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BIOGRAPHICAL HEALTH STUDIES.

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18.—Nicholas de Giers.

IN the British India building of the Chicago Exposition a group of sightseers one day gathered about a carpet of wondrous workmanship, which, according to the statement of the attendant commissioner, had kept a family of five persons at work for eight years.

"They must have lots of old grannies in that country," was the comment of a broad-shouldered native of the Cumberland Mountains, "ye would n't catch Billy Bucks doing that kind of work in old Kaintuck."

It is almost equally certain that North America, the "Land of Plenty and of Self-indulgence," could never have originated a character like the late M. de Giers, the cautious chief of the Russian diplomatists. That accomplished statesman, the son of a consumptive exile and a wan-faced mother, owed his long life and its manifold triumphs chiefly to his phenomenal gift of self-denial.

Nicolas Charles de Giers was born 1819, in Abo, a little coast-town of Southern Finland, where his ancestors had ranked among the wealthiest landed proprietors, till, by a stroke of political highway robbery, almost as scandalous as the partition of Poland, the freedom-loving peninsula was transferred from Sweden to the dominions of the czar. Nicola's father had wrecked his fortune in the struggle for independence and fled to Stralsund, but eventually returned to his native land, his aversion to the nation of the usurpers having yielded to the stronger feeling of his indignation at the infamy of their Swedish abettors. At the mere mention of the trimmer Bernadotte ("Charles Jean Charlatan," as the allies called him), Baron Giers was more than once known to turn sick, in the literal physical sense of the word. The experience of his exile had taught him to bridle his tongue, but he could not master his sullen moods, and the bitterness of poverty did not tend to improve his temper. He finally fretted himself to death, and the education of young Nicola devolved upon his mother, a pale-faced little lady with haggard eyes, expressing incurable sorrow, but now and then also traces of a still more invincible ambition. She felt her own strength waning, but contrived to stand her ground, till a ray of hope dawned upon the path of her boy, whom she had inspired with a devotion to the rarely combined ideals of caution and enterprise.

At twelve years of age, Master Nicola was a mere skeleton of a boy, spindle-shanked, with hands like a starved girl's, and eyes of that uncanny luster which in children generally indicates a tendency to lung disorders.

"Poor lad! study is wearing you out," said his sick mother one day, "but it is our only chance and you have to make the best of it." Nicola remembered that *our* all his life. He had a little sister not overburdened with intellectual precocity; their mother's health was failing, together with her scant resources, and the time was near when they would

have to lean on him for support. So he resolved to make his way to the head of his class or kill himself in the attempt.

He very nearly succeeded in both respects. In 1832 he was seized with a fever that might have proved fatal if the drugs of the family physician had not been counteracted by a prescription in the form of a note from the director of his college, advising him to get well before the end of the month, as about that time he would be needed to hear a piece of good news.

That letter probably saved the lad's life, but it spoiled a pleasant surprise, for both mother and son anticipated the arrival of an official communication which a few weeks after informed them that Nicolas Charlovitch de Giers had been recommended, and with the approval of the provincial commissioners, enrolled among the beneficiaries of the free scholarships of the Alexander Academy of Czarsko-Selo. That meant free board and tuition for the next five years, together with the prospect of speedy advancement in the civil service of the empire.

It also meant that the self-sacrifices of the heroic mother had answered their purpose. For her own modest wants and those of her daughter her small income was sufficient, and she could have departed in the confidence of having insured the welfare of her children, even without the speedy proof of her boy's ability to repay her devotion. Within less than a year small remittances began to arrive from Czarsko-Selo. Instead of running in debt, like many of his fellow-students, the prize-scholar from Abo gave private lessons in ancient and modern languages and carried off cash premiums of several competitive examinations, till the recommendations of his teachers overruled one chief objection to his enrollment in the "Class of Merit," or special proteges of the Imperial Government. That objection was the Protestantism of the Giers family. Through sunshine and storm Baron de Giers had adhered to the religion of Gustavus Adolphus, and it is a curious fact that for sixty years the merits of his unbefriended son prevailed against the prejudices of the most bigoted government on earth. In pursuit of political interests the advisers of the Russian autocrats are, withal, as cunning as Jesuits, and they had early recognized the value of the young foreigner's talents, as well as the improbability that a person of his discretion would ever bring his theological tenets into offensive prominence, however firmly he might resist the inducements to their formal renunciation. They also perhaps had noticed characteristics that practically made the young prize-scholar the most independent individual in the emperor's dominions. He had absorbed knowledge as quicklime absorbs moisture, and with a maximum of facilities for making a living in any part of the civilized world, had reduced his wants to a minimum. Ambition seemed to enable him to dispense with every other stimulant, and before the completion of his twentieth year the son of the shipwrecked Swedish patriot had, indeed, become a living definition of that Grecian word with few modern synonyms ("*sophrosyne*") that means habitual prudence, combined with sobriety.

At the early age of eighteen, Nicolas de Giers became an attaché of the Foreign office, where he speedily mastered the rudiments of his profession, and gave so many proofs of his versatile ability that a Russian army officer of high rank requested, as a special favor, the permission to take him along in a campaign on the Turkish border, in order to utilize his talent for negotiation. In 1850 he was appointed First Secretary of the Russian Legation at Constantinople and soon after was entrusted with a post of great personal responsibility, and now, for the first time, attracted the attention of foreign diplomats as a Russian Commissioner in what were then called the "Danubian Principalities." The record of that mission sealed his independence of the caprices of a despotic master. If court intrigues should after that at any time have deprived him of the patronage of the Muscovite government, the potentates of Western Europe would have competed for his services without a week's delay, and his promotion was accordingly rapid and liberal, though the Russian grandees depreciated him as a foreigner, and his rivals had saddled him with the sobriquet of "*Le Pere Ganache*" ("Daddy Night-caps," as we might translate it), a nickname which the courtiers of Frederic the Great had fastened upon the king's friend, the eccentric Marquis of Argens. The supposed analogy was, indeed, not wholly imaginary. Both the Baron and the Marquis enjoyed the patronage of a foreign court, both declined to conform to the manners and vices of those courts, and made the preservation of their health an object of constant and absorbing solicitude. "The Marquis' talents," says Macaulay, "were undeniable, and his manners those of a finished French gentleman, but this accomplished skeptic was the slave of dreams and omens, would not sit down to table with thirteen in company, turned pale if the salt fell toward him, begged his guests not to cross their knives and forks on their plates, and would not for the world commence a journey on Friday. His health was a sub-

ject of constant anxiety to him, whenever his head ached, or his pulse beat quick, his dastardly fears and effeminate precautions were the jest of all Berlin."

Baron Giers's circumstances did not warrant the luxury of book-lore superstitions, but the systematic pedantry of his health rules exceeded anything a Frenchman could possibly have conceived or observed. It soon became known that the famous diplomat accepted dinner invitations only as a *pro-forma* courtesy, and that he might nibble biscuits or chicken bones, peel pears and tell ancedotes, at the table of Prince Knoubovitch, but would invariably dine at home. He had no special prejudice against the delicacies of the St. Petersburgh *cuisine*, but held that food of any kind, eaten under the restraint of ceremonies, would become more or less indigestible, and thought that the knowledge of that fact was at the bottom of the rule which makes the priests of Bramah refuse to dine in public. But that predilection had nothing in common with Marshal Vendome's preference for private feasts, where he could gorge himself like a cormorant. Baron de Giers was an extremely moderate eater, and his two exemplars in that respect appear to have been the Venetian nobleman Cornaro, with his canary-bird rations, and the philosopher Rumford, who held that slow and thorough mastication would double the nutritive value of food.

De Giers seems to have adopted the rule *not only to resist but to avoid temptation* to a breach of his sanitary code, and in conformity with that principle never permitted himself to let his appetite become uncontrolable. He dreaded hunger as a reformed toper would dread the rage of his stimulant-mania. Besides blunting the edge of his dinner appetite with small luncheons, he filled his pockets with small dry figs almost as tough as leather, and began to munch them on the Rumford plan, about half an hour before mealtimes, and then ate leisurely and with deliberation, almost like a patient swallowing drugs that must be administered with special precautions.

His example promoted temperance among the numerous attachés of the Foreign Office, as it was known that the taciturn chief abhorred alcoholic loquacity above all other things, and would never promote a bibulous clerk. In warm weather his favorite drink was a mixture of light wine and water with a spoonful of sugar, and on his travels in the semi-tropical climates of Western Asia he was in the habit of chewing carob-beans ("St. John's bread") to promote the secretion of saliva, and thus to obviate the risk of extreme thirst. In Teheran, where he baffled the influence of the British commissioners from 1863–65, he amazed his native guide by refusing to taste a drop of cold spring water, because he "felt a temptation to drink enough to kill a horse." "But this is the only good water we will find this day," insisted the guide. As a compromise, the cautious Swede finally filled his pint cup a hundred yards below the spring, where the water was shallow and lukewarm. "That master of yours must be a saint or a lunatic," remarked the guide to a press correspondent, "only a religious fakir would do such things in our country."

Nicolas de Giers had inherited the choleric temper of his father, but kept it under control by avoiding passionate altercations, as he avoided dietetic excesses. His high rank in the service of the czar gave him a chance to terminate disagreeable interviews by pleading other demands upon his time, whenever he felt his anger rise, and in his transactions with the high-handed representatives of his government, he observed the excellent rule to avoid personal encounters with notorious blackguards and interpose a phlegmatic clerk, who took good care to modify the official report of his experience. For similar reasons he kept a proxy in the management of his correspondence. Long training had enabled his private secretary to recognize his family letters at first glance, and transmit all others only in the form of *resumés*, diluted, if necessary to mitigate an offensive purpose.

But however effectually those precautions might parry the provocations to actual explosions of wrath, the thin-skinned statesman could not help conceiving strong aversions to ill-mannered individuals (a class of the *genus homo* specially abundant in the land of the knout), and his own restless temper made him doubt his ability to resist the temptations of protracted *ennui*. For both reasons he used all his influence to secure the favor of frequent changes in the bases of his diplomatic activity, and the great extent of the empire enabled his patron to gratify that desire almost every other year. From St. Petersburgh he was transferred to Odessa, thence to Karo, Merv, and Samarkand, then back to Moscow, and the shores of the Neva, and finally from capital to capital of continental Europe. For a few years after the Crimean war he resided at Bucharest, as consul general, then, after a brief mission in Persia, he was sent to Berne, and afterwards to Stockholm.

In 1873 he married a niece of Prince Gortschakoff, who thought to please him by procuring him the post of permanent secretary of the foreign department, with a salary of 25,000 roubles; but he tem-

porarily resigned that lucrative position to participate in the Congress of Berlin, in 1878, and again a few years later to make the tour of Europe for the settlement of the Eastern question.

How a man of the baron's feeble constitution could sustain that constant activity might seem an enigma, if it had not been for the above suggested fact that mental excitement served him as a substitute for all other stimulants.

That the son of a consumptive father could outgrow the tendency to pulmonary disorders would seem less easy to explain, for Baron de Giers almost rivaled Prince Kaunitz in his superstitious dread of "draughts," and in the East, generally traveled in a tightly-closed carriage, double curtained at night, when it served him as a bed. The same absurdity shortens the lives of hundreds of German shepherds who pass the night in box-wagons, "Black-holes of Calcutta on wheels," as an English traveler calls them, six feet by four cabooses, almost as air tight as a coffin. But those shepherds spend the daylight hours in the pure atmosphere of the hills and heathers, where their lungs expand, and then, with their safety valves wide open, absorb a full dose of the deadly box-den miasma, while De Giers's consistent precautions secured him the *comparative* benefits of permanent indoor life, to which his respiratory organs somehow contrived to adapt themselves. That faculty of adaptation is often overlooked in the attempt to explain the long survival of life-prisoners, school teachers, etc., who breathe with apparent impunity an atmosphere that infects the lungs of a newcomer with the germs of malignant disorders. For similar reasons a bird will live for hours under the cupola of an air-pump that has gradually diminished and all but exhausted the supply of oxygen, while a second bird, suddenly transferred to that semi-vacuum, will almost immediately fall in convulsions, and die in a few minutes. It is also probable that the extreme abstemiousness of the systematic statesman left his disease germs nothing to feed upon. Fevers, and according to the traveler, Burton, even syphilis, can be suppressed in that way, and it is not impossible that De Giers's consumption microbes had been starved out of his organism.

HOW TO GET ON IN THE WORLD.

UNDER the above title, Rev. T. T. Munger, D. D., of New Haven, Conn., makes the following excellent remarks: —

The body lies at the basis of success in all respects. The first thing a young man, who has thought enough of life to take a look ahead, should take into consideration, is, how to secure a good body. Mr. Beecher said that the best way to secure one was to have a good set of ancestors; but as we cannot alter matters in that direction, we must start with such bodies as we have. There is seldom an ancestral weakness or taint that cannot largely be overcome or kept under. Nearly every one can be strong and healthy if he will begin right and keep on in the right way.

It is impossible to overestimate the value of health in the work of life. It is not a luxury and a fortunate possession; it is the main factor in the whole business of life. With health, the way is open to any success of which mind and heart are capable; without health, the way is absolutely barred.

Too often it is regarded as a matter of chance or inheritance, or as something that will take care of itself. Instead, it should be regarded as something to be cultivated and perfected, just as the mind is, by study.

Fortunately, the natural love of play is a drill-master in health. Nothing better invigorates the body than the rural sports and general out-of-door life in the country. But most of my readers live in cities, and so are forced to take care of their bodies as they best can,—a matter that requires special thought and effort, because city life is not favorable to good bodily condition.

There are two things that I wish to empha : —

1. Health can be stored up for future use, and can be drawn on for the hard work and hard times of after-life. And I wish to say that there is nothing so well worth laying up as a good stock of health, though I prefer to call it *vitality*. By virtue of the mysterious laws of our nature, it is possible for us, during the period previous to twenty-five, to work into our bodies a certain thing or force called *vitality*, which will last until we are seventy or eighty, and yet give itself off all the while; there are within us natural dynamos made to keep up the supply.

It is with this vitality that we do our work, whatever it is. It is the amount of vitality that deter-

mines the amount of work ; it is the intensity of the vitality that determines the quality of the work. If it is not secured early, it can never be secured. If our natural stock of it is early wasted and drawn off by excesses, it cannot be regained, any more than you can put oxygen back into ashes and make them wood again.

Vitality is the capital with which the business of life is done. There must be other things,—skill, industry, intelligence,—but this is what we do the work with. A good body well developed in lung; muscles firm ; nerves steady and quick as lightning when called on to act, but sleeping quietly when there is nothing for them to do ; limbs trained to all sorts of vigorous uses; rapidity and strength of action ; endurance ; keen eyesight ; the whole frame alert, facile, responsive to every demand made upon it, and imparting its quality to step, voice, eye, and gesture,—this is the sort of body we should have when we start out to make our way in the world.

2. My next word is that this vitality depends largely upon habits ; good habits increase it, bad habits waste it. Shakespeare has a good word upon this point in "As You Like It," where Adam tells why he is so strong in his old age : —

> "Though I look old, yet I am strong and lusty ;
> For in my youth I never did apply
> Hot and rebellious liquors to my blood ;
> Nor did not with unbashful forehead woo
> The means of weakness and debility ;
> Therefore my age is as a lusty winter,
> Frosty but kindly."

He refers to the two great wasters of vitality,—drunkenness and lust. To name is to condemn them ; but a good part of human kind are wasting their lives in these two ways.

Shakespeare did not speak of the weakening effect of tobacco, because he knew nothing about it, having lived too early ; but our wise men are now putting it beside the other two. In nothing are physicians more thoroughly agreed than that the use of tobacco in the years before twenty, lessens the vital forces, weakens the body, and sows the seeds of disease. A young man of eighteen who smokes burns up more than tobacco ; he consumes life itself, and ever after has less of it. He is spending more than money in the purchase of cigars ; he is paying out the real capital of life.

It is pleasant to be able to state that this is getting to be understood where young men "most do congregate." In Yale College less than a quarter of the students smoke, and, with some exceptions, it is the quarter most nearly worthless in both mental and physical respects. As a rule, those who know what they are about, and are taking life earnestly, do not smoke. Those who have caught the athletic spirit (which is something quite different from betting on the games) know that smoking and athletics are sworn enemies. The studious understand that it means a clouded brain and an indolent spirit, and there are not a few who have learned that it means poor eyesight, and an uncertain pulse, an unsteady hand, a stunted growth, and a general tendency to emasculation. There are still a few to be seen on the streets, sallow, vacant-eyed, heavy-gaited, thin-limbed, generally of short stature, smoking pipes under the delusion that it is very English-like ; but the resemblance begins and ends here.

Turning to the positive side of the subject, I would say, Make it your business to lay up a good stock of vitality. You have hard work before you ; you will have to bear heavy burdens, to endure great strains; there will be times when you must do two men's work, go without sleep, undergo dangers and experiences that will test your nerves and courage and endurance. Such a future awaits all. It is often said that a brave and strong life depends on the *stuff* in a man. True ; but the stuff consists in large part of vitality,—a good body well stocked with nervous energy.

I have hardly space, nor is it necessary, to tell you how to secure this vitality. It is clear enough that all which wastes vitality should be avoided ; clear, also, that great pains should be taken to foster and store it. Exercise, sleep, good food, pure air day and night, the frequent bath,—these are the conditions of health, and they should be met with a certain pride.

Nothing adorns a young man so much as an alert and graceful carriage, a clear and steady eye, a pure breath, a fresh complexion, a firm voice, and a bearing that shows self-command,—qualities that go along with a vigorous and well-trained body.

But I like better to speak of the subject as a duty. The late George William Curtis said that life is the best possible thing we can make of it. St. Paul carried the thought a step higher : "Know ye not that your body is the temple of the Holy Ghost?" Life becomes a sacrilege if the body is misused, and it becomes a failure unless it has for its foundation a strong, healthy, vigorous body. If you would make your way in the world toward any sort of success, you will need all the vitality you can store up in the first twenty-five years of life.

A SERMON ON HEREDITY.

It is a very wonderful fact that God has so created us that the results of our deeds are not limited to our own lives, but make their impress upon those who are to come after us. We are not separate units, but are links in a living chain of transmission. This fact makes our lives of far greater consequence than if, in their results, they were limited to ourselves. If we are anxious concerning the future of our country, we may take to heart the thought that it will be what we ourselves have made it. The Bible expresses the same idea in many ways. "Whatsoever a man soweth, that shall he also reap," does not mean merely that his own future will be influenced by his conduct, but that his future in his children will be a record which he himself has made.

Men often make their wills, and bequeath to their children their gold or houses and lands, but sometimes against their will, they bequeath to their children a bodily dwelling of inferior material, and so poor in construction that it very soon falls into decay through disease, or in very early life becomes a tottering ruin. It would seem rather amusing to us if one should sit down to write his will and say: "I bequeath to my daughter Mary, my yellow, blotched, and pimpled complexion, resulting from my own bad habits of life. I bequeath to my son John, the effects of my habits of dissipation in my youth, with a like love for alcoholic liquors and tobacco. I bequeath to my son Harry, my petulant, irritable disposition, and the rheumatic gout which I have brought upon myself by disobedience to physical law; and to my daughter Elizabeth, my trembling nerves and weak moral nature." But this is, in truth, what many parents do, and the children find it a sad, instead of an amusing fact.

On the other hand, if one has led a life of uprightness and morality, and has obeyed physical law, his children will inherit his physical vigor and his moral stamina. It becomes of exceeding great importance that these facts should be known to the young, in order that they may endeavor to overcome their own weaknesses, and strengthen their own good qualities for the sake of future generations.

This heredity, the transmission of the qualities of the parents to the child, is found among plants and animals as well as in the human race. The seed of a plant produces another plant of the same kind, and the farmer knows that when he sows wheat, his harvest will be wheat, and he should know just as certainly that if he sows "wild oats" in his youth, he may expect "wild oats" in his children. The character of the food we eat, the air we breathe, the occupations we follow, the habits we create, are the forces which shape not only our own destiny, but create the tendencies of our children.

With these thoughts in mind, the question of the use of narcotics becomes one of great importance. There are few, if any tobacco users who are anxious that their boys should early begin the use of the weed. But they do not realize the fact that in their own use of it they may have diminished the vital force of these boys, transmitting a tendency to disease, or perhaps an appetite for the tobacco itself, and not only will the boys feel the effects, but the girls as well. As the thought of men is turned in this direction, proofs are accumulating of the evil results to the children of tobacco-using parents. A prominent physician says: "I have never known a habitual tobacco user whose children did not have deranged nerves, and sometimes weak minds. Shattered nervous systems, for generations to come, may be the result of this indulgence. The children of tobacco-using parents frequently die with infantile paralysis. I have known two cases in which the crying of the baby could not be stopped until the tobacco-pipe was placed between its lips." Dr. Pidduck asserts that in no instance is the sin of the father more strikingly visited upon his children than the sin of tobacco using. "The enervation, the hypochondriasis, the hysteria, the insanity, the dwarfish deformities, the consumption, the suffering life and early death of the children of inveterate smokers, bear ample testimony to the feebleness and unsoundness of the constitution transmitted by this pernicious habit."

The effect of alcohol upon the child is equally marked, and from all sides comes the testimony that the degenerations do not stop with the individual, but pass on to succeeding generations. Sometimes the influence is seen in the stunting of the growth, both mentally and physically. Dr. Langden Downe reports several cases of this sort where the children had lived to be twenty-two years old and still remained infants, symmetrical in form, just able to stand beside a chair, utter a few monosyllabic sounds, and to be amused with toys. Dr. F. R. Lees, referring to the injury inflicted upon the liver by alcohol, says: "And recollect, whatever injury you inflict upon this organ, to your posterity the curse descends, and as is the father, so are the children."

Dr. Kerr asserts that the effects of injury to the mind and body may not always show themselves in the drinker himself, yet it is doubtful if his children ever entirely escape the effects in one form or another. These effects may be manifest in insanity, or in a tendency to diseases of the stomach, liver, bowels, lungs, or other organs, or with a like love for alcoholic stimulants. Not only may the child be weak in body, but also in intellect. It is the statement of a score of observant physicians that the children of intemperate parents are apt to be feeble in body and weak in mind.

Another very striking thought in this connection is that while the physical effects may not show in the individual himself, nor in his children, they may be manifest in the deterioration of his grandchildren and great-grandchildren. A prominent temperance advocate who was laid up with rheumatic gout, which is apt to be the result of alcoholic indulgence, replied to a friend who wondered that he, a drinker of cold water, should suffer with this disease, "Yes, my ancestors drank the liquor, and I must foot the bills." In 1834, the Parliament of the British House of Commons made a report of intemperance in which they stated that the evils of alcoholism "are cumulative in the amount of injury they inflict, as intemperate parents, according to high medical testimony, give a taint to their offspring before birth, and the poisonous stream of spirits is conveyed through the milk of the mother to the infant at the breast; so that the fountain of life, through which nature supplies that pure and healthy nutriment of infancy, is poisoned at its very source, and a diseased and vitiated appetite is thus created, which grows with its growth, and strengthens with its increasing weakness and decay."

A tendency to commit suicide seems to be a marked bequest of an inebriate parent to his children, and it is well to state that in the opinion of medical men who are dealing with all forms of inebriety, the evils resulting to the children may be transmitted by parents who have never been noted for drunkenness. Continual moderate drinking keeps the body so constantly under the influence of alcohol that a crowd of nervous difficulties and disorders may be transmitted even more surely than from the parent who has occasional "sprees" with long intervals of sobriety between. It is not only through the drinking father that injury is done to the children, but the mother may have a vitiated inheritance from her father and transmit it to her children. . . .

But we must not be so interested in the inheritance of evil qualities as to forget the transmission of good. We read in Exodus, twentieth chapter, that the sins of the fathers are to be visited upon the children unto the third and fourth generations of them that hate the Lord, but mercy will be shown to *thousands of generations* of them that love him and keep his commandments. As we have seen, the sins of the fathers are visited upon the children in the transmission of diseased bodies, perverted moral natures, and weakened wills, and realize that the promise is being fulfilled in the visitation of the sins of the fathers upon the children, let us see if the other promise is being fulfilled also, in the mercy shown to thousands of them that love the Lord and keep his commandments. . . .

If your ancestors did not do the best for you, will you not profit by your knowledge of this fact and do the best for those who shall look back to you as their ancestor? Supposing that your parents in their youth had said: "I will take care of my health so that my children may be born with vigorous bodies; I will make good use of my intellect so that my children will inherit an added capacity for acquiring knowledge; I will obey all the laws of morality so that my children will by inheritance tend toward virtue;" and supposing that you to-day, with healthy bodies, keen intellects, and upward-tending moral natures, were reaping the reward of their forethought, would you not bless them for it? . . .

The youth of to-day have in their own hands the moulding of the future, not only of themselves, but of the nation, by the every-day habits of their lives. By their thoughts and aspirations, by the moral tendencies which they are cultivating in themselves, they are determining what shall be the characteristics of the nation in a hundred years to come. Shall this be, in a hundred years, a nation of drunkards? The young people of to-day are deciding that question. Shall it be a nation of invalids? This, also, the young people are deciding. Shall it be a nation filled with greed of gain, with a low standard of morals, with dishonest methods of business, or shall it be a nation wherein vigorous health is the rule, and unflinching courage, absolute integrity, and pure morality shall everywhere reign? What the young people of to-day are making of themselves physically, mentally, and morally, is deciding what shall be the future of the country. —*From "Almost a Man," by Mary Wood-Allen, M. D.*

THE DIETARY OF EUROPEAN PEASANTS.

DR. A. THURMAN, in the *Anthropological Review*, published at Milan, gives an interesting summary of the dietetic habits of the rural population of several European countries, as follows: —

Belgium. — Coffee, black bread, potatoes, vegetables, chicory, and sometimes *salaisons*.

Holland. — Black bread, butter, vegetables, fish, coffee.

England. — Beef, pork, potatoes, vegetables, tea, cheese, beer, cider.

Ireland. — Oatmeal bread, potatoes, milk, a little lard.

Scotland. — Oatmeal bread, potatoes, milk, butter, coffee, tea, very rarely flesh.

Pomerania. — Potatoes, milk, green vegetables, lard, flesh three times a week.

Rhenish Prussia. — Milk, soup, dried fish, potatoes, flesh for the feast days.

Saxony. — Bread, butter, cheese, soup, vegetables, coffee, flesh on feast days.

Bavaria. — Porridge, butter, milk, cabbage, potatoes.

Italy. — Macaroni, bread, fruits, beans, peas, and lentils, wheat, rice, wine, a little flesh on feast days, but only in certain regions.

Spain. — Bread, vegetables, fish, fruits, flesh as a luxury.

Russia. — Rye bread, cabbage, mushroom soup, wheat cooked with milk and oil.

Sweden. — Potatoes, rye, oatmeal, barley, milk, salt herring, beer, no flesh food.

Switzerland. — Cheese, milk, coffee, vegetables, soup, wine, rarely flesh.

Turkey. — Black bread, onions, *poireaux*.

France. — In the neighborhood of Bourgogne meat is eaten but once a year. The peasants of Morvan eat meat twice a year. The peasants of Sarthe once a year; the peasants of Auvergne five or six times a year; the Bretons never, except rich farmers, who eat flesh on feast days.

We see from this table that European peasants subsist almost wholly upon vegetable food, a regimen which is highly economical, and by which they are sustained in good health.

THE INFLUENCE OF TEA AND COFFEE UPON CHARACTER. — The eminent Dr. Bock, of Leipsic, writes as follows respecting the influence of tea and coffee upon character: —

"The nervousness and peevishness of our times are chiefly attributable to tea and coffee; the digestive organs of confirmed tea and coffee drinkers are in a state of chronic derangement, which reacts on the brain, producing fretful and lachrymose moods. Fine ladies addicted to strong coffee have a characteristic temper, which I might describe as a mania for acting the persecuted saint. . . . The snappish, petulant temper of the Chinese can certainly be ascribed to their immoderate fondness for tea."

THE TOXIC EFFECT OF TOBACCO. — Although Wood gives it as his opinion that chewing is the worst form of using tobacco, yet Dr. Geo. P. Hall says in the *International Medical Magazine* that the use of cigarettes is certainly the most objectionable. He says the effects of tobacco when past the physiological limit are very wide and far reaching, and may fall in some degree on any one or more of the nerves or nerve centers of special sensation. Dr. Hall then relates four cases of tobacco amblyopia as proof of the serious effect of this drug on the eyes. He quotes Bosworth as stating that tobacco is not simply a cardiac poison, it is also an arterial poison. Its ill effects are shown in cerebro-spinal irritations, headaches with vomiting, morning fatigue, impairment of memory, psychical irritation, inaptitude for work, and even transitory aphasia.

OCEAN DRINKING. — The *Wine and Spirit Gazette* is authority for the following: The stock of wines, spirits, etc., laid in for a trip to England and back on one of the large Atlantic liners is 2500 bottles of wines and spirits, 12,000 bottles of ales and porter, and 6000 bottles of mineral waters.

A CHICAGO man, during the whole of his lifetime, has never taken any medicine. He has constantly consulted doctors and chemists, and all the medicine they prescribed for him he has put away together in a room. The result of this strange fancy is that he has now 1900 bottles of medicine, 1370 boxes of powders, and 870 boxes of pills. — *Ex.*

LOOK to your health; if you have it, praise God, and value it next to a good conscience. — *Izaak Walton.*

A PRESCRIPTION.

My pallid friend, is your pulse beating low?
Does the red wine of life too sluggishly flow?
Set it spinning through every tingling vein,
By outdoor work, till you feel once again
Like giving a cheery school-boy shout;
Get out!

Are you morbid, and, like the owl in the tree,
Do you gloomily hoot at what you can't see?
Perhaps, now, instead of being so wise,
You are only looking through jaundiced eyes;
Perhaps you are bilious, or getting too stout;
Get out!

Out in the air, where fresh breezes blow
Away all the cobwebs that sometimes grow
In the brains of those who turn from the light
To all gloomy thoughts instead of the bright,
Contend with such foes and put them to rout;
Get out!

— *Medical and Surgical Reporter.*

CONCERNING ILL TEMPER. — It is not enough for us to pray for self-control. We must all study the cause of irritability. If men would often go to a a sanitarian concerning their health habits, they would find an answer to prayer in his revelation of truth. I have known men who prayed for a good temper in vain until their physician proscribed eating so much meat, for they could not endure such stimulation. So long as they ate abundantly of animal food, they could not control the irritability; but as soon as they were put on a milder diet, they were able to keep their temper. Their physician, by the aid of science, revealed to them the cause of that irritableness, and their prayer was answered. They were not unwise in praying; but they were wise in adding hygienic advice. It is quite in vain to pray for a tranquil spirit, or a genial, hopeful spirit, when the organs of digestion are out of order. Not that one who is suffering from sickness should not pray for health; but prayer is to be conjoined to hygiene. It is in vain to pray for patience, and then run heedlessly into those very conditions where experience shows causes which lead to impatience. — *Henry Ward Beecher.*

A WONDERFUL ELIXIR. — *Lean Customer* — Doctor, I want some medicine or something that will put more flesh on my bones.

Doctor (filling bottle from large glass jar) — This will fix you. Take a tablespoonful three times a day, eat plenty of soup, meat, leguminous vegetables, cracked wheat, and fruit, and abstain from energetic exercise. Five dollars. Thanks.

Fat Customer (five minutes later) — Doctor, I want something that will relieve me of this superfluous fat.

Doctor (filling bottle from same large glass jar) — This will fix you. Take a tablespoonful three times a day, abstain from soup, meat, leguminous vegetables, cracked wheat, and fruits, and take plenty of energetic exercise. Five dollars. Thanks. — *Chicago Tribune.*

Indignant Physician — Man, what have you done? You sent my patient the wrong prescription, and it killed him.

Druggist — Vell vat vas de matter mit you? Last veek I send your odder patient der righd berscription, und dot killed him. How can somebody blease sooch a man? — *Cincinnati Medical Journal.*

Old Lady — I do n't believe this Sure Cure Tonic is going to do me any good.

Friend — It 's highly spoken of in the papers.

Old Lady — Yes, but I 've taken forty-seven bottles, and I do n't feel a bit better. I tell you what it is, Sarah, I 'm beginning to think these newspaper editors do n't know everything. — *New York Weekly.*

EASTERN WISDOM. — In a town in Japan this motto is found over each house: "Frugal in all things; liquor prohibited."

IN the Argentine Republic when a man is caught drunk he is made to sweep the streets for eight days.

WHERE the money goes: $1,200,000,000 for drink; $500,000,000 for the national government; $85,000,000 for public education.

HOW TO LEARN TO SWIM.

THE old method of teaching a boy to swim, was to throw him into water deep enough to drown him, making it, with him, a case of "sink or swim."

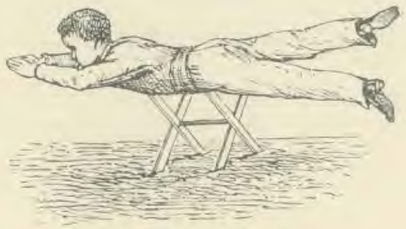


FIG. 1. FIRST POSITION IN SWIMMING.

The modern method, however, is more humane. The following is the method commonly employed in teaching swimming in the modern swimming-schools: —

The Movements.— There are three movements for the arms and two for the legs, the movements for the arms starting with the position for the arms shown in Fig. 1. At the first movement the arms are carried outward at the sides to the position shown in Fig. 2, the palms facing backward. At

FIG. 2. SECOND POSITION.

the second movement, the arms are brought from the position shown in Fig. 2 to that shown in Fig. 3. At the third movement the arms are thrust directly forward to the position shown in Fig. 4. The time occupied in movements 2 and 3 together is the same as that of movement 1 alone.

The two movements of the legs are as follows:

FIG. 3. THIRD POSITION.

During the first movement of the arms the legs remain straight out, as in Fig. 4. During the second movement of the arms, by which they are brought to the position shown in Fig. 3, the knees are flexed and the legs drawn up. For strong swimming, the knees are drawn well up under the body, a position which cannot be assumed except in the water, or with the body suspended by a belt. The second movement of the legs is executed with the third movement of the arms, the legs being thrust down-

FIG. 4. CHANGING FROM FIRST TO SECOND POSITION.

ward and outward, assuming, at the end of the movement, the position shown in Fig. 1.

By the aid of a teacher these movements may be easily acquired by the following method: The pupil

being placed in water not higher than his shoulders, seizes one end of a stick, the other end of which is held by his teacher who stands in a boat or upon a pier. The first thing the pupil must do, is to acquire the ability to balance himself in the water. He is afraid he is going to turn over upon his side or his back; he feels sure that his head is going under. The moment he tries to raise his feet from the bottom and bring them near the surface of the water, he is almost overpowered with the impression that his head is going to the bottom. A firm hold upon the stick enables him to maintain his position, and by degrees he learns to flex the back in such a manner as to keep the head above water and the heels near the surface.

As will be readily seen by reference to the accompanying figures, the position assumed in swimming requires a strong curvature of the spine and backward flexion of the neck. For this reason, swimming is a most excellent exercise for round-shouldered persons, and persons inclined to posterior curvature of the spine.

Within a month or two, the pupil, having acquired his balance in the water, and gotten the idea of the position to be assumed, takes his first lesson in leg movements in swimming. In swimming, the arm movements and leg movements are executed together, with the exception that the first arm movement is made without simultaneous movement of the legs, the two movements of the legs being executed only with the second and third arm movements. In order to establish the proper rhythmical movement, the teacher counts for these combined movements, "One — two — three, one — two — three, one — two — three," the time given to "two" and "three" being each one half that given to "one." In counting for the leg movements, only "two" and "three" are counted, a pause of equal time being substituted for "one." After practicing the leg movements for a few moments, the pupil is supported in the water by means of a belt passed around his body in such a position as to balance him in the water. The belt is attached to a rope supported at the end of a stout pole, one end of which is grasped by the teacher, who thus supports the pupil in the water very much as he might a large fish attached by his back to a hook and line suspended at the end of a long pole. The pupil is now made to execute the arm movements, keeping time to the count, "One — two — three, one — two — three," the movements being made in the order above described. After practicing the arm movements for a little time, the arm and leg movements are combined, remembering that the leg movements are made only with the second and third arm movements, the legs resting in the position shown in Fig. 4 during the first movement of the arms.

After the pupil has acquired a little confidence and has learned to combine the movements fairly well, he is provided with a swimming-belt and cast loose into the water to navigate himself. In a short time, if he has given good attention to his instruction, he will be able to move about in the water with ease and confidence. Then the floating power of the belt may be gradually decreased, either by loosening the number of corks, or if an inflated rubber belt is used, by letting out, from time to time, a little air.

It is well for pupils to practice the above-described movements by resting the center of the body upon a small raised platform or a camp-chair, as shown in the accompanying cuts. By this means the muscles employed in swimming may be developed, and the ability to coördinate the proper movements may be increased so that much more rapid progress will be made while the pupil is in the water.

Swimming is one of the most useful and healthful of all exercises. It brings all the muscles into active play. It develops especially those muscles which are requisite to erectness of figure and fine and graceful carriage; besides, the contact with the cool water is a powerful tonic, promoting surface circulation. Every boy ought to learn to swim, — and every girl also, for that matter. Swimming is not only a useful accomplishment and means of healthful exercise, but in certain emergencies it becomes indispensable to the saving of ife. Hundreds of lives might be saved every year, if only every person were taught to swim. The ability to sustain one's self in the water, even for a few minutes, would often turn the scale between living and dying.

The person who cannot swim, who is unaccustomed to water, and in mortal terror of drowning almost at the sight of a body of water, or at any rate, at the slighest danger of being plunged into the aqueous element, is certain to sink like a stone if thrown into the water, in consequence of the irregular and senseless movements which he is sure to execute the moment he feels himself sinking into the water. In the effort to keep himself entirely out of the water he is certain to give to the body just the momentum it requires to send it beneath the surface. Having no self-possession, gasping every instant for breath, he soon fills his lungs with water, and sinks to the bottom.

Lessons in swimming should constitute a part of the regular course of education in our public schools, and sometimes teachers could easily arrange to take classes of boys and girls separately to some suitable place, and by surrounding the exercise with proper precautions, it might be made not only interesting but exceedingly healthful. There is not one boy, and probably not one girl, in a hundred who would not be delighted with the opportunity thus afforded them of engaging in a natural and healthful exercise. The next two or three months will afford abundant opportunities for swimming lessons and exercise, and we earnestly exhort all our readers to improve the opportunity. The few suggestions we have made, if carefully followed, will, we believe, afford most satisfactory results.

HOW TO RIDE A WHEEL.

THE proper position for a bicycle rider is, in the first place, an upright one. He should push nearly straight downward with his legs — not backward, as one must do who leans far forward. His arms should not be rigid and extended to their full length, but a little bent, and the handles can be easily adjusted to bring this about. The reason for the bent or slightly bent arm is evident after a moment's thought. If the arm is stiff, rigid, and extended to its full length, the "pull" which you give the handles on going up hill, or indeed, while running along a level road, is a dead pull. There is no life in it. Each jar to the machine is a jar to your body, your head and neck, and consequently a jar to your whole system. On the other hand, if you ride with your arms a little bent, and acting as a kind of buffer to all jarring influences, they will save you an injurious, though unnoticeable shaking up each time you go out. The only way in which you will notice a change will be after you have become accustomed to the bent arm method. Then you will find you can ride longer without becoming tired.

Another feature of this stiff arm is the position into which the shoulders are thrust. Try it; grow a little tired with a long ride, and then see where your shoulders are. You have gradually come to lean on your arms for rest. Both shoulders have been thrown far back; your head and neck are stretched far forward, and your chest has, so to speak, sagged forward out of its natural position. Keep this up long enough, and you will be a fine-looking specimen.

No; the weight of your body should never come on the hands and arms, but on your thighs, and thence be transferred to the seat, with the unconscious, springy action of your legs, which in a measure allows some of your weight to come on the pedals. In this position your hands are free to guide your wheel, your body is erect; you do not then get into the habit of swaying from side to side to put your weight first on one side and then on the other; and your whole muscular movement is regular and normal. Try riding without putting either hand on the handles, and sitting erect. If you ride well, you can easily keep your balance, and in an instant you will be in the correct position. Once in this position, place the hands lightly on the handle bars, and you will be in a healthy, a proper situation to gain benefit from your riding.

In riding ten miles, for instance, I should never go the whole distance at one pace. Slow, steady riding has its merits; so has sprinting for short distances. When a good, clear road looms up ahead, have a brush for two or three hundred yards with the boy who is with you. These little races are good things. They quicken your movements, and they keep you from forming bad habits or letting your body sag into set, immovable positions. They also bring the muscles into a different kind of play.

In fact, in bicycle riding, as in about everything else, you should remember that there is a right and a wrong way; that you need not only endurance, but speed, and that changing from one to another, keeping up variety, is one good way of avoiding bad habits. — *Harper's Young People.*

PHYSICAL EDUCATION IN THE SCHOOL. — "The spontaneous grace of childhood" is very pretty and poetic, but from an inheritance of defective nutrition, bodily weakness, or an overstimulated nervous system, it has become in reality — I had almost said — an iridescent dream. Looking around on our children as they come trooping along these bright mornings, what do we see? — Flat, narrow, or depressed chests; round shoulders; thin little necks, bearing heads disproportionately large; bow-legs or knock-knees; legs and arms that are only bony outlines or masses of flabby fat; pale or pasty complexions;

shambling or jerky carriage. Does the picture seem too dark, or overdrawn? Look for yourselves, and you will find, in every large assemblage of children, comparatively few that have not at least one of the defects named.

At six or eight years of age, possessing probably at least one of some form of the physical deficiencies mentioned, for which little or nothing has been done in the way of systematic improvement or remedy, the children enter school. School life is necessarily a sedentary life; hence the circulation becomes slack, the hands and feet cold, or the face unduly flushed, and the brain torpid. No child of six or seven can do more than fifteen to twenty minutes of good brain work without flagging. Have you ever observed children, big or little, after a season of physical exercise? How tired faces brighten, dull eyes light up! A new being seems to have taken the place of the drooping, semi-stupid child. I have known a class to do half as much again as in the same length of time previous to the change from mental to physical work. — *Marion Browne, in Posse Gymnasium Journal.*

An All-round Physical Education. — Children are often far from perceiving the benevolent intent in the systems of education to which they are subjected, and it is little wonder, in general, that it should be so. But if an effort was being vigorously made to carry every natural faculty they possessed to its perfection — to make the eyes quick and true, the voice sweet and full, the hearing sensitive and discriminating, the bodily movements vigorous and graceful, and so on — the beneficence of the process would impress itself even on the juvenile mind, and thus half the battle would be gained, for we want the children's confidence before we can do them much good. Nothing, we believe, would do so much toward the development of the all-important quality of self-respect as a careful physical training. It would, on the one hand, promote individuality, inasmuch as the child could be made to feel what he or she was capable of individually; and on the other hand it would promote true comradeship, as it would awaken a consciousness of that common physical nature, with its varied powers, of which all partake. Here, therefore, is a part of education about which there can be no mistake — a preparation for perfect living in the physical sense — that perfect living which economizes both mental and moral force, and places the individual in a position of advantage for the accomplishment of all the ends of life. — *Popular Science Monthly.*

Physical Differences between Boys and Girls. — In the Ninth Annual Report of the American Association for the Advancement of Physical Education, Dr. E. M. Hartwell has an interesting paper on "Physical Education as an Educational Discipline," in which he calls attention to some very interesting facts, a few of which we summarize. The physiological fact determined by Bowditch and others, that girls are larger than boys at twelve or thirteen in consequence of a more rapid growth after ten or eleven years, is made the basis of the suggestion that the attainments in physical training made by boys and girls between the ages of ten and fifteen years should not be identical. This quite agrees with the views expressed by others upon this point. But Dr. Hartwell reverses the proposition as it usually stands, asserting "that we must protect the boys if we are to save them alive from the undue burdens laid upon them, *i. e.*, from the undue burdens laid upon them which are better fitted to the shoulders of the girl of that age than to those of the boy."

The doctor also calls attention to the interesting fact that female children seem to possess a higher degree of vitality than males, the evidence for which is the following: More male children are born dead than females. More male than female infants die before they are twenty-four hours old. The same is true with reference to male children at the ages of three days, a week, ten days, — indeed, all ages up to five years. The additional fact might have been added, that "the oldest inhabitant" is always a woman, that is, the last person alive in a million is always a woman.

Among the interesting facts bearing upon the educational questions are the following: While three fourths of one per cent of Boston children stammer, there are found to be three times as many boys who stammer as girls. It is also asserted that girls learn easier and earlier than boys; that they learn to talk more readily and at an earlier age than boys, from all of which Dr. Hartwell concludes that girls are better adapted than are boys, to live in the world into which they are born. Dr. Hartwell advances the idea that the stammering is the result of incorrect language instruction, children being pushed forward too rapidly before they are able to reproduce sounds accurately and easily.

A late writer in *Scribner's* magazine estimates that there will be at least 400,000 bicycles manufactured this year. There is danger that walking will become obsolete.

NOTES ON PRACTICAL EDUCATION.

BY J. H. KELLOGG, M. D.

IT is a fatal idea that all knowledge, or even the best knowledge, is to be found in books. With the exception of the Bible, the knowledge obtained in books is chiefly of value only as it calls attention to, and opens the way for, the objective study of things not in books. Even the knowledge of infinite value contained in the Bible is also in the great book of nature, for the apostle Paul says, "The invisible things of Him from the creation of the world are clearly seen, being understood by the things that are made."

The idea that school is the only place where the child can learn, results in two great evils: First, parents in their anxiety that the child shall secure an ample education, send the little one off to school long before it is old enough to graduate from the nursery; second, the education of the child is utterly neglected from the time it leaves the cradle until it is considered old enough to enter the school-room.

Education of some sort begins with the earliest dawn of intelligence; from the time the child begins to think, on through its entire life, every moment of conscious activity an educational process is taking place. The little one, sitting unnoticed in a corner while the mother bustles about at her work, gazing with wide-eyed wonder at the domestic tableaux spread out before it, starting with alarm when the older children come rushing in with a shout, is being educated by its surroundings. Robert Burns seems to have recognized this fact, for he says in one of his poems, "There 's a child amang ye, takin' notes." The statement is literally true; the little one, without paper or pencil, is taking notes in the most durable and permanent shape possible. Upon the photographically sensitive structure of its infantile brain is being indelibly impressed every picture brought before its mind by its environments. The infant has no thoughts because it has no thought material. It has a thinking organ, a brain, but a brain can no more think without thought material, than a brickmaker can make brick without clay.

During the early weeks of infancy, before the first evidence of intelligence appears, the little brain is gathering in through its eyes, and ears, and other senses, the fundamental impressions of external things, which later are woven into the complex web of ideas which forms the basis of its reason and judgment, its mental and moral character. This process of gathering in thought material goes on all through life. Indeed, this silent educational work is the most important, because the most powerful and lasting in its effects, of all the educational influences brought to bear upon the child. When the apostle Paul says that by beholding we become changed, he does not make use of a figure of speech, but states a profound physiological fact, which lies at the foundation of all education.

The fundamental thought, then, in a practical education, is to surround the child from its very earliest infancy with such conditions as shall furnish the kind of impressions needed to build up a sound and useful character. The mind has been aptly compared to a picture gallery. Every impression received through the eyes, ears, or other senses, is another picture added to the collection. The walls of this gallery are supposed to be made up of the pictures formed upon the brains of parents and ancestors reaching back into the distant past. On the walls are hung the pictures which the individual himself has gathered; thus a good thought, a beautiful picture, put into the child's brain by its surroundings, either by purposeful arrangement or by

accident, may cover and hide for a lifetime, possibly for all time, some horrible spectacle of crime or veritable Upas tree of sin, poisoning the character by the evil habits of an ancestor a hundred years back. Thus character may be by education both constructed and corrected.

What a good opportunity is offered during the earliest months and years of life, while the gallery walls are bare, to fill them with wholesome and noble pictures, such as may serve as seeds for useful and noble deeds. I think it was Horace Mann who remarked that if education was ever distasteful to a child, it was the fault of the teacher and not of the child. Certain it is that every child, not an imbecile, shows aptitude for learning. The child seeks knowledge, he loves knowledge, he hungers and thirsts for it just as he desires food and drink. If a child has no appetite for food, you say he is sick; if a child ceases to call for water, he is ready to perish. This is the situation of the child that no longer seeks knowledge; he is sick, mentally and morally sick. He may be ill, nigh unto death, but the fault is not the child's, it is the fault of his nurse, his parents, or his teacher. How many mentally and morally sick children do we see about us in the home, on the street, in the school! Alas, how many murders are committed in the name of education! Indeed, we might add physical murders also, for the prevalent neglect to care for and develop the physical nature of the child works in destructive harmony with the disastrous mental and moral influences brought to bear upon him.

A practical system of education must be based not only upon what the child needs to learn, but upon what the child wants to learn. The old idea that the child's head is a vacuum and must be filled somehow or other, and that it makes but very little difference how the information is gotten in, provided a sufficient amount is infused or injected or beaten or deftly inserted, as the case may be, is an error,— an error very forcibly expressed in a satirical description of a method of the common school,—

> "Cram it in, jam it in,
> Children's heads are hollow."

The popular methods of education which have prevailed during hundreds of years, are about as sensible as would be the action of a gardener who, wishing to make his roses especially attractive, should undertake to increase their fragrance by injecting attar of roses or some other perfume into his rosebuds with a hypodermic syringe. The child, like the incipient rose, is a bud. The natural, practical education of a child is simply the unfolding and development of the human bud. The assertion that the child is a bud is not a figure of speech, but an actual, physical, and physiological fact. More assistance can be obtained from the child himself in seeking the best method of education than by all the books ever written upon the subject, provided one's eyes have been opened so that he can see and know what to look for. The child naturally seeks the things which he needs, and seeks first the things which he needs most.

The first thing a child asks for is a knowledge of things; he does not ask the names of things, but he asks for the things themselves. His greedy appetite for a knowledge of things leads him to demand everything. He would seize the whole world, if he could. He is not even satisfied with the earth; he reaches out for the moon. Probably there was never a child born with eyes, that did not do his best to seize the moon. If he had wings, he would fly straight to the moon; not to take possession of it for any selfish purpose, but to investigate it. The child soon tires of a new toy for the reason that there is nothing more to learn about it. He has finished his investigation, and has no use for mere dead-weight property; so he throws it away and calls for something new. The growing, naturally developing child is continually seeking for new worlds to conquer. This appetite, judiciously fed, never stuffed to satiety, never starved to extinction, carefully studied as the guiding star in education, will lead to a well-rounded and practical education.

One of the most fatal mistakes in the popular methods of education, is the teaching of names before things and without things. The natural child has absolutely no interest in abstract knowledge. His inexperience gives him no interest in the storing up of knowledge, of which he can make no immediate use. Compelling children to learn by rote, to learn as a parrot learns, is the great bane of our educational system, and is a veritable mind poison. The children who sit listlessly on the benches of our public schools, are children who have been drugged with rote study, and who have been blighted by the repression of their natural inquiries after knowledge. These children are so numerous that we are met not only with the problem of how to educate children in a proper and practical way, but how to cure injured children,— children who have been well-nigh spoiled by bad methods of education at home and in the school. The children are blamed, scolded, and punished for stupidity for

which they are no more responsible than for the freckles on their faces or for the cut of their garments. They are the product of bad training. A great number of illustrations might be given of the piteous consequences of suppression of a child's natural instincts and a failure to develop his natural reasoning powers, or of trying to beat knowledge into him as one might drive pegs into a clay bank.

The other day a boy who had been studying physiology from a book without the assistance of natural or artificial models,—who had been studying names instead of things,—wrote and read the following composition: "The body consists of the head, the thorax, and the abdomen. The head contains the brains, when there is any; the thorax contains the lungs, the heart, and the diaphragm; the abdomen contains the bowels, of which there are five,—a, e, i, o, u, and sometimes w and y."

This boy, in studying names rather than things, had very innocently confused the two words "bowels" and vowels," and evidently had not the slightest conception of the real nature of either bowels or vowels.

A teacher who had been for some months talking to her geography class about the equator, which she described as an imaginary line, as do all the geographies, was horrified, on examination day, when a questioner who had some rational ideas about education, in asking the children how big the equator was, elicited some most remarkable answers. One boy said it was 5000 miles across; another thought that it could not be more than 2000 or 3000 miles. A shrewd boy thought he could jump over it. A little girl had the impression that when a ship reached the equator, the sailors got out and pulled it over with ropes. A little boy declared this was a mistake, for a canal had recently been dug to allow the ships to pass through, known as the Suez Canal.

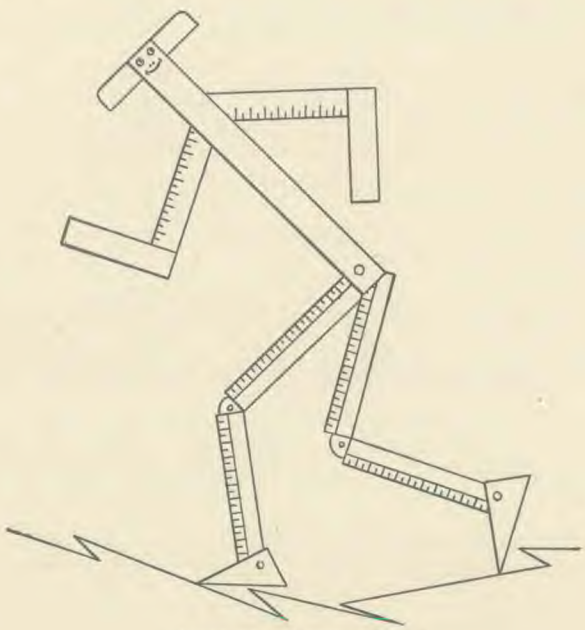
The true method of education makes the child a discoverer. He examines things, learns their properties and attributes; then, and not before, does he have use for names. Knowledge acquired in this way is staple; it is fixed in the mind gallery of the child in permanent form. Names are not now things like empty egg shells, which float away on the current.

(To be continued.)

A SLOYD SERMONETTE.

BY MARTHA WATROUS STEARNS.

MOTHER GOOSE may not have intended to preach a sermon when she told our infantile forefathers that —



"THERE WAS A CROOKED MAN."

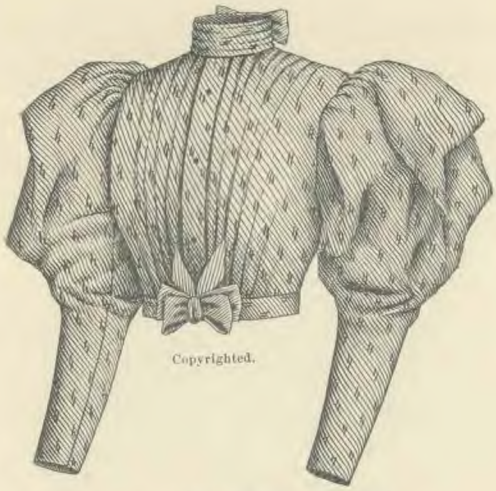
"There was a crooked man
And he walked a crooked mile,
And he found a crooked sixpence
Upon a crooked stile.
He bought a crooked cat,
Which caught a crooked mouse,
And they all lived together
In a little crooked house."

In this chain of crooked things, however, she has preached a forcible sermon on truth by negation.

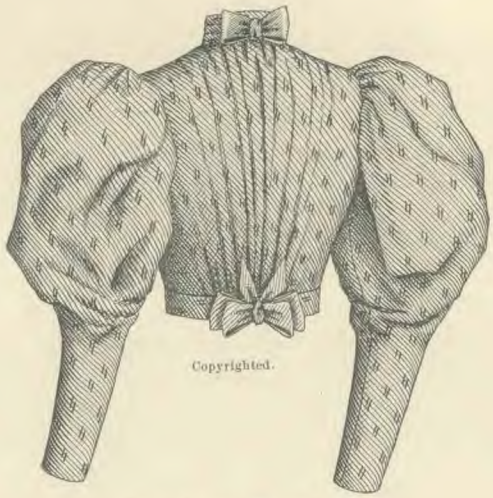
Perfection is only sought for after a distaste for imperfection has been created. After her word picture of the "Crooked Man," one instinctively wishes for something straight.

Many little feet go the pilgrimage of the Crooked Man, because their hands are not trained to do "straight" work, which must be done, for the old Guide Book says, "Make straight paths for your feet," then everything along the way will fall into line.

The first mistake of the Crooked Man was that he "walked a crooked mile," and, like him, most people who make crooked paths for their feet, don't like to work for their living, but prefer getting it by chance, finding a crooked living in crooked places as the crooked man found his "crooked sixpence upon a crooked stile," and the next thing is to spend

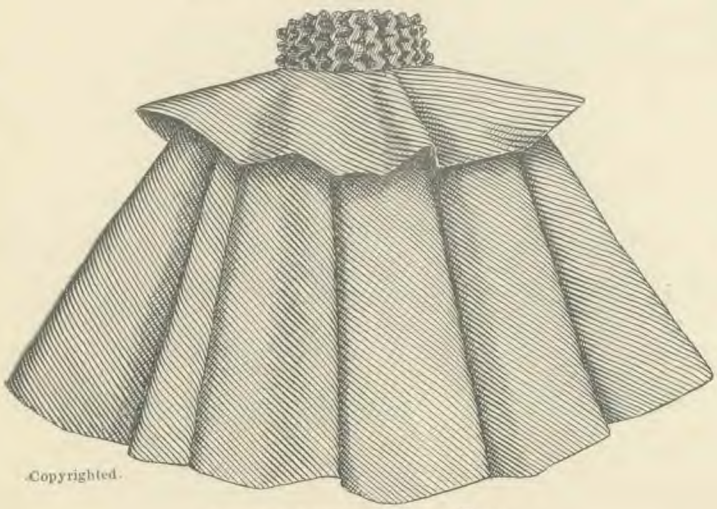


THE ALICIA WAIST.— FRONT.



THE ALICIA WAIST.— BACK.

LADIES' RIPPLE CAPE.— FRONT.



LADIES' RIPPLE CAPE.— BACK.

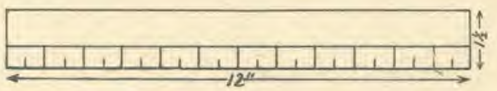
COSTUME WITH ALICIA WAIST.

it as he did on crooked things like themselves, metaphorical cats.

The poor crooked cat could catch nothing but a crooked mouse, probably because the crooked mouse was wise enough to know that a crooked cat was not worth his fear, and being a crooked mouse he was not worth eating. Thus so harmonious a family they made by their "inharmoniousness" that they all lived together reflecting themselves in their "little crooked house."

Now this pilgrimage is usually traveled by every child that makes a sloyd model. He draws his first line; it is not *quite* true, but never mind, it is so *nearly* so he thinks it will "do;" then the next one is thrown a trifle more out of the way; it can't be true because the first was wrong, and so on until his box is all drawn ready to cut out. It is a crooked looking affair, but he does not want to draw it over, and so it is creased and cut and folded together. Then he realizes that what was only a 16th of an inch out of the way at first has grown to be a whole half inch, and his effort is a failure. He can make another box, however, but he cannot live another life, and the more carefully he makes his box, the more successfully will he live his life.

Whatever the model to be made, a perfect one should be first shown, and beside it, an imperfect one. Suppose it is the model of the box. Any class of children would say that the box correctly made is the better of the two, why? Does it hold its contents any better? — No, the crooked one holds everything put in it. Which would they rather own? The perfect one of course. Why? They say, "It



FOOT RULE.

looks nicer." Yes, but why does it look nicer? Why are straight edges pleasanter to our eyes than those that are unequal? Because they are *true*. Crooked edges do not correctly represent what they were intended to, and a lie in work is as unpleasant and wrong as a lie in words and actions.

A perfect Life has been given us by which to measure our lives; and perfect works have been shown us, by which to measure our works, and we are proportionate failures or successes as we live by them.

The making of a foot rule, like the working drawing, will impress the thought of correct measurement in all things, upon a child's mind, if he has been taught the value of it, and he will gain a corresponding ability to measure himself "according to the measure of the rule which God hath distributed to us."

THE BATTLE CREEK SANITARIUM DRESS SYSTEM. — VI.

WE think it need scarcely be said that the aim of the management of the Sanitarium Dress System has been to present a series of garments which, while hygienically perfect, should in their fashioning strike the golden mean between the popular modern costumes and an absolutely plain form of dress. In every case our designer has so arranged that by the substitution of plain sleeves and the leaving off of the trimming on the waist the very simplest and plainest gowns may be made from the pattern of any costume here given. That this has really been the case will readily be seen by looking backward at the styles that have been already presented. This has been done in the interest of those who, by reason of scruples, religious or otherwise, or on account of limited means, prefer to dress at all times in a simple, inexpensive manner, which is, of course, a wise and sensible thing to do. The Mariette, Variété, and Priscilla gowns are each capable of infinite variation; each one may be made either a very plain or a very elaborate gown, as the maker may elect.

Most person naturally prefer that at least the gown reserved for best shall have the element of prettiness, and where prettiness is thoroughly consistent with convenience and hygienic excellence, why not? The Alicia waist, which we here illustrate, will be found to answer all requirements, as it may be made of silk or satin — it is particularly liked for thin fabrics, as it shows off the texture of the goods so well — and trimmed as indicated in the description below, or much more richly, according to the taste of the wearer, or it may be fashioned of some light wool goods and merely adorned with the bows in front and back, and at the collar, as in the illustration, or lastly, the bows and ribbons may be left off entirely. The Alicia waist is pretty, even when left perfectly plain. We lately saw a dress of dotted mull made with the Alicia waist, and the dress throughout had not a particle of trimming. It was very neat and attractive. This waist, having a lining, will be as desirable for winter as for summer. A pattern for plain sleeves will accompany the Alicia

waist, and in future will also accompany each pattern for a waist, or set of patterns for a costume. This waist, like the Favorite, given in the June number, is intended to button or baste to the skirt that is worn with it, and is cut of the proper length to swing the weight of the latter from the shoulders.

The Alicia Waist.— This waist is in ten pieces: Front, under-arm gore and back of lining, and front and back of outside goods, three sleeve portions, and two collar portions. Ribbon may be most effectively used for trimming this waist, either as bretelles, passing from the belt to the shoulder, both back and front, and fastened there under bows made with two loops and two ends; or a bow made with four long loops, tightly strapped in the middle, two loops falling in the front and two in the back makes a most effective trimming for the shoulders. This waist is developed in the present instance in China silk, but any kind of silk or soft wool goods may be used. The amount of material required is 6½ yards of 22-inch goods. This pattern can be furnished in sizes 32, 34, 36, 38, 40, 42, and 44 inches, bust measure. Price of pattern, 25 cents.

Ladies' Ripple Cape.— This cape is in three pieces: Cape, ripple collar, and band for the neck. Any preferred finish may be given the edges. From three to five rows of silk braid or narrow moire ribbon may be appropriately used as a decoration. Corkscrew diagonal cloth, kersey, ladies' cloth, or suiting goods may be used as material. This is a style of cape very desirable for use on cool days in summer, or for cool nights and mornings. The quantity of material needed is 1¾ yards of 50-inch goods. Patterns can be supplied in sizes 32, 34, 36, 38, 40, 42, and 44 inches, bust measure. Price of pattern, 25 cents.

For all patterns, address, Sanitarium Dress and Pattern Dept., Battle Creek, Mich.

THE MANNERS OF BOYS.

Not long ago, at the social meeting of a few friends, the small son of the hostess mortified his mother greatly by his disrespectful behavior. He objected to being "put off with cookies," as he expressed it, instead of being allowed to eat rich fruit cake and confectionery in quantities to suit his youthful taste. Then he remonstrated loudly against being sent to bed, muttering his displeasure at "always going too early."

When he was compelled to depart with his nurse, he sulkily refused to say "good-night" to his mother's guests, and even went away with the surly remark that "you always make me do things I don't like." In fact, he was the perfect personification of the typical naughty boy.

The long-suffering mother was distressed, of course; and the sting of such scenes is that the mother is aware the beholder knows well the behavior of the boy is not exceptional, but merely a repetition of what she has previously allowed to pass unchecked. The child who is outrageously rude or impertinent before company, only makes a display of the bad breeding for which his mother is responsible. He is himself not half aware of the extent and depth of his mother's shame. The boy who is not obliged to be habitually polite to his mother and sisters does not suddenly become a gentleman because strangers are present. It is rather the case that he considers it a fit occasion for a trifle more demonstration than usual.

One of the ladies present at the scene above indicated said: —

"There is yet another side to this question of a boy's manners, which, I think, mothers do not often consider. I always thought that an impertinent son was a greater trial than an impertinent daughter. For a son owes not only respect and obedience to his mother as a parent, but courtesy and consideration to her as a woman. And thus a disrespectful son fails doubly, and wounds his mother sorer when he does.

"Now this chivalrous feeling, like many other good and desirable qualities, must be taught. As it is the mother from whom all such good feelings come to the boy, so the mother must teach him this. Certainly those sons who are allowed to be boorish to their mothers and sisters as lads do not suddenly develop a chivalrous spirit and bearing toward all women when they come to associate with them as men. And the mother who wishes her sons to be gentlemen in feeling as well as in manners, must, while they are boys, begin her instruction by teaching them to show special politeness to the women of their own family."

"Do you think," asked a hearer, "that such ideas can be put into the minds of young boys? I mean the idea of what it means, and not only the manner."

"Yes, I think it can — gradually, of course," said the other woman. "We begin with very young

children, by teaching them obedience without questioning. This sometimes necessitates punishment. You understand, I am only stating broadly what I mean. Then, as the child's reasoning powers begin to develop, we punish less and reason more. We explain to him the difference, and why he must do thus and so. I think sometimes, if we are wise, we leave him to find out through 'natural punishments' the consequences of choosing wrong rather than right.

"Then — I am now speaking particularly of boys — there comes a time when the boy's will grows strong. Contact with the world of other boys in schoolroom and playground teaches him very quickly, though sometimes half unconsciously, the 'liberty' of his coming manhood. He is 'growing big;' he will be 'a man;' he will soon be able to do as he pleases. He must still yield a certain obedience to his mother, but he feels in his heart much scorn of the 'woman's opinion' on various subjects, and this feeling creeps into his manners, and will show itself decidedly there if it is not met by some other feeling and overcome by some other force.

"Then it is that you must begin to put into the boy an idea which he can never outgrow, making him understand that no man is manly without it, and therefore it must become stronger as he gets older — that he, growing to be a man, will be, in his manhood, in the possession of greater physical strength, and perhaps of broader opportunities and larger powers, than women, and therefore he owes women particular consideration, helpfulness, respect, and all outward observances, as well as sincerest love and appreciation, since such is always the first due of the stronger to the weaker; and that women, being peculiarly dependent upon men, are always entitled to this particular love and regard from them, which he as a man must by-and-by pay them; and that at present, as a boy, he must show this same spirit in his manners to his mother and sisters particularly, and then to all other women.

"Now I do not say that you can teach all this at one lesson to a very small boy. But I do say we could begin younger than is commonly believed possible to impress such thoughts on the boy's mind. And I do know that boys particularly need this teaching enforced so soon as ever the spirit of 'manly self-assertiveness' begins to appear. And that, my dear, is very young indeed!"— *Eva Lovett, in Harper's Bazar.*

SEASONABLE RECIPES.

Strawberry Granose.— Cover the bottom of a shallow pudding dish with a thin layer of granose flakes, add a layer of fresh strawberries, chopped and slightly sweetened, then a second layer of granose. Fill the dish thus with alternate layers of granose and berries. Set away in a cool place for an hour when it will be ready to serve. The juice of the berries should permeate the entire mass, but should not render it too wet and soggy. Cut in squares. No dressing is required. Raspberries and other small fruits may be utilized in the same manner.

Raspberry Granola Mush.— Strain the juice from freshly stewed and sweetened or canned red raspberries; heat, and when boiling stir into it dry granola sufficient to thicken it. About one pint of granola will be needed for each quart of juice. Serve hot with or without a dressing of cream. If necessary to do so the juice may be diluted with from one third to one half water.

Currant Syrup.— Boil together a pint of pure canned juice and one half pound of best white sugar for ten minutes, and can or bottle while at boiling temperature. One or two spoonfuls of the syrup in a glass of water makes a most refreshing drink. Two parts currants and one of red raspberries may be used in place of all currants, if preferred.

Cherry Pudding.— Soak and cook a half cup of tapioca in a pint of water until transparent. Have a pint of fresh pitted cherries in an earthern dish. Sprinkle them with sugar, pour over them the cooked tapioca and bake for an hour in a moderate oven. Serve hot with or without cream. E. E. K.

THE CARE OF SHOES.— Rub shoes free from dirt whenever they are worn, using a black cloth; keep them in a shoe bag, the buttons sewed on or ties fresh, and when growing shabby, brush the buttons and heels with black varnish and rub the shoes with a dressing; but do not use the dressing until needed, as when once begun, it must be continued. Patent leather shoes require a particular polish.

CLOTHING FOR THE SICK AND HELPLESS.

THE subject of clothing is one of interest to the well, especially how to be clothed according to the latest mandates of Dame Fashion; but to the sick and helpless, who are unable to display fashionable robes in an attractive style, the fashioning of garments comes to be regarded more from the side of comfort.

Most sleeping robes are totally unsuitable for sick-bed wear. Not only is the ordinary nightdress unhandy, being made long and full, with the opening only part of the way down the front, but it is exceedingly disagreeable to the patient, who cannot turn in bed without being twisted up in the numerous folds of the voluminous garment, whose wrinkles and seams and twists are a source of great annoyance. It is also so difficult to change that the process of taking off the soiled garment and replacing it with a clean one, becomes a dread to both patient and nurse, especially if the patient is heavy, helpless, or has some painful disorder, as rheumatism, or has just undergone a surgical operation. The ordinary nightgown is also a source of much annoyance in giving water treatment, as it is liable to become soiled and wet. It usually has to be removed entirely.

The sick-robe should be made wide and roomy enough to allow of being easily taken off, the arms especially being freed without inconvenience. Most nightgowns, especially those with yokes, are too narrow between the shoulders, making the process of getting in the second arm painful and exhausting to the feeble patient, besides wasting the time and strength and taxing the patience of the nurse. Absolute quiet is essential in many cases, as of internal hemorrhage from the bowels, lungs, or other internal organs; yet the patient must be kept clean, and the sick-robe changed frequently. For such cases the best garment is a bedgown made open in both back and front, the opening in the back being a little to one side of the spine. The buttons should be of thin, flat pearl, to avoid a ridge for the patient to rest on while lying on the back. This garment can be put on and removed very easily, without moving the patient more than to raise her up to get the garment well under the shoulders,— a much more convenient process than to be obliged to push the whole upper half of the nightdress under the patient and drag it through. The upper half can then be very easily slipped onto the upper arm. With the patient lying on her back, slip on the sleeves, and straighten down the gown, pushing the back part of the left side under the body as far as possible; then turn the patient on the left side, and pull the garment under her gently, so that the two sides will meet in the back, and button the front and back. All that is needed to remove the garment is to unbutton the front and back and slip off each half separately.

When giving treatment to the spine, unbutton the gown in the back; when to the abdomen, unbutton the front. This will keep the arms covered, and prevent chilling them, which is sometimes very important, especially in respiratory disorders, as pneumonia, where chilling of the upper extremities will increase the internal congestion.

The material for these nightdresses for the sick should be soft, easily laundered, and never starched, as any stiffness is very uncomfortable to the sensitive skin of the patient. Soft, loosely woven cotton goods, as fine, thin, bleached cotton flannel, or the fine, soft grades of outing flannel, are very good material for these gowns. Old sheets, old, soft white skirts, or the bottom parts of old nightgowns may be made over into very useful garments for the sick. It would be a wise provision for every family to keep a supply of these garments on hand, made up in different sizes, ready to use whenever a member of the family becomes ill. A little labor with the sewing-machine and a few buttons is all that is

required to make these garments, provided old garments are used.

In fever cases, the sick-robes require very frequent changing and disinfecting, and hence not much cloth and no ornamentation should be used. It is sometimes necessary to have the sleeves as well as the front and back made so as to button up, and they may be buttoned to the nightdress at the shoulders if necessary. This is especially useful in cases of a broken arm which cannot be moved, or where the arm joints are inflamed, as in rheumatism.

Flannel is needed in some cases where the skin is torpid and bloodless, or the patient has cold night sweats and a tendency to chill easily, and also for those who are advanced in years. Flannel is a material more useful for the chronic invalid than for acute attacks of fever, and should never be worn by those who have urticaria or any other skin disease, as it often causes a great deal of irritation to the skin, preventing sleep, and making the patient restless and uneasy. It may even destroy the appetite, or arouse fever in some cases, so intense is the irritation. Children and delirious and insane patients suffer most from this cause, being unable to help themselves or tell what is the matter. Whenever a patient who cannot complain is uneasy, always try to find the cause ; if she is wearing flannel, this may always be suspected as the cause of the irritation.

Two sets of garments should be worn by the invalid, one at night and the other during the day. If it is a case of fever or any disease that is contagious, both garments should be washed and disinfected daily. If the gowns are short and plainly made, this is very easily done.

When the patient begins to recover, she needs some loose, warm garment, easily put on, warm bedshoes and stockings, and a warm flannel wrapper with a loose sacque. These should be made so as to be easily put on and taken off, and they should be comfortable to lie down in. As little cloth should be used in making them as possible, to avoid folds. The material should be of a light, open texture. A convalescing patient is sometimes overtaxed and kept in bed by the heavy clothing, inconveniently made, and the heavy weight makes walking very difficult.

When a patient is in bed, the temperature of the room should be from 65° to 70° F. When she is able to sit up, it should be 70° or 72°. This temperature will not require so much wrapping up, and will give the patient more freedom. When the patient begins to go out, warm underwear should be worn, and also a warm, loose-textured outside wrap. In our changeable climate, where the weather is liable to change in twenty-four hours, changes in garments should be made to suit the weather. Persons who suffer from chronic diseases accompanied by night sweats should always be provided with an extra garment for the night. They often go to bed hot and feverish ; but when the sweating is over, their temperature is often below normal, and the wet nightdress makes them feel cold and chilly. The dry gown should always be at hand, so that the change can be made without trouble, and it should be of woolen, unless for some reason that is uncomfortable to them. The wet gown, filled with sweat and morbid secretions, should be washed before being worn again, as the body might be repoisoned by absorbing the poisons back into the system.

Children, as well as every one else, should be taught never to wear the same garments in the night that they have worn during the day. The nightdress should not be rolled up and tucked under the pillow in the morning, but should be left out loose until it is well aired and sunned, so as to free it from the foul matter and epithelial scales which it has acquired during the night.

For children's ordinary wear, I know of nothing better for night-robes than outing flannel. It is soft, absorbs moisture, is easily washed, and when hung out in the wind, can be worn without ironing. Of course it never needs starching. This is quite an item to mothers of limited means and strength, who are obliged to do all the work for a family of little ones. Every garment that can be saved from the ironing board is so much help to the overtaxed bodily powers of the mother, and such garments can be washed out in the washing machine by the ten-year-old boy or girl. As that is all that need be done to them, the gowns can be washed more frequently than the more complicated white garments, with ruffles, tucks, and lace, which cause aching backs, tired shoulders, and use up the strength and time which the mother needs so much to enable her to train up the little ones properly. Truly, life is too short to be thus uselessly and recklessly wasted.

Suitable beds and bedding will be the subject next month.

In hot weather, do not overload the baby with clothing in the middle of the day ; but let it wear an extra garment if the nights and mornings are cool, changing with the change of temperature.

EDUCATION OF THE INFANT BY TOUCH.

We are prone to forget how early the education of the children begins, and that the baby during the first weeks of life depends almost solely on touch for its impressions of its surroundings. The skin is the organ of the sense of touch. It is covered with little pointed bodies called papillæ, which are too small to be seen by the naked eye. Each of these papillæ contains one end of a sensitive nerve fiber, the other end being attached to a central cell in the brain or spinal cord. The fibers are the medium for carrying impressions both inward and outward. All our knowledge of our surroundings comes from outward impressions. We can scarcely imagine how potent is the touch as a means of instruction in early life, when ears and eyes are not yet capable of receiving impressions; and how wrong touching and handling may help make or mar the health of the baby, dull the intellect, and debase the morals.

We know that touch has been the sole medium of communication between some individuals and their surroundings. Laura Bridgeman, deaf, dumb, and blind, attained a good education and became something of a poet as well as doing other literary work. And there is in a Southern home at present a little girl fourteen or fifteen years of age, who is being taught through the same channel. She visited the World's Fair in Chicago, and gained a fair knowledge of many of the exhibits of the White City by the sense of touch alone.

We know that under the handling of different persons the baby will either be soothed or irritated. But most of us have never thought, perhaps, how the irritation may mar, or the soothing make, the future of the coming man or woman. There is the jerking, nervous woman, who works by fits and starts, and tosses the baby about, turning it this way and that, making many unnecessary moves. When washing, dressing, or holding it, it is kept in a state of suspense, never knowing what to expect. She handles the baby as if it were a lump of inanimate matter, and wonders why it cries, screams, and resists the dressing process so vigorously.

Then there is the fearful, uncertain handling of the baby, practiced mostly by the young mother, who, married without any instruction or practical knowledge of the duties of maternity, finds herself face to face with the responsibility of a living baby. About its care and needs she is as ignorant as the infant itself, if she has been brought up to shirk all other of life's responsibilities as well. She will handle the baby in a timid, uncertain manner, turning it over gingerly and awkwardly, as if she was afraid it would bend or break, touching it with her fingers as if she was afraid it was soft and putty-like and a finger dent would harm it. The little one has the instinctive fear that it may be dropped, and becomes infected with its mother's uncertainty, every time it is thus handled learning a lesson in indecision, and laying the foundation of an unstable character.

There is the cold, indifferent, careless touch and handling; and the hurried, harsh touch and handling. In one the infant gets a lesson of distrust, and in the other a sensitive, timid child learns a lesson of fear. Fear and distrust make so many of life's failures, as well as laying the foundation for either pauperism or crime.

Many other kinds of wrong touching and handling might be mentioned, but we will pass on to the proper, gentle, firm touch and handling of the infant by the gentle, trained, steady hands of the experienced nurse or mother who, being gifted by nature with love for the young and helpless, has been diligent to acquire by patient study and practical experience a knowledge of the baby's needs. She takes hold of it with a gentle, yet firm, confident grasp, which makes it feel that some one has a hold of it whom it can trust, some one who will shield and protect its helplessness, and an education of faith and confidence begins. When she turns it over, there are no awkward, useless, uncertain movements. But baby knows that what is expected will be accomplished, a valuable lesson, too, in doing work well, in assuring the success which attends work well done in after life. When she washes baby, she applies the sponge, wash-rag, or her hand so as to touch the baby gently, yet firmly, with the whole surface of the hand or sponge. Her motions, swift and regular, are soothing to the baby, and it coos and laughs and enjoys its morning and evening toilet. When frightened, grieved, passionate, or excited, the gentle, firm clasp of this tender mother quiets, sooths, and calms the nervous storm, and the very essential lessons of self-control are begun to be learned by the young life voyager. From this very tiny seed of self-restraint, communicated to the helpless infant by the mother's loving clasp and firm touch, may grow a strong, inflexible will, which, coupled with a noble, true conscience and a quick perception of wrong, reinforced and enlightened by a lively Christian experience, may lead the young

man or woman safely through the slippery paths of youth, and enable them to resist the fascination of the wine cup, and avoid the house of ill fame. It is from the tiny seeds that the tallest trees of the forest grow.

There are other things which touch the baby's skin either for its future weal or woe. Flannel underwear has been a great blessing to the human family, but there are a great many persons to whom flannel in contact with the skin is an unmitigated torture, and more of these are babies than adults. Many a fretful infant is wearing out its mother and all the family, besides demoralizing its own temper and injuring its health, because no one understands that it wants to be relieved of its flannel shirt. I have been called several times to treat such cases for hives and other skin diseases, which resisted all other measures until a layer of soft cotton gauze was interposed between the skin and the flannel, when the eruption disappeared, the crying ceased, and all was happy and serene.

There are certain portions of the body which ought to be specially guarded against wrong touching, markedly the external sexual organs. In common with other physicians, I have been amazed at the prevalence of self-abuse among very young children. And years of experience and observation have convinced me that the cause of the formation of this habit in infancy came from the attempt of the child, by rubbing and scratching, to relieve the itching and irritation due to the contact of stale urine, fæcal matter, and other dirt, and the overheating of the many thicknesses of diapering, causing chafing and the formation of ulcers and pimples. The habit once formed, like all other bodily habits, becomes fixed by repetition, and soon leads to the demoralization of a human life. Tact is truly a valuable accomplishment, for it means in the original "proper touch." The safeguard of the young is the formation of proper habits of life, and the younger this education is begun the better the success, and no mother or nurse can tell what the final outcome of the tiny seed of character planted by proper or improper touch may be.

MENTAL INFLUENCE OF EXERCISE.— Dr. Luys, in his interesting work on the functions of the brain, instances the fact that the amputation of a limb in early life is followed by a non-development or atrophy of the portion of the brain which normally controls the part amputated. From this conclusion, it is evident that exercise of a muscular organ develops that part of the brain which is organically connected with the organ.

Dr. John Deavor has shown that the convolutions of the brain are unusually developed in men who make great use of the arms and legs. The employment of exercise in the treatment of imbeciles and feeble-minded children has shown its great value as a brain stimulus.

EMOTIONAL STRAIN.— Teachers are fully aware that this is a fluctuating factor in each child, dependent on the weather, fatigue, excitement, and other circumstances.

Of these circumstances, those which affect the equilibrium of power are among the most important. There is a large class of irregular mental or emotional states which are unfavorable to the complete health and steady activity of the mind. The so-called depressing emotions — timidity, despondency, anxiety, and discontent — often interfere with the mental health, producing actual and very marked lowering of the powers of execution. No scholar ought to be allowed to remain under the influence of them. It is the teacher's place to find out the cause, and remove it if possible. In a certain number of cases, they may be due to unkindness or neglect coming from the teacher or the playmates. A neglect to award merited praise either wounds or hardens the one who feels the injustice. Again, all these depressed states may be a sign of overwork, want of exercise, bad air, want of sleep or food, etc.

A child must not be spared all that is irksome. Quite the contrary of this, the performance of irksome duty is one of the best lessons taught in school. But it is undesirable that he should feel the object of his study a worthless one, or should find his best efforts unsuccessful. I venture to suggest that, in these respects, the teacher needs as much of our sympathy as the scholar. Too much drudgery is laid upon her in correcting exercises, looking over examination books and papers, making up averages of marks, weekly and monthly reports, and other "school statistics." It is hard and unsatisfactory to have to give hours of the time needed for mental refreshment to the production of a few numerical results, which are probably destined to lie idle on a shelf.— *D. F. Lincoln, M. D.*

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

PASKOLA.

We do not often advertise patent medicines even by publishing an analysis of them, but so many inquiries have been made concerning Paskola that we are tempted to publish the following analysis which was made some time ago by the National Department of Agriculture, of Washington, D. C. : —

In appearance the liquid is a yellow, viscid fluid, smelling and tasting of sulphur dioxide. The analytical numbers obtained are as follows : —

Specific gravity at 17.5°	1.4062
Total solids, per cent.	78.58
Water, " "	21.42
Polarization on sugar scale	162.40
Reduction as per cent dextrose	33.52
Nitrogen, per cent.	0.04
Albuminoids, per cent	0.25
Ash	0.64

Calculating from the total solids, reduction, and polarization, the following figures are obtained : —

Dextrine, per cent	40.96
Dextrose, " "	26.84
Maltose, " "	10.78
Total,	78.58

By a recent letter from the manufacturer we are informed that Paskola now consists of glucose (corn syrup) with .1 per cent of hydrochloric acid (muriatic acid or spirits of sea salt) and animal ferments. A test of this mixture made in the Laboratory of Hygiene of the Battle Creek Sanitarium, showed that it is utterly devoid of digestive properties.

An equal quantity of New Orleans molasses, which costs at wholesale fifteen cents per gallon, containing about ten drops of hydrochloric acid to the pint, will be fully equal to Paskola as a medicine, and of a little higher value as a food.

From these facts it will appear that the price at which this mixture is sold — $1 for a pint bottle — affords a fair margin of profit for the manufacturer. The cost, besides the bottle, cannot be over three or four cents a bottle, at the outside. It is a matter of amazement that any intelligent person can be wheedled into the idea that such an absurd mixture is curative.

The Influence of Odors upon the Voice. — Dr. Joal (*Journal d'Hygiene*) has recently made an interesting investigation of this subject, including in his researches lawyers, professors, singers, and others who make professional use of the voice. The investigator undertook to ascertain whether the odors of artificial perfumes and of flowers, are capable of producing disturbances of the vocal organs in susceptible persons. He found that a majority of singers have no doubt upon this point, many of them finding it necessary to avoid, with great care, certain perfumes, especially those of violets, just before singing.

This fact, however, has never been previously published. Dr. Joal has taken pains to examine the vocal organs of several singers, and also to test the lung capacity by means of a spirometer. He has been led to the conclusion that, in addition to symptoms previously indicated by others, migraine, vertigo, syncope, fainting, spasms, convulsions, nausea, vomiting, palpitations, and cardialgia, odors are capable of producing changes in the voice.

The disturbance may relate to either the resonant, the vibratory, or the motor element of the voice. The following is the explanation of this disorder : The olfactory impression produces, primarily, a nervous reflex by which there is produced an orgasm of the erectile tissue of the nose, and excita-

tion of some filaments of the trifacial nerve, from which a secondary reflex arises, resulting in various manifestations, as follows: —

1. Vasomotor disturbances of the nasal mucous membrane (pharyngitis and laryngitis arising by propagation).

2. Vasomotor disturbances of the laryngeal mucous membrane (with consecutive paralysis of the constrictor muscles).

3. Nervous cough (with consecutive vocal congestion).

4. Spasms of the muscular walls of the small bronchi.

The result of these reflex symptoms may be to modify the quality of the voice, to render high notes less easy, less clear, to produce huskiness or even aphonia; the respiratory power may be diminished, resulting in the diminution of the intensity, the volume, or the duration of the tones, or a rapid loss of power in singing.

These changes are especially observed in nervous persons who are hypersensitive, and especially in neuropathic arthritics. Hypertrophy of the nasal mucous membrane also establishes a predisposition to susceptibility to odors.

An intra-nasal application of cocaine affords temporary relief in these cases. [It should be recollected, however, that the cocaine habit might be easily established by the use of cocaine in this manner, and hence, in this case, the remedy may prove to be even worse than the disease.]

Poisoning from Dried Beef and Pressed Chicken.— Two cases of poisoning from decomposing animal food have recently occurred in this State. Both cases were reported to the State Board of Health, and placed in the hands of Prof. Vaughan, Superintendent of the Laboratory of Hygiene at Ann Arbor, Mich., for investigation.

At one of these cases, a number of persons residing at Summerset Center, Hillsdale County, were poisoned by eating dried beef. Professor Vaughan reported at the last meeting of the State Board of Health, that he found on investigation that the meat contained a small germ, which, when injected under the skin of rats, guinea-pigs, and rabbits, produced death in twenty-four to forty-eight hours.

In the other case of poisoning, which occurred at Sturgis, two hundred persons who ate of pressed chicken at a banquet, were poisoned. The bacteriological study of the sample of chicken sent for investigation showed that it contained germs, which, when injected into guinea-pigs, produced death, although it was not sufficiently virulent to kill rats.

Cases of this kind are becoming more and more frequent, indicating very clearly that persons who use flesh food must under all circumstances use extraordinary care to avoid serious or even fatal poisoning.

Effects of Wine and Tea upon Digestion.— The popular idea that tea, coffee, cocoa, wine, and other beverages commonly used at meals, promote digestion, has been clearly proven by reliable physiological experiments to be an error. According to J. W. Frazer and W. Roberts, all these substances interfere with digestion. Tea, coffee, and cocoa retard the digestion of proteids, although the action of coffee is somewhat less intense than that of tea. The volatile oil as well as the tannic acid of tea, was found to have a retarding effect upon peptic digestion. It is well that this fact be known, as the idea has become prevalent that tea is harmless if the infusion is quickly made so as to obtain the volatile oil without so great a quantity of tannic acid as is dissolved by longer infusion. Wine also retards peptic digestion, as was clearly shown by W. Roberts. This effect of wine and other alcoholic liquors was so marked that Sir William Roberts concluded, as the result of his experiments, that wine and other alcoholic liquors are chiefly useful as a means of slowing down the too active digestion of the modern civilized man, thus acting as a safeguard against what he terms "a dangerous acceleration of nutrition." However much the digestion of the average Englishman may require slowing down, the average American certainly does not need to put breaks upon his digestive apparatus.

Both Roberts and Frazer also showed that the effect of wines and tea is inimical to salivary digestion. Tea, even in a very small quantity, completely paralyzed the pytalin of the saliva, while wine promptly arrested salivary digestion. Salivary digestion was not formerly considered a matter of very great consequence, as it was supposed that the action of saliva upon the digestion of food was quickly suspended in the stomach by the secretion of hydrochloric acid; but the observations of Ewald and others, which have been confirmed by the writer in the chemical examination of more than eleven hundred stomach liquids, indicates that salivary digestion proceeds in a normal stomach so rapidly as to cause the complete disappearance of starch by the end of the first hour after digestion has begun. Many cases of intestinal dyspepsia are doubtless due to the failure of salivary and peptic digestions in the stomach.

THE HYGIENE OF BRIGHT'S DISEASE.

In Bright's disease, general hygiene and alimentary hygiene are of the first importance and constitute the true therapeutics. Drugs, properly so-called, are only of secondary importance, or at least are only of occasional utility. This is a point of the greatest importance, and one which the physician should never forget, and which he should impress, not only upon the patient, but also upon his friends. How many times we have seen, in hospital service, subjects of Bright's disease suddenly taken with acute symptoms as the result of too amiable bed neighbors' furnishing them with interdicted food. How many times, in our clinic, have we seen aggravations of the disease due to the temptations which surround the unhappy subject of Bright's disease. "Take this;" "drink that," they say, "just for once; it will not make you sick." The patient yields to the temptation, and the next day he sees his symptoms aggravated. We repeat, then, it is the duty of the physician to be severe — very severe — with reference to the general and dietetic hygiene of Bright's disease. Any imprudence, any departure from the prescribed regimen, may be attended by serious consequences, and may even compromise a cure and place the life of the patient in danger, or at least, cause him to lose, for an ephemeral gratification, the benefits of treatment which he has received during a more or less prolonged period.

Whenever acute or subacute symptoms occur, the patient must be sent to bed. We have always found it advantageous in these cases, as a habitual practice, to discard bed sheets of linen or cotton. We require our patients to sleep between flannel or woolen blankets. At first the patients complain a little of the contact of the wool, but very rapidly become accustomed to it, and experience great advantages therefrom.

When, in consequence of dyspnœa, the patient is unable to remain in bed, he must be very carefully wrapped and protected in an easy-chair, against every possibility of chill.

When out of bed, the subject of Bright's disease must always be dressed with wool in direct contact with the skin. As a further protection from the cold, he is advised to spend the damp season of the year in the South, and to be very careful to protect himself from atmospheric changes. Sea-baths in summer must be interdicted. Those patients who have, in spite of our advice, indulged in sea-baths, have found themselves notably worse in consequence.

Wool applied to the skin in Bright's disease, has not only the advantage of protecting the skin against the impression of cold, but also gently stimulates the functions of the skin. The last object may be attained more completely and efficiently by dry friction with the hair glove. It is necessary, in our opinion, that the subject of Bright's disease should give to himself, or have administered to him, every day, preferably in the morning, a general rapid friction of the whole skin with the hair glove. This friction should constitute a part of the toilet. It removes from the skin all detritus, and stimulates its important eliminative functions in a most salutary manner.

If absolute repose is not indicated by acute or subacute symptoms, if walking is not prevented by œdema of the legs, the subject of Bright's disease should exercise moderately, but should never go so far as to induce great fatigue, and should take every possible precaution against chill. The bicycle, so popular to-day, so valuable in other cases, — may it be permitted to the subject of Bright's disease? Recently, Dr. A. Robin has reported to the Academy an observation. A man forty-four years of age was

atheromatous, slightly polyuric and albuminuric, hence subject to suspicion of Bright's disease, and who saw during three months in which he made use of the bicycle, at first an increase, then a diminution of the albumin in the urine.

Without wishing to generalize, M. Robin claims that the use of the bicycle, even in moderation, must be prohibited to persons who have traces of albumin in the urine, at least in cases in which one suspects that this albuminuria is related to a commencing renal sclerosis. For our part, though very partisan to the bicycle, we do not hesitate, after making many personal observations in relation to the matter, to absolutely prohibit this exercise to subjects of Bright's disease. Walking and horseback riding are the only exercises suitable for the subject of Bright's disease. When exercise is, for any reason, not possible, such patients should have recourse to massage.

Women suffering from Bright's disease should not be allowed to marry, or, at least, should not become pregnant, as all will agree. Men suffering from Bright's disease must, in our opinion, exercise the greatest moderation in respect to sexual relations. We have observed cases in which sexual indulgence has contributed largely to the aggravation of symptoms.

Tobacco is an enemy to the subject of Bright's disease. We have observed in the subjects of Bright's disease under our care in the hospital service, acute attacks which could not be explained otherwise than by the use of tobacco, by chewing, snuffing, or smoking. If tobacco does not act directly upon the kidney, it is at least unfavorable to the heart, which is already sufficiently threatened by Bright's disease.

As to alcohol, all are agreed in recognizing that in any form it can only be harmful to the subject of Bright's disease.—*Modern Medicine.*

ANSWERS TO CORRESPONDENTS.

PAIN BETWEEN SHOULDER-BLADES — TENDERNESS AND PRESSURE BEHIND EARS, BACK OF HEAD AND NECK, ETC.— J. T., N. Y., writes: "1. Several years ago a pain commenced between the shoulder-blades, following the spine to the neck. From there the pain has extended up the back of the head. It is steadily growing worse, so that at times I cannot sleep for the pain. There is a tenderness and pressure behind the ears and through the back of the head. There is also a dizziness, and a cold streak follows the spine. I have used hot applications for several months, but have been only temporarily relieved. Please give a name to this disease. 2. Would this affection cause loss of memory and confused ideas? 3. Would electric treatment benefit me?"

Ans.— 1. On investigation it will probably be found in this case that there is a tenderness at the epigastrium, or pit of the stomach. The patient is probably suffering from dyspepsia, and the pain referred to is only the reflex disturbance resulting therefrom.

2. Yes.

3. Probably; but the most important measures are regulation of the diet and treatment of the stomach. This patient should send more definite particulars of symptoms for a special form of prescription.

CATARRH OF THE STOMACH — DIET, ETC.— E. B., Ill., writes thus: "1. I have catarrh of the stomach, I think. When I take a stomach wash, a black, tough mucus comes up. I am troubled a great deal with gas in the stomach, and it affects the heart, causing it to miss beats. I never have any pain in the stomach, and yet the trouble there affects the nerves, and my limbs get so weak I can scarcely walk. What ought I to do for myself? 2. What food ought I to eat? 3. Three years ago I was told by Dr. Kellogg that I had retroversion of the uterus. Does this have any connection with the stomach difficulty? 4. Last year there was a cessation of the menses for three months, and at the end of that time my stomach seemed nearly well, but on their return the stomach was again affected and has continued so. Why was this? 5. Is cream more easily digested than milk? 6. What is the condition of the stomach when there is a sweet taste in the mouth and throat? 7. Which is the worse symptom, a white or a brown coating on the tongue?"

Ans.— 1. You ought to visit the Sanitarium for treatment. Your case is doubtless too complicated to treat at home.

2. A careful examination of the stomach fluid is necessary for an exact prescription diet.

3. There may possibly be some relation between the two affections.

4. This symptom would indicate a close connection between the two affections.

5. Yes.

6. There is probably hypopepsia.

7. The white coating, with red edges of the tongue, indicates irritation or inflammation; the brown coating indicates a foul condition.

ULCERS ON THE EYES — INFLAMMATION, ETC.— A reader, Tenn., writes: "1. I have been having trouble with the eyes for over two years, having had ulcers part of the time, and also inflammation. The edges of the lids have been scaly, or little dry particles like dandruff would come off. Is this the case usually with affections of this kind? 2. I am now wearing glasses for astigmatism, have worn them a number of weeks, but do not see nearly as well as without them, that is to any distance. When I first put

them on, most objects at a certain distance slanted, and this is still the case; but the doctor who fitted the glasses says that I am far-sighted, and that it will take two or three months for my eyes to get accustomed to them. Is this probably true?"

Ans.— 1. Yes.

2. It may be; but possibly the glasses may not fit. You should be sure that you consult a reliable oculist.

CATARRHAL SORES — RHEUMATISM — SULPHUR BATHS, ETC.— G. W. M., Cal., writes: "1. My wife has catarrhal sores in the ears, and the bronchial tube is also affected. She also has rheumatism at times, and has severe pains in the back and hips before and during menstruation. What treatment would you advise in her case? 2. There are hot sulphur baths near us. Would you advise their use?"

Ans.— 1. We would advise that she visit the Sanitarium. She evidently has a complication of ailments which simple treatment will not cure. The case must have thorough examination and treatment.

2. Warm baths properly administered might possibly be useful.

THE EYEBROWS.— S. B. K., Pa., asks: "Is there any treatment that will increase the growth of the eyebrows?"

Ans.— The best means of promoting the growth of hair upon any part, is bathing in cold water and massage with vaseline or oil.

DIET TO INCREASE FLESH.— An inquirer, Pa., writes thus: "1. I am a boy eighteen years old, quite tall, but weigh only 115 pounds. Have tried both wine and lager beer, but they do not help to put on flesh. What diet ought I to take? 2. How much water ought I to take during the day, and at what time? 3. Has a very heavy growth of hair anything to do with my lack of flesh? 4. Would you recommend cod-liver oil, or any of the advertised remedies, for my case?"

Ans.— 1. Fruits, grains, graham, and nuts is a most effective diet.

2. Two or three pints.

3. No.

4. No.

THE "OXYDIZER."— Miss R. C., N. Y., writes: "Please give your opinion in regard to the instrument, the patent of a Dr. Sanche, called the 'Oxydizer.' It is supposed to cure the various ills of mankind from a slight indisposition to a cancer, by introducing oxygen obtained from water, into the system."

Ans.— Our opinion is, that it is a humbug.

REMOVAL OF FRECKLES — CLEARING THE COMPLEXION, ETC.— Miss G. D. R., Ohio, asks: "For the removal of freckles, how should the prescriptions given in 'Monitor of Health,' be applied? 2. What would you advise as the best thing for clearing the complexion? 3. What for the removal of pimples?"

Ans.— 1. As a solution.

2. Pure diet, free water-drinking, and abundant exercise in the open air.

3. Get rid of the indigestion which is the probable cause.

DIET — VINEGAR — NUTS, ETC.— Mrs. A. G. M., Mich., asks: "1. What kinds of food is it advisable for one to take who is troubled with gas in the stomach and bowels, together with constipation and piles? 2. Where the digestive powers are weak, are such foods as corn bread, warm graham bread, maple syrup, potatoes, squash, lettuce, fruit jellies, and all kinds of ripe fresh fruit permissible? 3. Is the use of vinegar injurious? 4. Are all nuts healthful as a food? 5. What is the 'companion volume' of GOOD HEALTH this year?"

Ans.— 1. We can recommend nothing better than granose. It would be well also to use antiseptic charcoal tablets after each meal. Granose can be obtained from the Sanitarium Health Food Co., Battle Creek, Mich.; the tablets can only be obtained from "Modern Medicine" (same address).

2. All the foods mentioned should be interdicted, except such ripe, fresh fruits as grapes, peaches, and strawberries, eaten without sugar.

3. Yes.

4. Fresh nuts are healthful, if well chewed.

5. "The Monitor of Health" is still offered.

TARTARIC ACID — KIDNEY DISEASE, ETC.— H. W., Cal., asks: "1. Is tartaric acid used in canning green corn? 2. If so, is it not injurious to the stomach? 3. Does a constant pain across the hips and sometimes down the legs indicate kidney disease? 4. It there a disease of the head which is called dry catarrh? 5. If so, what are its symptoms? 6. I have pain in the bowels most of the time, which causes me to feel quite weak. At times I have a dull headache. What is the cause of these symptoms? 7. Please suggest diet and treatment."

Ans.— 1. No.

2. Yes.

3. No. It usually indicates a disturbance of digestion or prolapse of the bowels and kidney.

4. There is such a disease as dry catarrh of the nose. The condition, however, is more properly termed the third stage of nasal catarrh.

5. Dryness of the mucous membrane and an offensive odor of the breath.

6. Indigestion and disturbance of the abdominal sympathetic nerve.

7. Eat dry food; granose, granola, zwieback, and similar foods are excellent for you. Avoid milk, butter, cheese, and meat. Write Sanitarium Health Food Co., Battle Creek, Mich., for circular of health foods. I might mention the antiseptic tablets, which will doubtless help you. It would be well for you to have a home prescription, but better still for you to visit the Battle Creek Sanitarium.

TINCTURE OF MYRRH — ALCOHOL, ETC.— Mrs. I. W. B., Conn., asks the following questions: "1. Is tincture of myrrh a good medicine for sluggish bowels when the ex-

creta is apt to have a fetid odor? 2 Is alcohol beneficial when used to rub the spine? 3. I am in the habit of using an inch chip of slippery elm bark at night, holding it in the mouth over night to lubricate the throat; would it be injurious to add one half a clove?"

Ans.— 1. No.

2. Alcohol is no better for the purpose than a solution of salt and water.

3. Probably not.

Pain in the Bottom of the Foot.— H. H. P., Wash., writes. "I have a sharp pain in the bottom of my right foot when I walk with the shoe on. It seems to be just under neath the skin,— a kind of cramp, and sometimes it almost stops when walking, and extends out into one of the small toes. There is no soreness at all and no pain when without a shoe. What is probably the cause of the pain?"

Ans.— The foot should be examined by a surgeon. A hot foot-bath might be beneficial. Massage also will doubtless be beneficial, and probably electricity.

Bleaching the Face.— F. A. H. writes: "Kindly tell me of something that will bleach the face without injuring the skin."

Ans.— An oatmeal poultice.

Glycerine — Salt, etc.— A subscriber asks the following questions: "1. May glycerine be used in a nasal catarrh douche? 2. Would salt applied to the scalp cause the hair to grow? 3. Would it cause the hair to curl? 4. Might not glycerine be used as an oil for the hair? 5. Please give a remedy for 'cold sores.'"

Ans.— 1. Yes, in small amount.

2. A solution of salt is more stimulating than water only.

3. No.

4. Neither glycerine nor oil are necessary for the hair. The best method is to stimulate the scalp by rubbing in cold water. This promotes the secretion of oil, the natural lubricant for the hair.

5. As soon as the sore makes its appearance, touch it with a little spirits of camphor.

Rash — Putting up Fruit without Sugar, etc.— Mrs. P. M., Manitoba, asks: "1. Would the free use of milk cause children to break out with a rash? 2. Please give recipe for putting up fruit without sugar. 3. Will fruit thus put up keep for any length of time? 4. How may corn and green peas be put up for winter use? 5. May glass bottles be used as well as tin cans? 6. Is vinegar, after being scalded, harmful for table use?"

Ans.— 1. Indigestion of milk or any other food will result in an eruption.

2. The usual method of canning.

3. Yes, just as long as though put up with sugar.

4. Vegetables require cooking at a higher temperature than fruits. They must be boiled in closed vessels in a saturated salt solution, or by means of steam and pressure.

5. Yes, with proper precautions, but are not so convenient.

6. Scalding somewhat diminishes the acidity of the vinegar and destroys the parasites in it, but does not render it wholesome.

Regurgitation of Food — Diet, etc.— An Australian subscriber writes: "1. I am troubled with regurgitation of food, which occurs any time from just after a meal to three or four hours after. If the food is allowed to come up, there is only the present discomfort; but if the eructations are kept down, there is a painful flatulence and distention, presumably in the small intestines, since it requires a large enema to reach the obstruction. Please advise me as to the cause and relief of these symptoms. I am thirty-six years of age. I had an operation for piles some time since. 2. Does inodorousness of the fæces indicate a healthy condition of body, or otherwise?"

Ans.— 1. Your case is a peculiar one. We would suggest that dry food be eaten, and that great pains be taken to chew the food very thoroughly.

2. Normally, fæcal matters possess very little unpleasant odor.

Neuralgia—Scrofula.— H. H., Wis., asks: "1. Can you give me a prescription for neuralgia? My wife has been troubled with neuralgia in the face for several years, at times so bad that it is difficult for her to talk, or masticate her food. Her health is otherwise good. Her age is sixty-one years. 2. What treatment ought to be given for scrofula, where the patient is badly broken out on the body and limbs?"

Ans.—1. Neuralgia is generally the result of indigestion. Granose and granola and the charcoal tablets, recommended in a preceding case, will doubtless be found helpful. Hot fomentations will give temporary relief.

2. A cold bath two or three times a week, with a few ounces of sal soda added to the water, will doubtless be helpful. Probably the patient's stomach and bowels are in a disordered state and have not proper attention.

Wheat Bran as a Laxative — Lemons, etc.— C. C., Ill., asks: "1. Is wheat bran useful as a laxative? 2. If so, how should it be used? 3. Is it a good thing to use lemons with hot water in the morning? 4. What causes one to have a trembling feeling in the morning? 5. What is the remedy? 6. What is the best food for breakfast for a hard-working man who eats at 4:30 A. M.? 7. What is best for supper at 7 P. M.? 8. What kind of malt is best for a laxative?"

Ans.—1. In some cases.

2. One or two tablespoonfuls. Granose is, however, a much better remedy for constipation than bran.

3. Yes, for most persons.

4. The weakness is probably due to indigestion.

5. Find the cause and remove it.

6. Graham bread toasted hard, oatmeal mush, cracked wheat or grits, and milk.

7. A little fruit.

8. We do not recommend malt for this purpose. Granose and antiseptic tablets are better.

RELIEF DEPARTMENT.

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

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

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

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

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

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

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

☞He wishes especially to state that those who apply for children will be expected to accompany their applications by satisfactory letters of introduction or recommendation.]

No. 256 is a boy six years old, having blue eyes and light brown hair. He is just as needy and deserving of a home as an orphan. His stepfather has deserted him, and his mother, who is failing rapidly with that dread disease, consumption, wishes to see him placed in a good home. He has been living in the country, not having had many associates, and has not been neglected. He is with relatives in New York, who can care for him but a short time longer.

NOS. 262 AND 263.— A little boy and girl eight and six years old living in Pennsylvania, have been brought to our attention. They are motherless, and their father, being in very poor circumstances, needs assistance. He desires to place his children in the homes of Christian people. We learn that they are good children, easy to teach, and of good appearance. They are now with their aged grandparents, who cannot care for them longer.

WORSE THAN ORPHANS.— Two colored children living in Colorado have lost their mother, and as nothing is now known of their father, they surely deserve the sympathy of those who have an interest in those who are needy. The oldest (No. 266) is a boy twelve years old, while the little girl (No. 267) is only four. These children had a mother who gave them good care, and we earnestly trust that some one will deem it a privilege to take these little ones and direct their feet into the right path. The person who writes us concerning these children says, "I believe them to be bright, active children, with no bad habits."

No. 270 is a boy ten years old, living in Ohio. His father is dead, and his mother is in such poor health that she cannot care for him. He has brown eyes and hair. His health is good. He has never been sick. He is said to have a kind disposition, and has not been neglected.

No. 272 is a German boy who is now living in Nebraska. His father and mother are both dead, and the little boy, now at the age of thirteen years, is left homeless. He has gray eyes and dark hair, and his health is fair. Some friends are at the present time caring for him, but cannot provide a home for him much longer. They say that he has shown a desire to do right, and we trust that in a new home, which we hope can be provided for him, he can be surrounded with those influences which will be the means of developing in him a beautiful character.

No. 283 is a little girl five years old who is now living in Indiana. She has blue eyes and light hair, is in good health, is said to be obedient, and religiously inclined, also very affectionate and loves those with whom she associates.

Her brother, No. 284, is three years of age, with blue eyes and light curly hair. He is an active little fellow, in good health and admired by those who know him. The father has had chances to place these children in homes, but he is anxious that they be placed in a Christian family. The father has cared for the children, but he is unable to care for them and earn a living too. He will be glad of some assistance. Only those who can give these children religious as well as educational advantages need apply.

HERE is a bit which, coming from one of the greatest of living missionaries, John G. Paton, shows what

men to whom the souls of men are of highest value think of child-saving : —

"Often, as I have looked at the doings of men and churches, and tried to bring all to the test as if in Christ's very presence, it has appeared to me that such work as Müller's and Barnardo's, and that of my own fellow-countryman, William Quarrier, must be peculiarly dear to the heart of our blessed Lord. And were he to visit this world again, and seek a place where his very Spirit had most fully wrought itself out into deeds, I fear that many of our so-called churches would deserve to be passed by, and that his holy, tender, helpful, divinely human love would find its most perfect reflex in these orphan homes. Still, and forever, amid all changes of creed and of climate, this, this is 'pure and undefiled religion before God and the Father'!"

THE children, NOS. 257 and 258, have been placed in a home in the State of Maine. We are glad that a kind mother has taken both of them, so they will not be separated.

No. 280. — Word comes to us from Wisconsin of a girl nearly fourteen years old whose mother is working hard to support two children and a husband who is ill. This girl has gray eyes and brown hair, and is said to be bright, but she needs a strong, yet kind hand to guide her.

No. 281 is a Swedish boy with brown eyes and dark hair, having good health and is ten years of age.

No. 282 is his brother seven years of age. He has blue eyes and light hair. The father and mother of these children are both dead, and they have been cared for by their grandparents for three years. They cannot provide for them longer, and rather than place them in the poorhouse they apply for a place in a private family.

NOS. 285 and 286 are boys living in Pennsylvania. Their condition is like several that have been referred to us before, and from what we learn of them we are satisfied that they are worthy of help. Their father is dead and the mother not able to care for them. She has tried for the past few years to keep them with her, not wanting to part them, but has now reached the point where she can see no other way to do than place the children in homes. The boys are seven and eight years old, have blue eyes and brown hair, and are in good health. The mother has kept them with her most of the time.

A FEW days ago we saw one of the children that was placed in a home about a year ago. Her mother says she could not get along without her. When we saw the child running around so happy, we felt grateful that instead of a street education she has a kind hearted mother who has already had two orphan children in her home, and we are sure she will direct the feet of this little one in the right way. Can any one conceive of a work more noble than that of training one of God's "little ones"?

PERSONS making applications for children advertised in this department are requested to send with their applications the names and addresses of two or more persons as references. If possible, these should be known, either personally or by reputation, to some member of the Board of Trustees.

CLOTHING FOR THE POOR.

THE call for clothing of all kinds and the numerous offers to supply assistance of this sort, have led us to organize a Clothing Department to receive and properly distribute new or partly worn garments which can be utilized for the relief of the very poor. In connection with this work it is very important that a few points should be kept in mind and carefully observed : —

1. Clothes that are so badly worn that repairs will cost more in money or labor than the garment is worth, will of course be of no service. Garments that are old, though faded, or which may be easily repaired by sewing up seams, or made presentable by a few stitches judiciously taken at some point in which the fabric is nearly worn through, may be utilized to most excellent advantage. But garments so badly worn that they need extensive patching, or clothes which have become much soiled and grimy by long use in some dirty occupation, should find their way to the rag bag instead of the missionary box.

2. Freight must always be prepaid. It costs as much to send 25 pounds or any amount less than 100 pounds as to send the full 100 pounds ; consequently it would be well for those who think of sending clothes to be used in this department, to put their contributions together in one shipment, so as to get the benefit of the 100-pound rates. *We are obliged to ask that freight should be prepaid as a means of preventing loss to the work in the payment of freight upon useless packages.*

3. Clothes that have been worn by patients suffering from any contagious disease — such as typhoid fever, erysipelas, consumption, and skin disorders of all sorts, as well as scarlet fever, measles, mumps, diphtheria, and smallpox — should not be sent. Infected clothes may be rendered safe by disinfection, but we cannot trust to the proper disinfection of such garments by those sending them, who, in the majority of cases, are quite inexperienced in such work ; neither should those who unpack the clothes be exposed to the risk of contamination while preparing them for disinfection at this end of the line. Such clothes should, as a rule, be destroyed. If they are not destroyed, almost infinite pains is required to render their use perfectly safe.

4. All articles received here are carefully assorted and classified, and are then placed as called for, where they will do the most good.

5. Clothing intended for the Chicago mission should be sent to Chicago Medical Mission, 40 Custom House Place, Chicago, Ill.

LITERARY NOTICES.

Scribner's Magazine for July will open with an article on "Athletic Clubs" by Duncan Edwards, which will contain nearly forty illustrations of the great clubs in this country, such as the New York Athletic, the Crescent, the Chicago, the Olympia of San Francisco, and the Boston. This is the most comprehensive article that ever has been published on the subject. The famous Molly Maguire movement in the coal regions of Pennsylvania is dramatically summarized in this number. The great railroad strikes of 1877 are also described, with a very telling picture of the great round-house siege in Pittsburgh. Mildred Howells, a daughter of the novelist, has a poem with a decorative head-band by the author.

THE Experiment Station connected with the State Agricultural College has recently issued several bulletins upon horticultural topics that are of value to every person who has a garden or a fruit tree. These bulletins are sent by mail, postpaid, to all persons desiring them.

If any of our readers desire these bulletins, write to I. H. Butterfield, Agricultural College, Mich., and request that they be mailed to you.

WE have examined a package of the cards employed and an explanation of a unique system of missionary work termed "Silent Evangelism," devised by Richard B. Wightman, of Battle Creek, Mich., and in our judgment it seems to be just the thing required to set a hundred thousand laymen at work in a most effective way. The cards are artistically attractive, and the subject matter has been prepared with such care that there is no chance of giving offense. Millions of these cards will be used. They only need to be seen to be appreciated by all Christian workers.

"ALMOST A MAN."— By Mrs. Mary Wood-Allen, M. D. Published by the author, Ann Arbor, Mich.

This carefully written little brochure is most valuable both in counsel and suggestion to those having the care of boys and youth. The conversation herein given of Dr. Barrett with the boy Carl may well serve as a model to parents and instructors everywhere. When these troublesome problems which now confront all those having the good of the young at heart shall come to be dealt with in a like wise manner, the number of pure, self-respecting young men throughout the country will be greatly increased. Youth trained in this way, will be, both as boy and man, careful of their own honor, and so will be careful for their young girl friends as well, and innocence will then need no better protector. This valuable little book should be ordered by the hundred for gratuitous distribution, that it may be the means of doing a great educational work in the interest of social purity in homes and in schools.

"THE FAMILY CIRCLE."— By Rev. H. L. Hastings. Published by H. L. Hastings, at The Scriptural Tract Repository, 47 Cornhill, Boston, Mass. 318 pp., cloth. Price, $1.

This is one of a series of volumes for family reading, by the editor of *The Christian*, for which the author gives the *raison d'etre* as follows: "In conducting a monthly paper from which all fiction, controversy, sectarianism, politics, puffs, pills, and patent medicines are rigorously excluded, much matter has been prepared for its columns which has been thought worthy of preservation. Accordingly, in compliance with the request of many readers we have gathered up the fragments that nothing may be lost," and this matter is embodied in the series mentioned. To many in the religious world, Rev. H. L. Hastings, as editor, author, preacher, and publisher, is well known, and anything from the pen of so fluent a writer and so devoted a Christian worker will be highly prized. And indeed all who appreciate interesting and deeply religious books suitable for the use of every member of the family, will give this series a warm welcome.

"A HAND-BOOK OF LOUISIANA."— Compiled for the State Immigration Association, by Wm. C. Stubbs, Ph. D., director of State Experimental Stations.

This is a pamphlet of over fifty pages, giving the geographical and agricultural features of the State of Louisiana, together with the crops that can be grown on its soil, and a description of each parish in its relation to climate, health, and education, and with an account of its resources as regards railroads and watercourses, fish, and oysters. This pamphlet will be mailed free on application to the State Immigration Association, 620 Common Street, New Orleans, La.

PUBLISHERS' DEPARTMENT.

THE Sanitarium Health Food Co. are exerting themselves to their utmost to meet the demands of their customers, although the managers state that a perfect avalanche of orders is pouring in upon them from all parts of the United States. Their new food, granose, seems to cap the climax of perfection in the way of health foods. One of the leading physicians of Battle Creek, who recently obtained a sample of granose, wrote the managers as follows: —

"I want to thank some one for the 'Sanitarium Foods' which are produced from the food department of the Sanitarium. I think the thanks of the medical profession are due you for developing these foods. I, with many others who have led busy lives, find much difficulty in digesting starchy foods — they cause fermentation and bad assimilation, yet I cannot do entirely without starch in my diet. In the Granola and Granose Flakes I find the starch so modified in your process of preparation, that the impairment of my digestion is entirely relieved. We shall, in the future, make daily use of these two preparations, and incidentally several other of your foods. One of the chief pleasures I have in using these preparations is that I believe them absolutely true to formula."

Commendations of the health foods manufactured by this company, of the most flattering character, are being received from all parts of the United States. The business of the company has more than doubled within the last month, and at its present rate of increase, the larger facilities which are being provided for the manufacture of these foods will scarcely meet the requirements by the time they are in readiness for operation, which it is hoped will be within sixty days from the present date.

***

GEORGIA, the Empire State of the South, is leading, and bids fair to outstrip California as a fruit-producing State. Soon the shipments of the Georgia fruit crops will begin. Thousands and thousands of acres in grapes, melons, peaches, and pears — all is great activity. The fruit must be gathered at the right moment, packed carefully, and the cars must be properly iced. To the stranger there is much to interest, the quaint teams, the joyous pickaninnies, the miscellaneous costumes of the blacks, the air of content and prosperity.

The latest and most reliable estimates say 3000 car loads of peaches will be shipped from Georgia this season. So important has the peach industry of that section become that the growers have arranged to hold a mammoth Peach Carnival at Macon, the center of the Peach Belt, from July 1 to 20, inclusive, during which time every variety of fruit grown in Georgia will be on exhibition.

***

DR. DANIEL C. GILLMAN, president of Johns Hopkins University, has accepted the position of Chief of the Department of Awards for the Cotton States and International Exposition, to be held at Atlanta, Ga., from September 18 to December 31. This is a guarantee of the high merit upon which the awards will be based. President Collier has sought to make the Department of Awards the best ever organized in America, and in securing the services of Dr. Gillman, he feels that he has succeeded. The name of Dr. Gillman commands respect all over the world.

***

A HOME MISSIONARY CONVENTION. — Since our last issue there has been held in the city of Battle Creek, Mich., a meeting of more than ordinary interest — the annual convention of the W. C. T. U. for Michigan. We call this a home missionary convention for the reason that in our opinion there is no other association or organization of any kind which is doing so much for the elevation of the home life of the American people as the National W. C. T. U. and its various State and local branches. This association of earnest women, with that cultured and great-hearted woman, Miss Francis E. Willard, at its head, has taken up one by one various much-needed reforms, until now, instead of being devoted exclusively to the pressing of measures for the extinction of the drink habit, it represents every reform relating to the social life of civilized men and women — health reform, dress reform, social purity reform, with other departments too numerous to mention, which are in the hands of earnest leaders, who are organizing and developing these many lines of humanitarian work, and pushing their activities into every nook and corner of this great land. The association, indeed, not content with laboring for the uplifting of the masses of this great continent, has extended its work to England, India, Australia, even China and the islands of the sea, and is now exerting a world-wide influence in operations the proportions of which are vastly greater than have ever been undertaken before by any single organization of women.

The Sanitarium had the pleasure of entertaining several hundred delegates to the meeting recently held in this city, to a hygienic lunch, thus giving them an opportunity to become acquainted with the work represented by this institution. There is no association on earth for which the managers of the Sanitarium, and the editor and publishers of this journal, entertain greater respect and more cordial sympathy, than for the National W. C. T. U.

***

DR. PLACE reports that the Colorado Sanitarium, now definitely located at Boulder, is flourishing. Steps are being taken for the erection of a twenty thousand dollar building upon a most delightful site which has been selected for the purpose. The site is a little above the town, which it over looks, together with many miles of surrounding territory. From the roof of the Sanitarium building, when completed, it will be possible to look down into the streets of Denver, forty or fifty miles away.

The vicinity of Boulder differs from most other sections of Colorado. The abundance of irrigating water has rendered possible the creation of a large number of beautiful little lakes. From a peak in the immediate vicinity of the Sanitarium site the writer counted more than half a dozen lovely little sheets of water and twice as many pretty villages scattered along the foot-hills. The site is, on the whole, we think, the best we have found in Colorado, and

we have taken a good deal of pains to look the State over with reference to a site for a Sanitarium. It is protected from prevailing winds during the winter season by a fine ridge just behind, and is supplied with an abundance of irrigating water; it is in immediate proximity to a fine mountain range which can be laid off in lovely mountain paths for exercise; it is dry, well drained, and sightly. Being located just at the mouth of Boulder Cañon, an abundance of fine scenery is close at hand.

The city of Boulder is an exceptionally fine location for such an enterprise. The people are of an unusually intelligent and cultivated class. Boulder is the city of the State University, and on this account is widely known. The citizens are greatly interested in the enterprise, and are raising a handsome fund to assist it. Mr. A. R. Henry, the Chairman of the local Board of Managers, and W. C. Sisley, the architect of the building, are now on the ground making arrangements for its construction. It is expected that the building will be completed by fall, so that it may be occupied during the winter.

* * *

MICHIGAN has been blessed with pleasant weather thus far this season, and the usual cool, breezy, sunny days which distinguish this State from most other countries in the same latitude. The great inland seas which surround the beautiful peninsula cool the air in the summer and soften the blasts of winter, giving the State a much more equable temperature than that of other States adjacent. There are, on the whole, few sections which afford a more agreeable climate than does Michigan.

* * *

THE Nebraska Sanitarium, located at College View, a suburb of Lincoln, Neb., is reported to be full and running over. However, the immediate proximity of the College hall, in which there is a considerable number of vacant rooms, provides for every one, so all who may desire to visit this well-conducted Sanitarium may be accommodated. The populous territory of Eastern Kansas, Western Iowa, Arkansas, and Northwestern Missouri ought to furnish a fine patronage for this enterprise and to give it a liberal support. We hear nothing but praise of the work done by the institution so far, and anticipate a prosperous future for it.

* * *

THE last month has seen great advances in the medical missionary work carried on under the auspices of the Sanitarium Medical Missionary Board in Chicago. The work having outgrown the small limits of the quarters at No. 40, Custom House Place, a large fine building has been hired at 744 West 47th St., near the corner of 47th St. and Union Avenue. A settlement known as "The American Medical Missionary College Settlement" has been established at this point, and a line of missionary work in the interest of the better classes of the poor will be carried on. The lines of work already planned, are, a course of lectures upon health and kindred topics, mothers' meetings, cooking schools, training classes, kindergartens, kitchengardens, free dispensary, free baths, and visiting nurses' work.

Some of these lines of work are already begun, and others will be added as rapidly as the work can be organized. There is a prospect that a most excellent work will be accomplished in this new field.

* * *

A MEDICAL MISSIONARY COLLEGE.—The Medical Missionary Board, under the auspices of which the *Medical Missionary* is published and carries on the work which it represents, after mature deliberation has incorporated a medical college in Chicago. The educational work will be carried on both in Chicago and in Battle Creek. The work of organizing a school is being rapidly pushed, with the expectation of beginning a course of instruction the coming fall. A large number of young men and women are already applying for admission. The school will be a high-grade school, the requirements for admission and the course of study being equal to those of the foremost schools of the United States.

* * *

GRANOLA.—This remarkable food-product,—one of the first devised and manufactured by the managers of the Sanitarium Health Food Co.,—has been recently still further improved, and in such a way as to increase its value as a food for both sick and well. The improvements referred to increase both its toothsomeness and its digestibility, thus adding materially to its value as a health food.

* * *

BAPTIST YOUNG PEOPLES' UNION OF AMERICA.—On July 16 and 17, 1895, the Michigan Central will sell excursion tickets to Baltimore, Md., and return at one fare for the round trip, limited for return until August 5, 1895.

* * *

TO TEACHERS AND OTHERS.—For the meeting of the National Educational Association at Denver, Colo., in July, next, the Western trunk lines have named a rate of one standard fare, plus two dollars for the round trip. Variable routes will be permitted. Special side trips at reduced rates will be arranged for from Denver to all the principal points of interest throughout Colorado, and those desiring to extend the trip to California, Oregon, and Washington, will be accommodated at satisfactory rates. Teachers and others that desire, or intend attending this meeting or of making a western trip this summer, will find this their opportunity. The Chicago, Milwaukee & St. Paul Railway (first-class in every respect) will run through cars from Chicago to Denver. For full particulars, write to or call on HARRY MERCER, Michigan Pass'r Agent, 1101 Fourth Avenue, Detroit, Mich.

* * *

THIS MEANS BUSINESS.—On the principal lines of the Chicago, Milwaukee & St. Paul Railway, passenger trains are electric lighted, steam heated, and protected by block signals. With these modern appliances, railway traveling at high speeds has reached a degree of safety heretofore unknown and not attainable on roads where they are not in use. Electric lights and steam heat make it possible to dispense with the oil lamp and the car stove. Block signals have reduced the chances for collisions to the minimum by maintaining an absolute interval of space between trains.

HYDROZONE

IS THE STRONGEST ANTISEPTIC KNOWN.

One ounce of this new Remedy is, for its Bactericide Power, equivalent to two ounces of Charles Marchand's Peroxide of Hydrogen (medicinal), which obtained the Highest Award at the World's Fair of Chicago, 1893, for its Stability, Strength Purity and Excellency.

CURES DISEASES CAUSED BY GERMS:

DIPHTHERIA, SORE THROAT, CATARRH, HAY FEVER, LA GRIPPE,—OPEN SORES: ABSCESSES, CARBUNCLES, ULCERS,—INFECTIOUS DISEASES OF THE GENITO-URINARY ORGANS,—INFLAMMATORY AND CONTAGIOUS DISEASES OF THE ALIMENTARY TRACT: TYPHOID FEVER, TYPHUS, CHOLERA, YELLOW FEVER,—WOMEN'S WEAKNESSES: WHITES, LEUCORRHŒA,—SKIN DISEASES: ECZEMA, ACNE, ETC.

SEND FOR FREE BOOK OF 152 PAGES GIVING FULL INFORMATION.

PHYSICIANS REMITTING TWENTY-FIVE CENTS POSTAL ORDER WILL RECEIVE FREE SAMPLE BY MAIL.

AVOID IMITATIONS.

HYDROZONE is put up only in small, medium and large size bottles, bearing a red label, white letters, gold and blue border.

GLYCOZONE
Cures
Diseases of the Stomach

Sold by Leading Druggists.

MENTION THIS PUBLICATION.

PREPARED ONLY BY Charles Marchand

Chemist and graduate of the "Ecole Centrale des Arts et Manufactures de Paris" (France).

28 Prince St., New York.

MALTED GLUTEN

A New Food

For Dyspeptics, Anæmics, and Neurasthenics.

This product is the result of a long series of experiments and a long and extensive experience in the treatment of maladies of nutrition by a physician who has for many years given special attention to this class of disorders.

MALTED GLUTEN is especially indicated in cases in which starch digestion is imperfectly performed, with resulting acidity, flatulence, eructations of gas, emaciation, and anæmia. It is also very valuable in cases of gastric neurasthenia. In cases of dilation of the stomach, accompanied by foul breath and coated tongue, it is invaluable as a means of securing intestinal asepsis.

MALTED GLUTEN furnishes the farinaceous food elements in a state of complete digestion, **ready for immediate absorption.** The gluten which it contains has been subjected to malt digestion and is in a state of fine division, so that it is promptly acted upon by the digestive fluids. Gluten is of all food elements **the only one which is capable of sustaining life indefinitely.** It will thus be seen that **MALTED GLUTEN IS A PERFECT BLOOD AND FLESH-MAKING FOOD.** It is free from the unpleasant flavor of the various meat peptones, and is especially adapted to those cases requiring perfect intestinal asepsis, in which meat peptones and meat preparations of every description are contra-indicated. It has proved a **sovereign remedy** in cases of **nervous headache, sick headache, obstinate nausea, and vomiting,** and numerous cases in which all other food substances were rejected by the stomach. For sample, address

FACTORY:
BATTLE CREEK, MICH.

SANITARIUM HEALTH FOOD CO.,

28 COLLEGE PLACE, CHICAGO, ILL.

CHICAGO & GRAND TRUNK R. R.

Time Table, in Effect Nov. 18, 1894.

GOING EAST. Read Down.					STATIONS.	GOING WEST. Read up.				
10 Mail Ex.	4 L't'd Ex.	6 Atl. Ex.	42 Mixd Tr'n.	2 Pt. H Pass		11 Mail Ex.	1 Day Ex.	3 R'd L't'd	29 B. C. Pass.	5 P'fic Ex.
a m	p m	p m				p m	p m	pm		a m
9.00	3.10	8.15	a m	.....	.....D.Chicago A.....	6.45	1.50	9.10	.....	7.60
11.25	5.05	10.30	6.00	.....	.....Valparaiso.....	5.05	11.35	7.10	.....	5.45
p m										
1.05	6.30	12.00	10.05	.....	.....South Bend.....	3.10	10.15	5.44	....	4.10
1.46	7.12	12.45	12.40	....	.....Cassopolis	2.15	9.40	5.13	.....	3.28
2.33	.....	†1.33	3.42	.....	.....Schoolcraft.....	1.20	.....	.....	.....	.....
2.44	7.55	1.48	4.30	a m	.....Vicksburg.....	1.10	8.52	.....	p m	2.97
3.30	8.36	2.40	6.20	7.0	.....Battle Creek.....	12.15	8.15	3.55	9.35	1.50
4.33	9.26	3.25	.....	7.4	.....Charlotte.....	11.14	7.23	3.07	8.40	12.53
5.1	9.55	4.00	.....	8.20	.....Lansing.....	10.40	6.53	2.40	8.00	12.20
6.30	10.45	5.03	.....	9.30	.....Durand.....	9.35	6.05	1.55	6.50	11.28
7.30	11.17	5.40	.....	10.05	.....Flint.....	8.35	5.35	1.28	5.47	10.35
8.15	11.50	6.15	.....	10.43	.....Lapeer.....	7.49	5.02	1.00	5.10	10.01
8.42	a m	6.35	.....	11.06	.....Imlay City.....	7.28	.....	.....	4.48	.....
9.50	1.00	7.30	.....	12.05	.....Pt. H'n Tunnel.....	6.50	3.50	11.55	3.50	8.45
	p m					a m	a m	a m	p m	p m
9.25	.....	.....	.....	.....	..... Detroit.....	.....	.....	p m	10.40	4.05	8.45	p m
.....	a m	p m	.....	.....	..... Toronto.....	.....	9.20	.....	.....	.....	1.00
	8.15	5.25					a m			
.....	p m	a m	.....	.....	..... Montreal	.....	9.15	.....	.....	.....	.....
	8.15	7.25					a m			
....	a m	p m	.....	.....	..... Boston.....	.....	8.30	.....	.....	.....	.....
	8.12	7.15					p m	a m		p m
.....	a m	p m	.....	.....	.....Susp'n Bridge.....	.....	10.15	7.05	.....	2.25
	7.50	4.25								p m
.....	a m	p m	.....	.....	..... Buffalo.....	.....	.....	.....	.....	1.00
	7.00	5.40					a m	p m		p m
.....	p m	a m	.....	.....	.....New York.....	.....	8.15	6.10	.....	8.00
	8.53	8.03								p m
.....	.....	a m	.....	.....	..... Boston.....	.....	.....	.....	.....	7.0
		10.20								

Trains No. 1, 3, 4, 6, run daily: Nos. 10, 11, 2, 23, 42, daily except Sunday.

All meals will be served on through trains in Chicago and Grand Trunk dining cars.

Valparaiso Accommodation daily except Sunday.

Way freights leave Nichols eastward 7:15 a. m.; from Battle Creek westward 7:05 a. m.

† Stop only on signal.

A. R. Mc INTYRE, *Asst. Supt., Battle Creek.*

A. S. PARKER, *Pass. Agent, Battle Creek.*

MICHIGAN CENTRAL

"The Niagara Falls Route."

Corrected June 2, 1895.

EAST.	*Night Express.	†Detroit Accom.	†Mail & Express.	*N. Y. & Bos. Spl.	*Eastern Express.		*Atl'ntic Express.
STATIONS.							
Chicago.....	pm 9.30		am 6.50	am 10.30	pm 3.00		pm 11.30
Michigan City.	11.35		8.50	pm 12.08	4.50		am 1.19
Niles.....	am 12.45		10.15	1.02	5.55		2.45
Kalamazoo	2.15	am 7.20	11.52	2.16	7.21		4.35
Battle Creek...	3.00	8.10	pm 12.50	2.50	7.58		5.22
Jackson.....	4.30	10.00	2.40	4.10	9.20		6.50
Ann Arbor....	5.40	11.05	3.50	5.00	10.12		7.47
Detroit.....	7.10	pm 12.20	5.30	6.00	11.15		9.20
Buffalo.....				am 12.10	am 6.45		pm 5.30
Rochester.....				3.00	9.55		8.40
Syracuse.....				5.00	pm 12.15		10.45
New York.....				pm 1.45	8.45		am 7.00
Boston				3.00	11.35		10.50
WEST.	*Night Express.	*N.Y.Bos. &Chi.Sp.	†Mail & Express.	*N.Shore Limited.	*Weste'n Express.	† Kalam. Accom.	*Pacific Express.
STATIONS.							
Boston.....		am 10.30		pm 2.00	pm 3.00		pm 7.15
New York.....		pm 1.00		4.30	6.00		9.15
Syracuse.....		8.30		11.30	am 2.15		am 7.20
Rochester.....		10.37		am 1.20	4.10		9.55
Buffalo.....		11.45		2.20	5.30		pm 3.30
Detroit.....	pm 8.45	am 6.30	am 7.20	8.30	pm 1.00	pm 4.35	11.05
Ann Arbor.....	10.25	7.30	8.43	9.25	2.00	5.57	am 12.15
Jackson.....	11.40	8.35	10.43	10.30	3.02	7.35	1.25
Battle Creek...	am 1.17	9.48	pm 12.15	11.43	4.18	9.11	2.55
Kalamazoo	2.10	10.27	1.00	pm 12.22	4.57	10.00	3.36
Niles.....	4.00	11.48	3.00	1.40	6.27		5.00
Michigan City.	5.09	pm 12.50	4.25	2.45	7.22		6.00
Chicago.....	7.10	2.40	6.35	4.30	9.05		7.50

*Daily. †Daily except Sunday.

Kalamazoo accommodation train goes west at 8.05 a.m. daily except Sunday.
Jackson " " east at 7.27 p. m. " "

Trains on Battle Creek Division depart at 8.10 a. m. and 4.35 p. m., and arrive at 12.40 p. m. and 6.35 p. m. daily except Sunday.

O. W. RUGGLES, General Pass. & Ticket Agent, Chicago.

GEO. J. SADLER, Ticket Agent, Battle Creek.

ESTABLISHED 1844.

SHARP & SMITH,

73 Randolph Street, CHICAGO, ILL.,

Brace for Lateral Curvature of the Spine.

MANUFACTURERS OF

Deformity Apparatus

Of All Descriptions.

Artificial Limbs,

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Abdominal Supporters,

Trusses,

Shoulder Braces,

Etc., Etc.

Family Syringes.

Surgical and Veterinary Instruments.

The Umschlag

ONE of the most useful inventions of Dr. Priessnetz, the father of modern hydropathy, was the umschlag, or heating compress, as it is sometimes called by the Germans. There is no better remedy for indigestion, inactive bowels, or sleeplessness, than this simple measure, when properly applied. The umschlag consists of a properly-adjusted bandage, moistened and worn about the body at night, to be replaced by a dry bandage during the day.

Send for Catalogue.

SANITARY AND ELECTRICAL SUPPLY CO., BATTLE CREEK, MICH.

A Natural Flesh Brush

This is the product of an Egyptian plant called the Loofah, or dish-rag gourd, which grows along the Nile. It excels every other natural or artificial product for use as a flesh brush. Conveniently arranged with tapes, as shown in the cut, it can be applied to every part of the body. It will last indefinitely.

SEND FOR CATALOGUE.

SANITARY AND ELECTRICAL SUPPLY CO., BATTLE CREEK, MICH.

THE GRAND TRUNK ROUTE

To **BOSTON**, in July, 1895.

Meeting of the United Societies

Y. P. S. C. E.

As civilization grows upon the world so does Christianity place the mile-stones. The Young People's Societies of Christian Endeavor have laudably repaired each year to some grand convention place, where together they have formed plans for mutual advancement and public good. Hardly a better place could have been selected than Boston for the coming meeting.

It is with a great deal of pleasure that this Company submits for the consideration of the Christian Endeavor Societies and their friends a brief description of the attractions they have to offer *en route*, to this convention.

Leaving the Brush Street Station in the city of Detroit early some afternoon, those taking the trip will traverse the Southern Division of the Grand Trunk Railway as far as Toronto.

In the event of the passenger not wishing to take the time for as extended a trip as most of the following description entails, this Company can furnish transportation direct via Niagara Falls, Buffalo, Rochester, Syracuse, Utica, Albany, etc., to Boston, returning the same way or via any return route mentioned hereafter.

If Port Huron is more contiguous to the point from which the journey is commenced, the same as the foregoing could be said of this portion of the route.

The traveler will be delighted with the journey thus far, passing through the prosperous cities of London, Woodstock, Dundas, and Hamilton. The reason the city of Dundas is mentioned, is because of its munificence in providing a beautiful picture for the sightseer.

The railroad traverses the edge of the mountain which overhangs the city, spreading an interesting panorama of hill and valley, dotted by the quaint buildings of the town, with here and there a rising church spire, reminding one strongly of the old quotation which might be made, from Barbara Fritchie: "The clustering spires of Fredericktown, green walled by the hills of Maryland." While it is not in Maryland, it is in a country which during the war-time enjoyed with it the same sympathies. Gliding down the Copetown grade from Dundas, a view of Burlington Bay, at Hamilton, is suddenly spread before us.

These scenes are all beautiful. From Hamilton we traverse the shores of Lake Ontario into the Union Depot at Toronto, the "American City of Canada." From Toronto we take the main line of the Grand Trunk Railway to Kingston Wharf, on the St. Lawrence River. The palatial steamers of the Richelieu & Ontario Navigation Company will here take the pilgrims on the historic waters of the St. Lawrence, through the Thousand Islands and numerous rapids to Montreal. The Rapids of the St. Lawrence have for years occupied a prominent place in the history of picturesque America.

As we are all likely familiar with its ancient history, it would be an idle waste of time to change the current of our pleasant thoughts, by a too meager description of the varied grandeur and power of the mighty St. Lawrence.

MONTREAL.

This city will be visited by many for the first time. Its wealth of buildings, including convents, churches, and hotels, will, after the journey is completed, afford food for pleasant thought.

It is a city of upwards of three hundred thousand inhabitants, made up of English, Scotch and French. The French, being the early settlers, have left a strong stamp of originality and racial mannerisms upon nearly all one sees. The prevailing language is French. Even the English-speaking people have imbibed the spirit of Parisian grace in shrugging their shoulders and gesticulation, which fairly makes one thankful to have made their acquaintance.

From Montreal the Grand Trunk Railway will take us across the River St. Lawrence on the Victoria Bridge, an immense tubular steel causeway, some two miles or over in length.

As most of us will make the trip between Montreal and Quebec in the night time, it will be sufficient to say that the road-bed is good, and that the time of arrival in Quebec is early in the morning.

QUEBEC.

Oh! for the spirit of reminiscence. Oh! for the love of antiquity. Could we but always live in the shadow of such monuments of the past as these. One needs no trip to ancient Europe or the Continent to live again the centuries ago. Quebec is old, Quebec is new. Old in its citadels, its fortresses, its walls of stone, bearing on their crests the ancient British cannons and mortars. It is new, in that its antiquities are here — they are with us, living, present monuments to the Anglo-Saxon race.

France here saw her glory fade. Here she relinquished the profit of the victories of her voyageurs, her missionaries, and her soldiers. She here bade a sad good by to her possessions on the continent of America. The Englishman took them all, but like a victory of the prison house, he could take neither the Frenchman's God, nor his love of country and his native tongue.

Our time can be most profitably spent looking at the quaint monasteries, and pictures by ancient artists filling most every prominent building in the city. We can listen to the history of each and every one if we can but "parlez Francais," because in this old, yet new France, French is indeed the court language.

From Quebec the Grand Trunk Railway will take the train to Gorham, the base of the White Mountains, where can be had in the near perspective a fine view of these Eastern Hills. Thence to Portland, Maine, and Old Orchard Beach. Here one can listen to the song of the grand old Ocean, and, as we hear it in the Gladiator, "telling its story to the smooth pebbles on the beach." The enjoyment of a sea bath is just the thing before we land in Boston.

The Return Trip.

So many varied routes having been chosen and talked over, both direct back from Boston via Niagara Falls, also by way of New York and Niagara Falls, that it will be hardly possible to include a list of the attractions of any one line, it not having as yet been selected. We are pleased to say that we can offer a direct trip back via the Fitchburg and West Shore Railroads, taking in Saratoga and Niagara Falls, without extra charge; Fitchburg Railway to Albany, West Shore or Hudson River Day Line of Steamers to New York, and any of the lines back to Niagara Falls, among which are the West Shore, Delaware, Lackawanna & Western, Erie, and last but not least, the picturesque Lehigh Valley Route, through the Lehigh Mountains, Mauch Chunk, Glen Summit, Wilkesbarre, the Coal regions and Lake Geneva, and all of which run in direct connection with

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