are asleep. Boys that stay in a room all day should not breathe. They should wait until they get outdoors. Boys in a room make bad, unwholesome air. They make carbonicide. Carbonicide is poisoner than mad dogs. A heap of soldiers were in a black hole in India, and a carbonicide got in that there hole, and nearly killed every one before morning. Girls kill the breath with corsets that squeeze the diagram. Girls can't holler or run like boys, because their diagram is squeezed too much. If I was a girl I had rather be a boy, so I could run and holler, and have a big diagram."

POISONING BY POTATOES.—A French Journal recently contained an account of the poisoning of more than one hundred soldiers, the symptoms being "headache, dilatation of the pupils, colic, diarrhea, sweating, fever, pain in the epigastrium, vertigo, nausea, thirst, troubles of vision, and cramps.

"The poison was evidently contained in the food, and, after successive eliminations, suspicion rested upon the potatoes, which were withheld for forty-eight hours, with the result that no new cases developed. It was found, on examination, that the potatoes simply consisted of sprouts, which, as is well known, contain solanine, an alkaloid of a poisonous character, and which produces results similar to those detailed above.

"In these cases the average duration of the indisposition was four to five days, although in some it lasted somewhat longer, with persistence of the diarrhea. As the cause of the affection was not recognized, and the effects did not appear until eight or ten hours after the meal, it was too late for evacuating medicine, and ether and laudanum were given, and the patients confined to a milk diet."

PREVENTION OF CONSUMPTION.

THE health department of the city of Providence, R. I., has issued a circular containing the following brief and practical suggestions respecting the prevention of consumption :—

"Consumption causes more deaths than any other disease the human race is subject to. Nevertheless, it is to a very large extent preventable. It is, though not generally known, a contagious disease. Consumption, or pulmonary tuberculosis, is in every case caused by disease germs which grow in the lungs in enormous numbers. When a person is sick with this disease, these germs are coughed up in great quantities in the expectoration, and when this becomes dry and crumbles, or is trodden to dust, the germs float about in the air, and are liable to be breathed into the lungs of any one. If the lungs of the person who does breathe them are poorly developed, or if the constitution is feeble, the germs are very sure to grow and cause the disease. Unfortunately, we do not know how to kill them when they are once in the air passages. The best that can be done is to build up the system and strengthen the lungs by the use of cod liver oil, good food, and fresh air. Much, moreover, can be done to prevent the spread of the disease by destroying the germs as completely as possible in every case.

"(1) No person with consumption should ever spit on the floor or in the street. If handkerchiefs or bits of cloth are employed, they should at once be disinfected or burned. A good plan is to use a small, wide-mouthed bottle with a rubber stopper. The contents should be thrown into the fire, and the bottle and stopper thoroughly scalded with *boiling* hot water every day.

"(2) The dishes used by a consumptive should be at once scalded, and the unwashed underwear and bed-clothing should be thoroughly boiled as soon as possible.

"(3) When a person with consumption has diarrhea, the discharges from the bowels should at once be disinfected, as at this time they contain the disease germs. A good way is to add a half-teacupful of fresh chloride of lime, or fill up the chamber vessel with *boiling* water.

"(4) No one with consumption should sleep in the same room with another person, and the room occupied by a consumptive should be thoroughly cleansed as often as possible.

"(5) No mother with consumption should nurse an infant, and children ought never to be taken care of by a consumptive person."—*Scientific American.*

A FRENCH physician is said to have cured hydrophobia by means of hot steam baths.

FOR WARTS.—Here is a new remedy: Make a saturated solution of washing soda. Apply on a bit of cotton. Leave on over night. A few applications are said to soften the wart and cause its disappearance.

A CURE FOR STAMMERING.—A medical authority recommends the following cure for stammering: First, absolute silence for ten days; Second, speaking in a whisper only for ten days more; Finally, gradual return to the ordinary voice.

HOW TO RELIEVE NAUSEA.—In many cases of nausea, all efforts to relieve these symptoms by the introduction of remedies into the stomach are unavailing, but prompt relief may often be obtained by the employment of simple external measures, such as the application of heat or cold to the stomach and the spine, ice to the back of the head or to the throat, mustard plasters applied over the stomach, or a similar application to the spine.

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.]

THE WILFORD HALL REMEDY.—We refer those of our readers who are constantly making inquiries regarding this much-advertised remedy, to an article in the Editorial Department of this number.

SALINE SPONGE BATH AND USE OF FLESH-BRUSH.—B. C. M., Mass., asks: "Would you approve of the use of the flesh-brush each night upon retiring, and a saline sponge bath once a week, for a man of seventy years?

Ans.—Yes.

PURE BAKING-POWDER.—A subscriber asks for a recipe for pure baking-powder.

Ans.—We do not know of any baking-powder which we could recommend. The most wholesome bread is made without the use of baking-powder, or any raising materials other than water and air.

DIET DURING CONFINEMENT—INFANT'S UNDERWEAR.—Mrs. S. H., Wis., inquires: "1. What diet would you recommend for a mother during confinement? 2. What material would be the best for an infant's summer underwear?"

Ans.—1. Fruits, grains, and milk. 2. Flannels and soft woolens.

A SUBSCRIBER who has exhausted his nerve force by trick gymnastics, which he has since given up, is troubled much with insomnia. Wishes advice.

Ans.—It is quite possible the difficulty in this case is hyperæmia, or congestion of the brain. While this difficulty may have been due to excessive physical exercise, it is very likely maintained by some morbid condition which must be removed before a cure can be effected, but the nature of which cannot be clearly understood without a personal examination.

J. L. B. inquires the cause of the following symptoms: Pain in the region of the heart, followed by raising pure blood; also soreness about left lung.

Ans.—The difficulty may be due to an organic disease of the heart, causing congestion of the lungs. The case should be submitted to the examination of a competent physician.

GLUTEN FLOUR.—Several subscribers inquire our opinion of gluten flour. In reply, we have to say that we have investigated all the gluten flours manufactured which we have been able to obtain,—we believe all in the market,—and find none of them to be what they are reported to be. It is impossible to make a flour which will contain a much larger percentage of gluten than whole wheat flour. In fact, we have found upon making analyses, a larger proportion of gluten in flour made from the entire wheat than in samples of so-called gluten flour. Gluten is contained in flour in from ten to fifteen per cent, and can only be separated by a washing process.

BONE-MAKING FOODS.—K. M. S., Tex., asks: "1. Do not some foods contain more earthy matters, and for this reason have a tendency to promote ossification? 2. How does corn bread compare with wheaten in this respect? 3. Will you give me a list of some nutritious but non-ossifying foods?

Ans.—1. Yes. 2. Corn contains less bone-forming material than wheat, rye, oats, or barley. 3. Fruits, and most of the vegetables, eggs and milk, contain a smaller percentage of bone-forming material than do oats, corn, wheat, or rye.

COATED TONGUE, ETC.—J. D., Cal., writes: 1. What is the probable cause of a coated tongue and bloodshot eyes? 2. Should one suffering from dyspepsia and liver complaint use drinks made with lemon-juice or citric acid?"

Ans.—1. Loss of sleep, indigestion, and a variety of other causes may produce the condition named. 2. Vegetable acids are not unwholesome for liver complaints. The abundant use of fluids is beneficial in many cases of inactive liver and slow digestion. The addition of a small amount of lemon juice is not harmful, and in some cases beneficial.

CONGESTIVE HEADACHE—DYSPEPSIA.—Mrs. M. H. E., Ill., asks: "1. Is aconite of use for congestive headaches? If not, what would you recommend? 2. Should dyspeptic persons use oatmeal with sugar and cream?"

Ans.—Aconite is a powerful drug, the use of which for any malady is not to be recommended. Congestive headaches are usually due to disturbed digestion. The remedy is removal of the cause, which can only be determined by a personal investigation. 2. Sugar on oatmeal and other farinaceous preparations is quite unnecessary. Sugar is particularly damaging to persons suffering from acid dyspepsia.

BLUSHING.— A Texas subscriber wishes to know if there is any remedy for the embarrassing habit of blushing, ofttimes without any reason whatever.

Ans.— This difficulty is doubtless due to an abnormally sensitive and badly controlled condition of the nerve centers. An improvement in the general health, by which the nerve tone will be increased, will doubtless be found beneficial in cases of this sort.

SORENESS OF LUNGS FROM LA GRIPPE, ETC.,—J. E., Wis., writes: "1. After suffering from *la grippe*, I have considerable pain and soreness in the upper part of the left lung. What is the difficulty, and what the treatment? 2. My six-year-old boy is troubled with being unable to retain his urine while at sleep or play. Otherwise seems healthy. What can be done for him?"

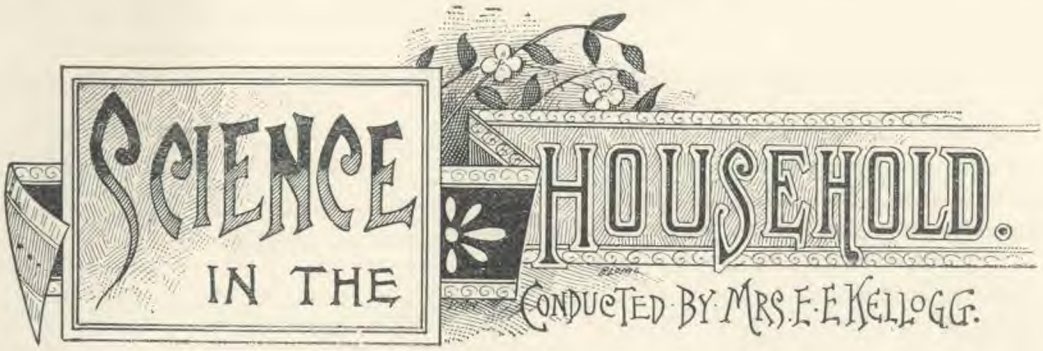
Ans.— 1. We have met numerous cases of this sort following *la grippe*. In some cases the condition has been one of inflamation of the lung substance, and in other cases only the large air passages have been involved. We could not say without an examination which is the condition in this particular case. The application of cloths wrung out of hot water, or of a bag filled with hot water, or sponging the affected part with hot water, or water containing a little mustard, will probably afford relief. 2. This condition in children may be due to any one of a variety of causes, as intestinal irritation, bladder irritation, bad habits, phymosis, nervous irritability, weakness of the nerve centers controlling the bladder, etc. The remedy must be adapted to the particular condition present. What this is in the case referred to, could only be determined by a personal investigation.

STEAM INHALER, HOMINY, EGGS, ETC.— E. H. N., Ore., inquires: "1. Would the use of the steam inhaler be advantageous for a weak stomach? and if turpentine is used in the inhaler for chronic tonsilitis, would it be liable to be injurious to a person who has kidney troubles? 2. Which is the most healthful way to hull corn for hominy: by the use of lime, lye, or soda? 3. Is egg beat up in skimmed milk and cooked until it becomes thick, healthful? 4. Ought children raised on a wholly vegetable diet, to be troubled with worms? 5. In preparing a drink from water drained from raw oatmeal, how long should it be boiled? 6. When will we be able to obtain the vegetarian cook-book promised so long?"

Ans.— I know of no way in which a steam inhaler could benefit a weak stomach. Turpentine might be used in steam inhalers in sufficient quantities to disturb the action of the kidneys, and might possibly induce acute inflammation of the kidneys. 2. We think there is little choice as to the use of the agents needed in hulling corn. It is important to wash and prepare the corn thoroughly, whichever agent is used. 3. Yes, for persons who require a diet rich in nitrogenous matter. 4. No. 5. A few minutes' boiling is sufficient. 6. Mrs. Kellogg is busily engaged on the cook book, and hopes to be able to announce it ready for sale in a few months.

DAKOTA CLIMATE— WEAKNESS IN BACK, ETC.,— Mrs. J. M. J., Dak., asks: "1. Would the climate of Dakota prove a beneficial change from that of Canada, for a person who has suffered five months from consumption? 2. What would you recommend for such a person in the way of diet, open-air exercise, and bathing? She suffers from night sweats. 3. My baby and myself are troubled with scalding in the urine, which is frequent, scant, and of ammonia-like odor. What would you advise? 4. What shall I do for a weak side,— the left one,— with a feeling of stagnation in that side of the head, and as if something was the matter with a muscle extending from the little toe to the top of the head, on that side, and a weakness between the hips? 5. What remedies would you advise for sleeplessness and constipation?"

Ans.— Possibly, although when this disease is well advanced, changes of climate, like most other methods of treatment are unavailing. The disease progresses in spite of climate. A cool, dry climate is preferable for cases of this sort. 2. A diet of fruits, grains, and milk, and such other wholesome foods as are relished. The thing most important of all is to sustain strength. The patient should live out-of-doors as much as possible. A saline sponge bath at bed time, or a cold bag over the stomach, is often effective in keeping off night sweats. 3. Abundant hot-water drinking, at least to the extent of two or three pints daily. 4. Apply to the spine, two hours daily, a rubber bag filled with hot water, as hot as it can be borne. Take a hot bath two or three times a week. Have the affected side vigorously rubbed daily. Applications of faradic electricity might be serviceable. First of all, consult a competent physician who can make a personal examination. The symptoms may be due to loss of nerve tone, or may be an indication of some very grave disorder. 5. Insomnia and inactivity of the bowels are often very obstinate symptoms. The only means of effecting a radical cure is to ascertain and remove the cause. A personal examination is required to accomplish this.



HELPS FOR THE INEXPERIENCED.—7.

GRAVIES, sauces, and similar foods thickened with flour, are among the most common of the poorly prepared articles of the *cuisine*, although their proper preparation is a matter of considerable importance, since neither a thin, watery gravy nor a stiff, paste-like mixture are at all palatable. Their preparation is a very simple matter when governed by that accuracy of measurement and carefulness of details which should be exercised in the preparation of all foods. In thickness, a properly made sauce should mask the back of the spoon; that is to say, when dipped into the mixture and lifted out, the metal of the spoon should not be visible. The proportion of material necessary to secure this requisite, is one tablespoonful of flour, rather more than level, for each half pint of water or stock. If milk be used, a trifle less flour will be needed.

For thickening soups, which should be of a much thinner consistency than gravies, one tablespoonful of flour to a quart of liquid is about the correct proportion. The flour in all cases must be first braided or rubbed perfectly smooth in a very small amount of the liquid, reserved for the purpose (salt, if any is to be used, being added to the flour before braiding with the liquid), and then carefully added to the remaining liquid, which should be at boiling temperature. It should then be continuously stirred until it has thickened. If through any negligence to observe carefully these simple details, there should appear lumps in the sauce, they should be removed before serving, by rubbing the whole through a wire strainer.

The double boiler, which was mentioned in the previous article as the most serviceable utensil for the stewing of foods and the cooking of grains, is likewise the utensil *par excellence* for the preparation of gravies and sauces, since it facilitates even cooking, and renders them less liable to become scorched.

Cream gravies for vegetables and toasts may be delicately flavored with celery, by steeping a few stalks of celery in the milk for a few minutes, and removing them with a skimmer before adding the thickening. Sauces for puddings may be similarly flavored, by steeping cocoanut or bits of lemon or orange rind in the milk.

A SUCCESSFUL TEST.

THEORIES are good, but practical demonstrations so much better, that we are glad to give our readers the benefit of the experience of some Decatur (Ill.) householders, in their experiment with the co-operative housekeeping system. Fifty-two families of comfortable income banded together, a kitchen and necessary help was secured, with a paid housekeeper to oversee the cooking and serving. Then each housewife (of which there is one for each week of the year) takes her turn for a week in superintending the housekeeping—buying the supplies, arranging the *menu* for the week, keeping the accounts, etc. So far, all has worked like a charm: the husbands are satisfied, as the total cost for service and supplies, including all the luxuries of the season, is but $2.50 per week for each person; the wives are equally well pleased, since it relieves them for fifty-one weeks out of the year, from all the housekeeper's cares and responsibilities, leaving them ample leisure for self-culture and the gratification of their individual tastes and ambitions, besides what is still more important, time to devote to the training and educating of their children. Of her newly acquired liberty and opportunities, one woman wittily says: "In this way a woman can serve her week as head of the house, and take a trip around the world, if she wishes, before her turn to housekeep comes again." Verily, a new era has dawned for housekeepers and housekeeping.

S. I. M.

REFRESHING DRINKS FOR SUMMER.

An exchange offers the following recipes for beverages for this season of the year: —

Pine-Apple Water.— Peel, slice, and pound to a pulp a pine-apple. Pour onto it one pint of boiling syrup (made by dissolving a cup of sugar in a pint of water), add the strained juice of one lemon, cover for two hours, then filter through a fine sieve or strainer cloth, and add a quart of cold water.

Gooseberry Shrub. — Pour boiling water over green gooseberries, cover with a cloth, cool and drain. Heat the juice, and pour over the berries again. Drain, cool, add a pint of sugar to each pint of fruit; boil, skim, and bottle.

Cherry Nectar.—Select nice cherries, pound well with the stones in them, press through a sieve, add a little water, and boil up; filter through a jelly bag (one made of flannel is best). Mix a little sugar, water, and lemon juice, then add the cherry juice to suit the taste, but do not make too sweet.

Strawberry Water.— Crush one pound of ripe strawberries with one half pound of powdered sugar; add half a pint of cold water, and the juice of one lemon. Filter, and add two pints of water.

Currant Shrub.— Equal quantities of strained currant juice and white sugar; boil ten minutes, cool, and bottle tightly. In using any kind of shrub, stir two or three teaspoonfuls into a glass of water.

Raspberry Sherbet.— Crush a pound of berries; add to them one quart of water, a sliced lemon, and one teaspoonful of orange-flower water. Leave in an earthen bowl for three hours, and strain. Dissolve one pound of powdered sugar in it, strain again, and put in a cool place.

Tisane.— Tisane can be made of dates, figs, prunes, or jujube, by boiling two ounces of the fruit for an hour in sufficient water to make a quart of tisane. Strain and cool.

USES FOR OLD PAPER.

Most housekeepers know how invaluable newspapers are for packing away the winter clothing, the printing ink acting as a defiance to the stoutest moth, some housewives think, as successfully as camphor or tar paper. For this reason newspapers are invaluable under the carpet, over the regular carpet paper.

The most valuable quality of newspapers in the kitchen, however, is their ability to keep out the air. It is well known that ice, completely enveloped in newspapers so that all air is shut out, will keep a longer time than under other conditions; and that a pitcher of ice water laid in a newspaper, with the ends of the paper twisted together to exclude the air, will remain all night in any summer room with scarcely any perceptible melting of the ice. These facts should be utilized oftener than they are in the care of the sick at night.

In freezing ice cream, when ice is scarce, pack the freezer only three-quarters full of ice and salt, and finish with newspapers, and the difference in the time of freezing and quality of the cream is not perceptible from the result where the freezer is packed full of ice. After removing the dasher, it is better to cork up the cream and cover it tightly with a packing of newspapers than to use more ice. The newspapers retain the cold already in the ice better than a packing of cracked ice and salt, which must have crevices to admit the air.—*Scientific American.*

Sprinkle borax in places infested by ants.

It is convenient to have a holder attached by a long string to the band of the kitchen apron; it saves burnt fingers and scorched aprons, and is always at hand.

A Tribute to Good Cooks.—They who provide the food of the world, decide the health of the world. One of the greatest battles of this century was lost because the commander that morning had a fit of indigestion. You have only to go on some errand amid the taverns and the hotels of the United States and Great Britian, to appreciate the fact that a vast multitude of the human race are slaughtered by incompetent cookery. Though a young woman may have taken lessons in music, and may have taken lessons in painting, and lessons in astronomy, she is not well educated unless she has taken lessons in dough! They who decide the apparel of the world, and the food of the world, decide the endurance of the world.— *Talmage.*

LITERARY NOTICES.

"MOTHER'S PORTFOLIO," Alice B. Stockham & Co., Chicago. Illustrated. Sent, postpaid, for $2.25. Truly a book for every mother, as it contains the best helps ever given for the training of young children. In this, one finds kindergarten methods, nursery occupations, stories, music, pictures, etc. Agents wanted in every town.

The Philanthropist, an eight-page monthly, is devoted to the suppression of social vice and the better protection of the young by legislation. It is the earnest friend and champion of unfortunate women and helpless children, and should receive a liberal support and patronage. Only fifty cents a year. Address, *The Philanthropist,* P. O. Box 2554, N. Y.

Demorest's Family Magazine for July contains an illustrated article on the interior of Vice-President Morton's house, which is full of suggestions for modern house-furnishing. The article, "Stanley's Rescue of Emin," profusely illustrated, is also of great interest at this time; and "The House-Boat in American Waters" will give a delightful hint to many who are wondering how to spend the summer so as to get the most enjoyment out of it. This is a very handsomely executed number of a magazine which is always full of merit, and most acceptable to each member of the household. Published by W. Jennings Demorest, 15 East 14th St., New York.

THE June *Domestic Monthly* makes us realize that summer is close upon us. All sorts of dainty seaside and outing toilets are illustrated and described. The usual departments of Fancy Work and Knitting and Crochet are especially full of hints for pretty piazza work in the long, hot days. The publishers announce a very attractive trial subscription offer, as follows: For twenty-five cents they will send the magazine for three months, and a free coupon good for twenty-five cents' worth of "Domestic" paper patterns. Subscription, $1.50 a year, with a *free* premium of one dollar's worth of patterns. *Domestic Monthly,* 853 Broadway, New York.

The Kindergarten, an illustrated monthly, opens with a thorough and instructive survey of "Public School Kindergartens." The average Eastern reader knows that there is such an institution in Boston, and the Western reader that St. Louis and Milwaukee have "tried the experiment." But who knows of the score and more of cities and villages where the beneficent kindergarten system is already fully established? This article is worth the study of all public-spirited citizens. It shows how earnest individual efforts have opened the way for the adoption of this system of education into the public schools. Alice B. Stockham, & Co., Chicago, Ill.

WE have received from the Vegetarian Society of Manchester, England, a package of the Manchester Vegetarian Lectures, upon the following topics: Vegetarianism and the Intellectual Life: Vegetarianism and the Bible; Man Not Carniverous; Vegetarianism and the Higher Life, Etc. These lectures were delivered by the highest authorities in the literary and and scientific world,—eminent physicians, clergymen, members of Parliament, chemists, and so on,—and present an array of arguments that cannot be refuted. They are now published in tract form, and retail at one penny. They should be widely circulated. Address, The Vegetarian Society, 75 Princess St., Manchester, England.

THE *Jenness-Miller Magazine* for June is replete with interest for every woman, and full of suggestions most timely and helpful. The paper on "Physical Culture" is devoted to a discussion of "Walking, Sitting, and Going Up-stairs," and so complete in itself that it can be read with profit by one who has seen no other of the articles in this most interesting series. The article on "Fine Laces" is the best illustrated of all the valuable articles which have appeared in the series on this subject. "Moral *versus* Conventional Charity" is an able argument for broader charity, by Laura Giddings, which will be read with sympathy by those interested in the social questions of the day. Jenness-Miller Pub. Co., New York.

The Chautauquan for July presents the following table of contents: "Summer Health: How to Keep It," by Felix L. Oswald, M. D.; "The Follies of Social Life," by Charles Ledyard Norton; "Picturesque Dalmatia;" "Altruism and Leprosy," by Frances Albert Doughty; "Original Packages and Prohibition," by Joseph Shippen, Esq.; "How to Conduct a Round Table," by Edward E. Hale; "What Women should Wear," by Mary S. Torrey; "Homesteads for Women," by Kate Carnes; "Madam Blavatsky," by Frances Willard; "New Birds for the House," by Olive Thorne Miller; "Summer Resort Acquaintances," by Felicia Hillel; "The Growth of a Home," by Mrs. Hester M. Poole; "Dinners and Dinner Giving," by Mrs. Emma P. Ewing. *The Chautauquan,* Meadville, Pa.

PUBLISHERS' PAGE.

THE State Board of Health has just closed a very successful Sanitary Convention, which was held in Battle Creek, Mich., June 25 and 26. Each of the five sessions of the Convention was devoted to the discussion of some practical and interesting sanitary topic, and the intelligent audiences which listened to and participated in the discussions, were certainly profited by this opportunity for education in public sanitation. These conventions have been the means of accomplishing great good wherever they have been held. They are an educational means of the highest character, and it is to be hoped that all cities and large towns in the State will avail themselves of the opportunity to obtain a convention of this sort by a mere asking. Those who are interested in having a convention held in their respective communities, should address Dr. H. B. Baker, Lansing, Michigan, Secretary of the Board.

Governer C. G. Luce was present at the opening session of the convention, and expressed his high approval of the work of the State Board of Health, and especially of its efforts in the direction of popular education on sanitary subjects. In his very interesting philister speech, the Governor gave expression to many most important and excellent thoughts, prominent among which were temperance sentiments of the most thorough-going and radical character. Michigan is fortunate in having for its governor a man whose breadth of character and sound, practical sense leads him to participate intelligently in the discussion of questions of so great interest and importance as those considered at these sanitary conventions.

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THE Sanitarium family spent the delightful day of June 26 on the shores of Lake Goguac. The Sanitarium villa afforded ample dining-room accommodations, and the attractive bill of fare provided, rendered the commodious dining-room a great attraction to the sharpened appetites of the picnickers, although dinner was served a half-hour earlier than the usual time. The Sanitarium grounds are situated upon the highest of the bluffs which surround the lake, and command a most delightful view of almost the entire lake, which may be fairly said to be one of the most beautiful and picturesque of the hundreds of little lakes scattered over the State. Good music was furnished by amateur performers, but the best treat of all was a song charmingly rendered by Miss Richardson, of Chicago, a vocalist of rare talent, at present a guest at the Sanitarium.

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ELD. W. H. WAKEHAM, Field Secretary of the American Health and Temperance Association, who has been laboring for several weeks in Iowa, Wisconsin, and Dakota, in the interests of the Association, reports a great interest in the subject of sanitary reform wherever he has been. Mr. Wakeham's abilities as a lecturer, and the careful preparation he has made in this line of work, eminently fits him for the labor in which he is engaged, and we are not surprised that his services are in so great demand that he is in receipt of more calls for lectures than can possibly be filled. There is a great demand for work in this line in all parts of the United States. Indeed, there is a most excellent opportunity for labor in the direction of the enlightenment of the people on sanitary subjects in all civilized countries. Young men and women of ability and culture are wanted to fit themselves for this work. The Sanitarium is carrying on a training-school for health and temperance missionaries, in which young men and women are prepared for this field of usefulness. The school holds a session each winter, from November 1 to April 1.

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WILFORD HALL HUMBUG.—For some months back we have been receiving frequent inquiries regarding our opinion of the Wilford Hall secret remedy which has been peddled about the country. We have taken pains to make a thorough investigation of this so-called secret, and in the present number publish the first of a series of articles in which we propose to demonstrate, to the satisfaction of all intelligent persons,—

1. That this so-called secret remedy is not the panacea which it is claimed to be, and that if used according to directions, it will almost certainly produce serious injury.

2. That Dr. Hall never made any discovery in connection with the matter, except the anatomical fact that his colon was so relaxed and distended by chronic disease as to be capable of holding a gallon of water.

3. That the so-called secret is not a secret at all, and that every man who is induced to pay $4.00 for the penny pamphlet describing it, is the victim of a swindling operation.

We propose in these articles to give a full account of the so-called secret, so that the readers of GOOD HEALTH, at least, may be protected against the cupidity of those who, under the guise of public benefaction, are carrying on of one of the basest, and we think we may say the dirtiest, swindling operations with which we have become acquainted.

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POSTPONEMENT OF GOOD HEALTH SCIENTIFIC SUPPLEMENT.—As stated last month, for various considerations, mainly as given below, it has been thought best to defer for a time the publication of the GOOD HEALTH SCIENTIFIC SUPPLEMENT Since its publication was announced in May, it has been suggested by many of the friends of the journal that properly it should begin with the new volume of GOOD HEALTH. There are many advantages in this plan which the publishers have thought worthy of consideration. In order to be mailed as a supplement, at newspaper rates, it will be necessary that it should be mailed with the number of GOOD HEALTH for the same month. It will be apparent that if the volume of the SUPPLEMENT does not begin with the volume of GOOD HEALTH, the odd numbers will have to be mailed in separate packages at ordinary postage rates, which would add considerable expense to either the publisher or the subscriber.

Another and a still more important consideration is the fact that if the SUPPLEMENT does not begin with the first number of the volume, it cannot be bound and indexed with the volume of GOOD HEALTH. As the SUPPLEMENT will contain a large amount of valuable matter which every subscriber would doubtless desire to preserve, this is an item of considerable weight.

Taking these and other equally important facts into consideration, the publishers have decided to postpone the publication of the SUPPLEMENT until the beginning of the volume for 1891. The SUPPLEMENT is a fixed fact. The first two numbers, intended for a double number, was already nearly in type, and would have been mailed to the subscribers when announced, but for the considerations above mentioned. Hundreds of subscriptions have been received. The money received for these subscriptions will be credited on the subscriptions to GOOD HEALTH, or retained until the publication of the SUPPLEMENT is begun, a few months hence, or will be returned, as may be desired by individual subscribers.

FOURTH OF JULY EXCURSION RATES.— Excursion tickets will be sold by the Chicago & Grand Trunk Ry., and Michigan Air Line and Detroit Divisions of the Grand Trunk Ry., on the 3rd and 4th of July, good to return up to and including July 5th, at the rate of single fare for the round trip, between stations on their lines and to Canadian points west of and including Toronto and Niagara Falls.

* *
*

TO THE SEA SHORE AND THE MOUNTAINS IN A PALACE.—The sale of tourist tickets to Eastern summer resorts commences June 1. "The Seaside and White Mountain special," the finest train in the world, makes its first trip from Chicago, Wednesday, June 25, continuing each Wednesday thereafter during the tourist season, leaving Dearborn Station, Chicago, at 5 P. M. The entire train, including dining-car, barber-shop, library, and observation car, with four magnificent Pullman vestibuled sleeping-palaces, all lighted by electricity, accompanied by a special agent of the passenger department and a lady attendant, runs through solid, without change, from Chicago to Portland, Me., and return. Passengers for all the seaside, islands, and mountain resorts of New England and Canada, should secure accommodations on this finest train in the world, by applying to E. H. Hughes, General Western Passenger Agent, Chicago and Grand Trunk railway, No 103 South Clark street, Chicago Ill.

* *
*

SIXTEEN TRANS-CONTINENTAL PASSENGER TRAINS DAILY.— Under the new train schedule which the Northern Pacific Railroad inaugurates June 15th, 1890, there will be sixteen transcontinental passenger trains moving daily on this great line, eight east bound and eight west bound, exclusive of 108 local, main and branch line passenger trains running daily west of St. Paul, Ashland and Duluth in Wisconsin, Minnesota, North Dakota, Montana, Idaho, Oregon and Washington on its 3800 miles of track.

Chas. S. Fee, General Passenger Agent of the line at St. Paul, announces that under the new arrangement the first through train, the Pacific Express, leaves St. Paul at 8:15 a. m., daily, with a through Pullman Palace Sleeping Car, leaving Chicago daily at 5:30 p. m., via the Chicago, Milwaukee & St. Paul Railway, running via Helena and Tacoma direct to Portland, and making close connections at St. Paul with all trains leaving St. Louis in the forenoon and Chicago in the afternoon of the previous day, arriving at Tacoma 10:50 a. m. of the third day and Portland the same afternoon.

The second through train, No. 1, the Pacific Mail, leaving St. Paul at 4:15 p. m., daily, making close connections with the "Fast Mail," and all night trains out of Chicago, will carry a through Pullman Palace Sleeping Car and one or more Pullman Tourist Sleeping Cars leaving Chicago at 10:45 p. m., daily, via the Wisconsin Central line, running through to Portland via Helena and Tacoma. Both trains out of St. Paul will carry Pullman Tourist Sleeping Cars and Dining Cars, but free colonist sleepers will be run only on train No. 1, leaving St. Paul at 4:15 p. m.

The Northern Pacific now operates the largest equipment of dining cars of any railroad in the world, twenty-four, and also the longest Pullman sleeping car line in existence, namely: Chicago to Portland via Tacoma, and is the only line running these sleepers to the principal trade centers and pleasure resorts in Northern Minnesota, North Dakota, Manitoba, Montana and Washington.

The recently completed Butte Air Line of the Northern Pacific makes this the shortest route between Chicago and Butte by 120 miles and enables this company to announce a through Pullman Sleeping Car service between St. Paul and Tacoma and Portland via Butte, west on the 4:15 p. m. train, east from Portland on the 7:00 a. m. Atlantic Mail.

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8. *Cayenne and its Congeners.*
9. *A Live Hog Examined.*
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13. *Tea-Drinking and Nervousness.*
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18. *Tobacco Blindness.*
19. *Science vs. Tobacco Using.*
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EAST.	† Mail.	† Day Express.	*N. Shore Limited.	*N. Y. Express.	*Atl'ntic Express.	†Amer. Express	† Kal. Accom'n
STATIONS.							
Chicago	am 7.05	am 9.00	pm 12.00	pm 3.10	pm 10.10	pm 9.00	pm 4.50
Michigan City	9.10	11.10	1.56	4.48	am 12.20	10.53	7.00
Niles	10.20	pm 12.15	2.53	5.55	1.52	m 12.00	8.25
Kalamazoo	11.50	2.20	3.38	7.04	3.35	am 1.18	pm 10.05 / am 7.10
Battle Creek	pm 12.55	3.03	4.30	7.37	4.25	2.03	7.55
Jackson	3.10	4.30	5.33	8.52	6.15	3.40	9.55
Ann Arbor	4.45	5.32	6.29	9.45	7.45	4.55	11.00
Detroit	6.15	6.45	7.30	10.45	9.20	6.20	pm 12.10
Buffalo	a m 8.25	am 3.25	am 3.25	am 6.25	pm 4.55	pm 2.15	8.30
Rochester			6.00	9.20	8.00		11.20
Syracuse			8.00	11.35	10.20		am 1.30
New York			pm 4.00	pm 8.50	am 7.20		9.42
Boston			8.30	10.57	9.35		pm 2.50

WEST.	†Mail.	†Day Express.	*N. Shore Limited.	*Chicago Express	*Pacific Express.	†Kal. Accom'n	†Niles Accom'n
STATIONS.							
Boston		am 8.30		pm 3.00	pm 7.00		
New York		11.50	pm 4.50	6.00	10.00		
Syracuse		pm 8.30	11.05	am 2.10	am 8.00		
Rochester		10.40	am 1.42	4.20	10.45		
Buffalo	pm †1.30	11.30		5.30	11.50	am 8.45	
S spen. Bridge	am 12.18	am 12.28	3.05	6.25	pm 12.50		
Detroit	9.05	7.50	9.25	pm 1.20	9.15	4 4	pm 5.55
Ann Arbor	10.37	8.56	10.19	2.17	10.30	5.58	7.16
Jackson	pm 12.15	10.05	11.18	3.20	11.50	7.1[illegible]	pm 8.30 / am 9.25
Battle Creek	1.50	11.35	pm 12.22	4.30	am 1.23	8.47	7.55
Kalamazoo	2.37	pm 12.12	12.59	5.02	2.17	pm 9.30 / am 6.00	8.29
Niles	4.17	1.23	2.0	6.17	4.05	7.40	10.05
Michigan City	5.42	2.25	3.08	7.20	5.45	8.55	
Chicago	7.55	4.15	4.50	9.00	8.05	11.20	

* Daily. † Daily except Sunday.

Accommodation train for Jackson and all intermediate points leaves Battle Creek at 6.16 P. M., arriving at Jackson at 7.55 P. M., daily except Sunday.

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CHICAGO & GRAND TRUNK RY

Chicago & Grand Trunk R. R.

Time Table, in Effect Jan 19, 1890.

GOING WEST.						STATIONS.	GOING EAST.				
	p m		p m				a m	p m	p m	p m	
....	3.05	.....	7.00	.....	.....	.....Boston.....	8.30	7.30	7.30	7.30	
	p m		p m				p m	a m	a m	a m	
.....	5.00	.....	8.00	.....	.....	.....New York.....	11.10	7.40	10.10	10.10	
	a m	a m	p m				a m	p m	p m	p m	
.....	6.20	6.32	1.00	.....	.....	.....Buffalo.....	9.50	5.40	7.30	9.00	
	a m	a m	p m				a m	p m	p m	p m	
.....	7.45	7.35	2.45	.....	.....	....Niagara Falls....	8.15	3.17	5.30	7.10	
		a m		m				a m	p m	p m	
.....	.....	8.30	.....	1.00	.....	.....Boston.....	.....	9.50	12.10	12.10	
	p m	p m		p m			p m	a m	a m	a m	
....	8.30	8.30	.....	11.55	.....	.....Montreal.....	8.00	7.45	7.45	7.45	
				p m			a m	p m	p m	p m	
.....	.....	.....	.....	1.00	.....	.....Toronto.....	8 40	7.25	7.25	7.25	
							a m			a m	
.....	.....	.....	.....	.....	.....	.....Detroit.....	9.45	.....	7.45	.....	11.50
Chi. Pass.	R. C. Pass.	Lmtd Exp	Pacific Exp.	Pacific Exp.	N'all Exp.		Mail	Lmtd Exp.	Atlte Exp.	Night Exp.	Prr. H Pass.
am	pm	pm	pm	pm	am	Dep. Arr.	pm	am	am	am	am
5.55	4.19	12.45	8.55	7.45	7.15	..... Port Huron	10.20	1.05	7.35	10.00	10.50
7.28	5.40	1.55	10.20	9.08	8.31	.....Lapeer.....	8.4	11.43	9.17	8.31	9.17
8.05	6.20	2.25	10.50	9.45	9.0	.....Flint.....	7.55	11.17	5.40	7.45	8.35
8.48	7.15	2.53	11.28	10.30	9.35	..... Durand.....	7.15	1.48	5.03	7.15	8.00
10.00	8.25	3.45	12.37	11.35	10.30	.....Lansing.....	5.25	9.57	4.00	6.05	6.35
10.37	9.01	4.13	1.09	12.08	11.00	.....Charlotte.....	4.57	9.27	3.25	5.36	6.02
1.00	10.00	5.00	2.00	1.00	12.05	....BATTLE CREEK....	4.05	8.45	2.35	4.55	5.15
1.49	pm	.....	2.50	1.48	12.48	.....Vicksburg	3.19	8.01	1.48	.....	am
2.00	.....	.....	.....	1.58	12.58	.....Schoolcraft.....	3.05	.....	1.33	.....	.....
2.52	.....	6.19	3.43	2.45	1.42	.....Cassopolis.....	2.15	7.16	12.45	3.25	.....
3.40	.....	6.50	4.25	3.35	2.25	..... South Bend.....	1.25	6.40	12.00	2.50	.....
5.00	.....	.....	.....	4.52	.....	.....Haskell's.....	12.03	.....	.....	.....	.....
5.20	.....	8.10	5.55	5.10	4.00	.....Valparaiso.....	11.50	5.20	10.30	1.30	.....
p m	.....	10.10	8.10	7.30	6.25	.....Chicago.....	9.05	3.15	8.15	11.25	.....
.....	.....	pm	am	am	pm	Arr. Dep.	am	pm	pm	pm	

Where no time is given, train does not stop.
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Plain Oatmeal Crackers	10	*Gluten Wafers*	30	*Granola (Bulk 10)*	12
No. 1 Graham Crackers	10	*Rye Wafers*	12	*Gluten Food No. 1*	50
No. 2 Graham Crackers	10	*Fruit Crackers*	20	*Gluten Food No. 2*	20
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" "	2,000	"	30	"	" 2
" "	2,500	"	30	"	" 2
" "	3,000	"	32	"	" 2
" "	3,500	"	36	"	" 2
" "	4,000	"	30	"	" 2
" "	5,000	"	30	"	" 2
" "	6,000	"	28	"	" 2
" "	7,500	"	22	"	" 2
" "	10,000	"	16	"	" 2
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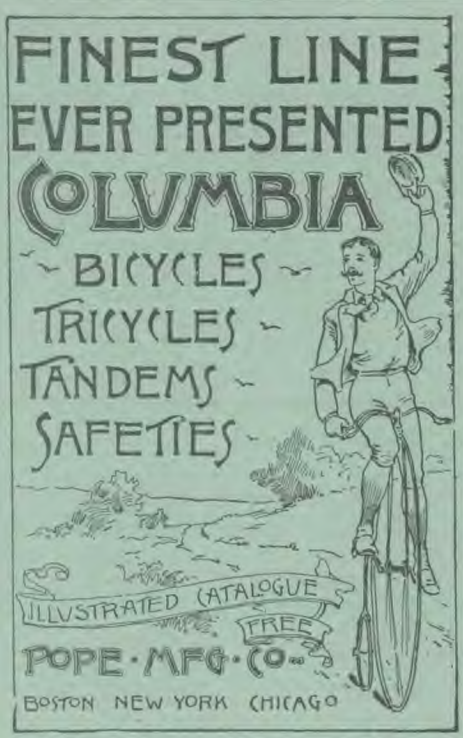

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