GOOD HEALTH

A Journal of Hygiene.

VOL. XXXIII. AUGUST, 1898. NO. 8.

THE JOY OF LIFE.

BY J. H. KELLOGG, M. D.

WHAT is life? This is one of the questions of the ages, and one which remained unanswered so long as man looked for an answer in a solution of the mystery in which all life processes are enshrouded; but when philosophers ceased the effort to express by chemical formulæ the phenomena of life in its infinite variety of forms, and to account for these marvelous manifestations by means of laws and principles which may be written down in books, and which may be controlled by the human will; in other words, when scientists no longer sought to make the result of life responsible for life itself, putting the effect before the cause, and frankly acknowledged that the problem of life is the problem of creative intelligence, of the divine master mind which dominates the universe, which "dwelleth in eternity," then the answer to the question came at once: "Life is God." The phenomena of life are simply the evidence of the great animating force of the universe at work.

The modern scientist, whether professed Christian or not, believes in God, and admits his universal presence in all nature. No intelligent person nowadays doubts the existence of this universal intelligence as the foundation of all life, and not only of living things, but of inanimate things as well.

Recognizing the principle, no argument is required to make clear the fact that God is in man, the highest and most wonderful manifestation of life to be found in all the natural world. We find, then, a scientific basis for Paul's query to the Corinthians, "Know ye not that your body is the temple of the Holy Ghost, which is in you?"

As we look out upon the world, and see this divine life at work in nature, we find no evidence that it is ever actually engaged in any effort which has not for its principle, joy and peace, pleasure, happiness, and delight.

Let us note the manifestations of life about us in the animal world. See the squirrel gamboling in the tree-top, springing from bough to bough, swinging, dancing, chirping, full of life and joy. Who ever saw a squirrel looking sad and melancholy, going about its daily tasks with a glum and hopeless air? The squirrel is happy; why? — Because it is obedient to the divine instructor, to the suggestions of the divine life which dwells in it. Hear the skylark as it greets the morning sun with a burst of joyous song. There is no wail of sorrow, no tone of bitterness, in its carol. The bird's heart is full of joy, its life one long tuneful lay. Imagine for a moment a bird chorus comprising all of earth's songsters pouring forth their praise in unison. What a grand peal of joy that would be. We hear the chorus in fragments; God hears it as one grand united song of praise.

The birds sing because they can not help singing. Their souls are full of song. They certainly do not sing from a sense of duty, or in obedience to some automatic principle. Their song is the spontaneous utterance of inward joy.

See the colt gamboling in its pasture, the calf capering beside its mother. What mean the friskiness, the irrepressible activity, the seeming waste of energy? Simply that there is a fulness of joy, a surplus of animal spirits, of life, which must be expended in expression.

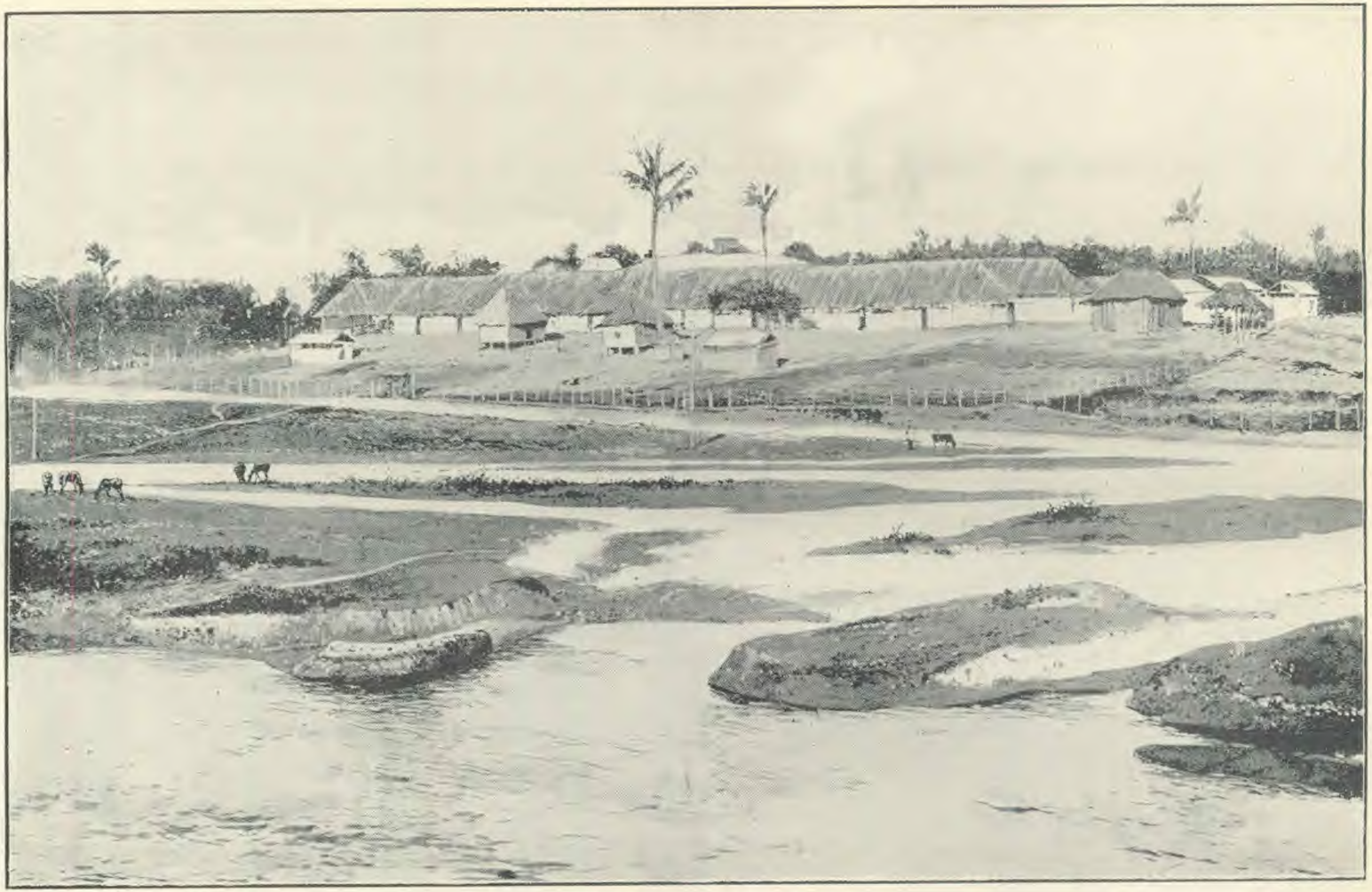
Even the so-called inanimate world is full of joy. There is joy in the sunbeam. Indeed, the sunbeam is God's messenger or vehicle of joy to the world. Under the influence of the sun's glorious rays, all nature is alive, animated, active. In its absence, death as well as darkness falls upon the scene. Under its potent influence, a veritable resurrection occurs. Each morning, as the sun's rays drive away the gloom of night, how the plants, the shrubs, the trees, rejoice. The flowers spread their petals in a grateful smile, and send out a tribute of fragrance on the morning air; the leaves turn up their faces for a sunbeam kiss; the shrubs raise their nodding heads, and all the vegetable world awakes. A thrill of joy animates the very air, and sets the morning breeze in motion, singing melodies amid the foliage, while the trees and bushes beat time with their stems and branches.

The deeper we look into the phenomena of life, the more evidence we see of a universal rhythm, an omnipotent joy; for joy is rhythm, harmony. The microscope has in recent years shown us marvelous things about the secret doings in the workshop of animal life where living things are made—the cell. Under a sufficiently high power, it is possible to see the marching and countermarching, the mating and splitting, the grouping and regrouping, taking place with a regularity and an order, a system and a promptness, which demonstrate an omnipotent guiding intelligence, a veritable "dance of life" keeping time to the divine harmony which thrills all nature, and which the ancients recognized in the music of the spheres.

In the midst of this universal joy, why is man of all God's creatures so sad and wretched, so seldom in a mood to join the great anthem of praise which the whole world beside pours out to its Maker? Away back in the ages there was a time "when the morning stars sang together, and all the sons of God shouted for joy." Every bird and beast, great and small, as well as man, took part in that grand burst of praise. Imagine the deep bass of the forest kings and the mammoths of the deep, the tenor of the millions of lesser beasts, mingling with the hundred parts contributed by birds of every sort and size, striking the whole gamut of sound into one magnificent melody of joy. The forest still rings with the wild elephant's trumpeting. The air still vibrates with the cadences of feathered songsters. But man has all but ceased to sing. If he sings, it is generally from a sense of duty, or for hire or to gain applause. Except in childhood's happy days one seldom hears the note of joy from human throats. Why this universal sadness among men? The answer is an easy one. Man has lost the joy from his heart, and no longer feels, in common with the world about him, a compelling impulse to sing.

Joy is harmony of soul. Song is harmony expressed in sound. Man has wandered away from rectitude and fallen out of harmony. His soul is full of discord—sin. His body is full of discord—disease. Harmony is health of body and soul.

What is harmony? Simply obedience to the divine will which created and upholds. In order that man might become godlike, the Creator gave him such free-



IMPROVISED BARRACKS IN CUBA.

dom of will as enables him to make free choice whether he will obey or disobey; whether he will act in harmony with the divine will, or in opposition to it. The body is like a musical instrument upon which two players may play at once. If both play together the same chords of the same key, there will be harmony, music. If one plays out of tune, the harmony is spoiled; there is no longer music, but simply noise. Man puts in so many discordant notes in his playing that the song of life is spoiled.

Man of all creatures has wandered farthest away from the divine order. He is in rebellion against the God that made him, and that dwells in him, and his life is full of discord instead of joy.

The fact that man's life is morally discordant has been recognized for some thousands of years, but the same truth has not been so fully seen in relation to his physical life. In fact, the strange doctrine has been taught that physical discord, or disease, in some way tends to moral health, or harmony. This belief led the monks of olden time to chastise and neglect the body to an extent positively monstrous, and to establish a system of penances, which, though now largely extinct, still survives in spirit in the contempt with which the demands of the body are regarded, and the abuses and indignities which are heaped upon it, not only by the ignorant and unenlightened, but to a still greater extent by the intelligent and the learned. In the schools, the science of life — physiology — receives least attention of all the sciences. In business, the question is rarely asked, "Is this occupation salubrious?" or "Will it contribute to the health of the community?" The great question is, "Will it pay? Will it bring rich returns in cash?" In eating, drinking, and the various habits of life, the dominant question is not, "Is this way or that way the divine order?" but, "Which course of action will elicit the greatest returns of pleasure?" The body is regarded, not as a temple in which God dwells, a sacred fane in which there burns an eternal fire, a precious trust, carrying with it the obligation of safe keeping and jealous protection; but rather as an instrument of pleasure, each of the several senses a key-board, on which one may play at will so long as a response can be compelled. In our eating we aim to please the palate, not the stomach, the brain, the nerves,— the house not made with hands, for the proper repair of which the taking of food is a divine ministration. In drinking, the palate again is consulted, rather than the body's needs. In dress we aim at outward adornment rather than the convenience and needs of the house in which we dwell as tenants with the builder.

So in all our relations in life, we ask first what will please the senses, not what will please God, forgetting that while once the senses may have been a perfect guide to rectitude of conduct in all the physical relationships of life, long centuries of ill conduct have so far obliterated and confused our instincts and intuitions, that they are now unreliable, if not almost wholly extinct. The world of men and women long ago became "lovers of pleasures more than lovers of God," and as the result of this mad rush after sensual delights, and this contempt for the tender and loving power that still dwells with us and in us, and sustains us in all our wanderings from right, we find man leading an almost joyless life. Almost as soon as he is born, his sorrows begin. Nameless and numberless ills assault him on every hand as he journeys quickly from the cradle to the grave. The many smiles of youth are quickly replaced by the frowns and sordid wrinkles of late years. The bloom and freshness and gaiety and spontaneous happiness of childhood are a

fleeting dream which quickly fades from memory in the awakening to the sad and awful fact that life is but one long-drawn-out agony of existence, a painful gasp between two sighs, a jargon of minor keys and discords, rather than a joyous hymnal, a triumphant march of glorious and melodious chords.

The world is conscious that there is something wrong. There is an instinctive appreciation of the fact that poor humanity is being cheated out of its birthright, that a loving Creator never designed for man so sad and sorrowful a career; and all mankind are busy with the problem how to find the happiness which we are conscious was intended for us, but which ever eludes our grasp.

The stoic seeks happiness in ignoring it, in schooling himself to become oblivious alike of pleasure and of pain. The esoteric philosopher seeks happiness in the contemplation of the infinite, and learns to see in the absolute annihilation of self the sum of all pleasure and delight. Another finds the panacea for all human griefs in the cultivation of contentment with one's lot and utter disregard of others' griefs, adopting for a motto, Refuse to recognize the evils of to-day, and take no thought for to-morrow.

All of these and many other philosophies may enable one to wear an outward semblance of content, but none can ever bring back that spontaneity of joy that will again set the whole world of men singing as of old when the sons of God "shouted for joy." They provide a negative, not a positive happiness.

By far the greater mass of mankind seek happiness in a more direct and material way, and with such a degree of success as encourages them to pursue it in the most persevering manner. Realizing sorrow and pain to be the dominant experiences of life, they seek some means whereby these unpleasant incidents may be abolished. Finding the cup of life filled with bitterness rather than the nectar promised in the joyous days of youth, they seek for means whereby an artificial and fictitious felicity may be produced. Here is the real origin of the alcohol habit, the tobacco habit, the tea and coffee habit, the opium habit. These drugs and others produce a felicity which has not been earned, a surcease of pain which is undeserved, an oblivion to sorrow without a removal of its cause. Never in all the history of mankind was there such a universal seeking after new felicity-producing drugs. Never was there such a demand for some new nerve-tickling chemical or compound. It may be a deadly poison; never mind, if it will only produce a new sensation. It may be certain to bring the user into bondage of the most oppressive sort; never mind, if it will only abolish present discomfort or secure temporary oblivion to the ills of life.

Thus the whole world has come into bondage to alcohol, to tobacco, to tea and its congeners — coffee, maté, kola, etc., to nerve-obtunding and nerve-exciting drugs of various sort, to condiments and stimulating viands at the dinner-table, to exciting and depraving amusements, to a wholly unnatural and sophisticated mode of life that for a time affords, not happiness, which swells the heart with joy and pure delight, but a cheap substitute, which for the moment brings forgetfulness of the vacuity, the miseries, the infelicities of life.

There is but one true road to real, lasting, normal happiness, to joy that leaves no sting behind, that has no drug of sorrow in its cup, and the path leads along the line of absolute obedience to God in all things, physical as well as moral. We have ceased to say physical and mental, for we know that the mental

is physical as much as any other bodily function. We may sometime cease to say physical and moral, for man is one in all his attributes.

To be one with God, to be in absolute harmony with the power that works for good in all the universe, to be in accord with all the principles that govern our relations to the things and beings about us, — this is happiness. Sin and sorrow, death and disease, come through disobedience. Health, happiness, peace, and joy are the result of obedience. We suffer because we are at war with God; in other words, we are rebelling against divine order. Our suffering is not a punishment, an arbitrary infliction, it is simply a reaping of seed of our own sowing. Sorrow and pain are the warning sentinels by which God leads us back into the path of rectitude and wisdom. "Her ways are ways of pleasantness, and all her paths are peace." A will surrendered to God in the fullest sense will obey God's laws in all their relations to human life. Such a life must be a life divinely led, a divinely happy life, a healthy and joyous life. Knowing that God dwells within us, that we can not for an instant escape from him, ought we not to live as in his presence? "In his presence is fulness of joy."

THE CAMPAIGN IN THE TROPICS.

BY FELIX L. OSWALD, M. D.

I.

THE history of inventions records the names of several alchemists who wasted their fortunes in quest of a gold-cook recipe, but stumbled upon important industrial discoveries, or even upon new laws of nature; and the enormous expense of international wars has often been compensated in a similar manner.

Millions of crusaders who had started with gripsacks for the collection of miracle-working relics and the resolution to smash the skulls of the largest possible number of Unitarians, returned with the seeds of a new civilization, and the Spanish-American war may prove a blessing in disguise if it should help the belligerents to get rid of some of their most mischievous prejudices.

It so happens that neither the Spaniards nor the natives of Greater Britain are proof against the logic of practical experience. The fearful lesson of Trafalgar convinced the countrymen of Torquemada that naval victories can not be insured by christening battle-ships with fulsomely pious names: There are no "Santissima Trinidads" and "Virgens de la Purissima Concepcion" in the present Spanish navy, and it is an at least equally encouraging sign of progressive times that our military surgeons, remembering the lessons of the Crimean campaign, carry no apparatus for turning field hospitals into fever-breeding furnaces.

Baneful delusions, however, still linger on both sides, and the fresh-air dread of the northern nations is alone a worse curse than militarism in its extreme despotic forms. Some forty years ago a Dr. Karl Bock, of Leipsic, published a household work under the title, "Das Buch vom Gesunden und Kranken Menschen" ("All About Man in Health and Disease"). The book abounds with orthodox sentiments à la Grundy, and misses no opportunity to inculcate the importance of avoiding currents of outdoor air as messengers of death in a thousand forms.

SPANISH PICKET-POSTS.

The attraction of its moderate price is aided by the charm of a sort of wheedling popular style, and it is more than probable that its twenty-eight editions have caused a greater loss of life than did the campaigns of Attila and Genghis Khan.

A large plurality of our own countrymen still mistake cold, fresh air — the most effective of all natural antiseptics — for the chief cause of consumption and catarrh; and even partial deliverance from the man-devouring insanity of that superstition would be cheaply bought at the price of a six months' sojourn in the purgatory of the tropics.

For the conservatism of prejudice has its limits, and thousands of sweat-box maniacs, proof against all other arguments, would be unable to resist the logic of the repeated experience that lung disorders of all sorts are aggravated by confinement in a stifling, superheated atmosphere, protected against the influx of fresh air currents, but are relieved by the very agencies which, according to the hygienic dogmas of Bock & Co., ought to be dreaded as their principal cause, viz., a change from warmer to colder weather, and protracted exposure to draughts of cool night air. They will see the prisoners of the Spanish hulls coughing their lungs away, sneezing, sniffling victims of pulmonary scrofula, while persons in the enjoyment of perfect health pass four out of five nights on the flat roofs of their houses, exposed to every stirring breeze, even at a time of the year when the land-wind from the Sierras cools the midnight atmosphere to less than 50° F. They will see children and adults romping about dew-drenched gardens, long after the sun of the tropics has set, and tipulary insects yield to the chill of the approaching midnight. Their hospital stewards can not help noticing the fact that the sick-list of lung affections invariably decreases in the comparatively cool atmosphere of a rustic bivouac, and as invariably increases upon the return to the shelter of sweltering draft-proof barracks.

Epidemics of pulmonary disorders will preach their significance by unmistakable *argumenta ad hominem.* The instinct of self-preservation will drive their victims to the panacea of fresh outdoor air, even in the form of cold night air.

A considerable proportion of the campaigners will thus at last be led to the recognition of the fact that lung scrofula, in all its varieties, is propagated by a specific contagion, a micro-organism extremely partial to foul, stagnant, and overheated air, but, luckily, apt to yield to the cheapest of all remedies — fresh air at a reduced temperature. Frost and every approach to frost will be prized as nature's specific for the abatement of a plague that has destroyed more human lives than gunpowder and alcohol taken together, and the conclusion of hostilities will be hailed as the harbinger of sanitary redemption by return to the germ-destroying climates of the colder latitudes.

For to a good many of our countrymen chance may even happen to repeat the memorable experience of Captain Cook and Professor Bates, related in "Travels in the Valley of the Amazon." At the great navigator's first visit to a certain archipelago of the South Sea, the natives crowded his deck, almost crazed with the desire to exchange their garden products for the marvels of the white man's art. Then these visits suddenly ceased. Fearing that his men had somehow abused the confidence of the aborigines, the captain proceeded to investigate, and was amazed to learn that a brief exposure to the effluvium of the cockpit and of congested human lungs had afflicted scores of the natives with a virulent disorder, resembling influenza, or contagious catarrh. In other words, beings of our species, who for generations had run about in the costume

of the Nereids and breathed cold night air or wantoned in the breakers with perfect impunity, were stricken with lung marasmus in consequence of transient visits to the catarrh trap of a British steerage.

A Primitive Restaurant.

Professor Bates's notes on "The White Death of the Brazilian Backwoods," are even more significant. With all their hospitality, the Guahilas, Pintos, and other tribes of the upper Amazon Valley, it seems, are extremely averse to the risk of letting a Caucasian colonist enter their *casuchas*, and can hardly be bribed to cross the threshold of a white man's habitation. They prefer to transact all commercial and diplomatic business in the open air or, in stress of circumstances (at the approach of a thunder-storm, etc.), under the shelter of an overhanging rock, sad experience having taught them to dread a foreigner's visit as the ancients dreaded the approach of a *lamia*, and the peasants of the lower Danube the intrusion of a vampire.

Within a day or two after the departure of a Caucasian guest his hospitable entertainers began to cough, to sniffle, and to complain of more and more suffocating respiratory difficulties. The paterfamilias and his elder sons had a chance to recover in the cool air of the upland hunting-ground, but women and infants generally died. They coughed night and day, and died in spite of the catarrh remedies furnished gratis by the sympathizing traders.

The impression of such experiences can not be effaced by the twaddle of Mrs. Grundy, and few persons who have tested the benefits of the Spanish-American *siesta* custom can be repersuaded that there is any harm in a nap after a full meal. It is in vain to tell a sunstroke victim that he owes his trouble to his practise of going to work in the sweltering fields directly after dinner; he will shake his congested head, and prefer to attribute his affliction to the one sensible act of the last ten hours, viz., the transient removal

of his slouch-hat, when the desire for refrigeration became irresistible. It is of no use to tell him that for a long series of centuries the nature-abiding nations of antiquity deferred their principal meal to the very end of the working day, and that the emperor Hadrian traveled bareheaded through the twenty-two provinces of his world-empire. The wisdom of the ancients is a voice that fails to penetrate the intervening millennium of antinaturalism, but personal experience is a match for the whispers of hearsay, and the blessing of a second morning, the unmistakable renewal of mental and physical vigor by the influence of an afternoon nap, are pretty sure to be remembered the next time the protests of instinct shriek out against the horror of after dinner work.

"Do not eat before you have leisure to digest," is one of the sanitary axioms that need only once be recognized to prevail against sophisms, and compromise business exigencies after the manner of the North American bankers, with their 3 P. M. closing rule, or on the plan of the Louisville, Ky., school trustees, who persuaded teachers and pupils to try the schedule of the 7 A. M. to 1:30 P. M. method, and now could not persuade them to try any other system in warm weather.

The siesta custom is all but universal in the tropics; even the inhuman taskmasters of the Morocco coast plantations permit their slaves to pass the first three afternoon hours in such shade as the neighborhood affords, and the West Indian Creoles generally leave their fields at 1 P. M., and do not return before the cool of the evening, though the summer heat of the hill country is not half so effective as that of our northern river bottoms. A Missouri surveyor, who had passed several years in southern Cuba, confessed that the midsummer martyrdom of St. Louis often tempts him to transfer his permanent home to the Bayamo (some eighty miles north of Santiago harbor); yet the boon of the long noonday recess is claimed by the laborers of the Bayamo coffee gardens not less than by the Santiago longshoremen.

In the southern West Indies the longest summer day is only a trifle longer than the twenty-first of December, while in the latitude of Northern Dakota the difference amounts to more than seven hours; and travelers in the tropics soon get rid of the idea that the insect plague increases with every degree nearer the equator. The facilities for natural drainage are more important in that respect than differences in the average of annual temperature, and for the virulence, omnipresence, and all-day and all-night activity of their summer mosquitoes neither the Florida everglades nor the Cuban coast jungles can begin to compare with the beaver swamps of Sault Ste. Marie, Mich.

But it is true that climatic diseases attain the maximum of their contagious potency south of the twenty-third parallel. Acclimatization is a process of years, and it might be questioned if the strictest attention to the rules of prophylactic hygiene could be warranted to protect a newcomer in such localities as the estuary of the Rio Canto on the west coast of Cuba, where malaria broods scentably and, as the natives maintain, visibly, almost the year round. "*Es el vomito*" ("that 's yellow jack"), said our guide, pointing to a dun haze over the lagoons of the mangrove brakes. But sanitary precautions will protect in the settlements of the foothills, where reckless indulgence in the dietetic habits of the North would seal the doom of any foreigner. Meat gluttony alone will often suffice to book the sinner for the proscriptive list of the next epidemic; but meat dinners plus alcohol breakfasts and cheese lunches will originate life-endangering zymotic disorders, almost as surely as scurvy can be originated by a

protracted diet of salt beef and rot water, or fretfulness by a course of strong black tea.

The Spaniards, it is true, are rarely entirely frugal in the ancient Roman sense that implied preference for a vegetable diet with such quasi-animal *entremets* as eggs and milk. They are carnivorous, a circumstance that may have had a good deal to do with the truculent passions of the conquistadors and buccaneers (literally, beef-roasters); but the modern West Indian Creoles use meat sparingly, and generally with an admixture of antiseptic spices — mustard or red pepper. The habit, thus initiated, if not a protective instinct, also leads them to chew *chile colorado* (red pepper pods) for its own sake, and the traveler in the Spanish Antilles is often surprised to see his guides or teamsters claw a shred of their favorite tonic from a leather breech pocket, and proceed to masticate it in default of more substantial refreshments.

The inexpensiveness of the habit is no argument in its favor, and it would be a libel on nature to endorse the popular sophism that the human organism spontaneously craves a stimulant of some sort or other. Dean Swift, with the clairvoyance of intuitive genius, makes his Houyhimas eschew all spices, including salt, and I can not help thinking that the violent protests against that mere hint at a radical food reform were founded on impressions deduced from the experience of a mistaken vegetarianism. If we are to adopt the menu of the Concord turnip eaters or the still stranger plan of the Cyropædia sage who wants his model youth to subsist on a diet of cresses and water, the enormous quantum of the requisite *ingesta* might tempt nature to crave the same aid to digestion that enables a cow to assimilate a wheelbarrow-load of dry fodder.

But vegetarians of a less ascetic school can dispense with such aids to nature, and

if we shall believe Athenæus, the most popular sect of ancient philosophers, the somewhat mystic, but health culturing and nature-worshiping disciples of Pythagoras, were living proofs of the possibility of combining a considerable degree of mental and physical vigor with total abstinence from all stimulants whatsoever.

They avoided meat (to beings of our species a digestive irritant and the probable cause of gout), eschewed alcohol in all its forms, counteracted frost with olive-oil, and never suspected the advent of our multi-fuddling era of tea, coffee, absinth, and tobacco. Opium probably did enter into the day-dreams of ancient mystics, but if Pythagoras was initiated by the tope fiends of a far Eastern temple city, he wisely concealed that fact even from his esoterics, and the plurality of his followers practically refuted the idea that the moral or physical well-being of our species depends on the aid of any tonic except hunger and exercise.

Yet conceding all that, the questions remain whether reformed inebriates can get along without some concession to weak (or weakened) human nature, and if a compromise of that sort would not even lessen the risk of a relapse.

But if we must throw a tub to the whale of that temptation, a brief sojourn in the American tropics might convince unprejudiced observers that a hogshead of *chile colorado* would be preferable to a barrel of coffee or a firkin of schweitzerkäse. Red pepper does not afflict its votaries with insomnia, and is not only free from the suspicion of microbes (of which strong cheese contains a little more than 16,000,000 and a little less than 20,000,000 per square inch), but is an effective microbicide, and with one exception perhaps the most reliable prophylactic, without inducing the distressing after-effects of quinine.

THE CHILD.—PART II.

BY COLONEL FRANCIS W. PARKER.

IT will take the children a hundred years to come into their birthright, because we — not only teachers, but fathers and mothers — are insisting upon a conventional education.

Although we all acknowledge, when we stop to think of it, that the earth we walk on, the air we breathe, the water we drink, the food we eat, the clothing we wear, — everything that surrounds us, touches us, or impinges upon us, is a part of our life; yet we leave these things out of the schoolroom almost entirely. This is an age of science. Man is discovering God's eternal truths. The whole world is being changed by magnificent inventions.

Why should not the child in the schoolroom be consecrated to science? Of course he must learn to read; he must read a polytheistic literature in order to be Christianized. He must spend years in digging into the old "dead languages," — I believe in that, if they can be made alive. But why should he not have a chance to feel the mighty power, not only of nature, but of man, that is sweeping through the world in this age? Why would he not make a better citizen if he learned something in childhood about gas, and water, and rock, and electricity?

This, however, is not the main reason why the child should study nature. The main reason is, that no child can really love nature and be bad. No boy can love birds, and stone or shoot them wantonly. There comes to him a feeling — it is not reason, it is a feeling in his soul — of the beauty and the love that exist in the things around him. That is the beginning, and it ends, — where? Tennyson has said: —

"Flower in the crannied wall,
I pluck you out of the crannies;
Hold you here, root and all, in my hand,
Little flower: but if I could understand
What you are, root and all, and all in all,
I should know what God and man is."

There is not a petal, a flower, a rift in a cloud, or a blade of grass, that does not point upward to the Eternal One. So I say, give the child this real study of nature; make him feel the eternal God, — his love, his law, his power.

Every child is a born lover. True, some great men say that the child is born selfish; that he is a little selfish animal when he begins. I have been studying these little folks a long while. I used to believe that children were bad when they started; now I believe that God made them. Think of this little baby in its mother's lap or upon its mother's breast, longing for love and returning smile for smile! Is that the beginning of selfishness?

We systematically cultivate selfishness in the child. Selfishness is a disintegrating power. It disintegrates society. It develops hate and bigotry. It disintegrates the mind, for cohesion and unity of mind are brought about by love and love alone. How do we begin the cultivation of selfishness? It is begun in the home. "Now you be good, and I'll give you something nice" — some candy, perhaps. "Now take your medicine like a good little boy, and I'll give you some money to put in your box." "If you won't tell where we borrowed the spoons for the supper-table, when the company visits us, you shall have a ride to-morrow." The child appears on earth to do something. He is ready to do what his

environment demands,— and this is what is demanded of him. This is the lesson he learns: "I am a little marketable product,— I am for sale!" He does nothing for duty, but everything for profit.

He goes to the Sunday-school and is given a little reward, a bit of paper. When he gets ten of these bits of paper, he receives a larger one. I know a little girl who once had nine of these little pieces of paper, and she found another on her way home from Sunday-school, and then, she said, she was "going to get the reward." Just look at the logic of this system,— it is not that the teacher may love Christ, but that the child may; in order to get him to do this, he must think of the reward. Is this leading the child to love Christ, who is love?— No; it completely surrenders the idea that Christ is love. It induces a sordid spirit.

The little children go to the primary school, and then begins the system of debits and credits. I used to think I was doing God service while using this system, as Saul did when he held the garments of Stephen. It is easy,— just as easy as taking paregoric or "soothing syrup,"— "Sit still now, and you shall have a merit-mark." Poor little children, sitting all day on a bench so high that their feet can not touch the floor! "If you will only be good — *don't turn round* — don't turn your heads!" No exercise of the neck! Oh, the torture! "Face to the front, and *sit still!*" And they do — all their lives.

Then the rewards begin for "taking places." An innocent-hearted little boy comes to school. The teacher places him at the foot of his class, and tells him to "get up to the head" so many times, and he shall have a reward. This is his environment. He looks at those above him, and says to himself, "You think you are bigger than I am, but I 'll show you what I can do." Then he steps up one; he despises the child below him, and envies those above him. Then he steps above another, and now he has two to despise and fewer to envy; so he can concentrate his envy. Up he goes, above one after another, until at last he is at the head, and joy fills his heart. He rushes home to his mother, and says, "Mother, I have beaten them all,— they are all under my feet!" And she says, "Come to my arms, my darling! Let us go to prayer-meeting, and learn of Him who gave his life wholly and entirely for man!" Is that the true system?

When selfishness is cultivated in a child in the Sunday-school, in the day-school, and in the home, the light and love of Christ do not break into that soul. We make these conditions for the child, and then wonder why the man is so bad. Why do we pursue this course? It is because we do not understand the child.

Then come the "per cents." It may be you do not know anything about per cents. But why do pupils have to have per cents.? It is because they must have something left. The per cents. show how high the water-mark has been sometime in the past — after it is all gone. Per cents.! If the pupil loved knowledge, there would be no use for per cents. Were knowledge "sweeter than honey and the honey-comb," per cents. would be no attraction. But it is not sweet,— at least, in the way in which it is administered,— and so pupils have to be bought, with per cents. and rewards, to acquire knowledge. This brings envy and selfishness. I once heard a great man say: "Beautiful little children! When I look on them, I think they are like the angels. When I see them on the streets as men, alas! what a difference!"

Let us look into the matter of per cents. As I have said, if pupils loved knowledge, they would not have to have per cents. But they must have a purpose, an

end and aim, and it is the per cent. that they are taught to worry about. The mother worries about it; she does not worry much about her little girl's health, but she worries about the per cent. Thousands of young women are preparing themselves for lives of invalidism, just by this unnatural struggle for the per cent. Now if this system is a good thing for children, it is a good thing for older people: suppose, then, that we introduce it into our society as a regular business matter. You hire a cook, and in the morning you sip your coffee (excuse me, unless you have something better), and the lady of the house puts down five per cent. for the cook. You see she can not judge of the abilities of the cook without knowing her per cent., so she puts it down. Then the cook prepares some beefsteak; the lady of the house eats a bit of it and puts down ten per cent. Finally she adds the column of per cents.; if it reaches a certain amount, she keeps the cook; but if it does not, she discharges her. Why not?

Here I have a little girl right by me for a whole year, and I love her, and she loves me. I help her to study and to work, and teach her to assume responsibilities; I watch her to see that she is active in doing right and that her mind is stored with beautiful things. And then, I don't know whether to promote her or not unless I have put her percentage in a book!

Suppose we introduce this system of per cents. into matrimonial affairs: A young lady has worked her way through one of our model colleges, and stands at the head, and then a certain gentleman visits her; he continues his visits for two years; that is long enough. Then comes the final question which is to decide his fate. She says: "My dear sir, I suspected your purpose when you first came here, and I didn't propose to trust my emotions or my estimate of your character in general. In our college we had one plan for determining these matters, a method of systematic marking; so every evening after you left me and went home, I sat down and marked your per cent. in a book. I have kept this account systematically for two years, and here it is. I now have occasion to add these columns and balance this account, and if you will be quiet and patient for a moment, I will do so." Then she adds the "Credit" column, beginning perhaps with "Amiability, 99 per cent.; Clothes, 97 per cent.; Money, 6 per cent." Calmly and carefully she adds. In this manner she finishes this column. Then she "foots up" the other column, writes the footing, and brings the footing from the other column to the final column. She then draws the line that is to draw a line between them forever, strikes the balance, looks calmly at the final result and says, "I can only be a sister to you. It is 74.99 per cent. If it had been 75 per cent., I would have been thine forever." Why not try that system? If it is good for children, why is it not good for adults?

But some will say, as a gentleman said to me some years ago in Pennsylvania, "Colonel, wouldn't you cultivate ambition?" I said, "No,—only the ambition of doing more good to-day than you did yesterday."

(To be concluded.)

LOOK back on time with kindly eyes,
He doubtless did his best;
How softly sinks his trembling sun
In human nature's west!

—*Emily Dickinson.*

NUTS AS FOOD.

BY J. H. KELLOGG, M. D.

THE well-worn simile, "sweet as a nut," shows that it is not necessary to make a plea for the delicacy and toothsomeness of this natural product. Why, then, is not the nut a more popular food? There are two chief reasons: First, nuts have suffered discredit from being relegated to the list of questionable foods, called desserts. Desserts, as a rule, are unwholesome. We may almost say that they are a device of evil to get the most digestible and least attractive foods served first, while the indigestible and highly flavored dishes are reserved as a temptation to overindulgence. Nuts are usually taken after we have eaten too much, and the fit of indigestion that follows is unjustly set down to their account. Second, nuts in their natural state are to a considerable degree indigestible, because they are hard and dry and difficult of mastication. Most people eat in so great a hurry that they do not properly chew their food. Besides, there are very few adults in this country who have teeth that are sound enough to chew nuts sufficiently. The consequence is that the nuts, instead of being reduced to a creamlike consistency, are swallowed in chunks and masses. In this form they are absolutely indigestible, and will pass through the alimentary canal unattacked by the digestive fluids. Sometimes they undergo a certain putrefactive change in the alimentary canal, and produce serious indigestion.

Considered from a dietetic standpoint, however, nuts are the most highly nutritive of all foods. They contain just what fruit lacks, so that they are almost the complement of fruit. Fruits offer acids, sugar, and fluid in abundance, while nuts supply fats, albumen, and a very little sugar. The special dietetic value of nuts lies in the fact that they contain practically no starch. The chestnut, however, must be noted as an exception to this rule, since it contains about seventy per cent. of starch, more even than the ordinary cereals. In the walnut there is about fourteen per cent. of starch, and in the cocoanut and the almond from four to eight per cent., but all other nuts are almost entirely lacking in this element. Nuts, therefore, are particularly adapted to a large class of people who have lost their ability to digest starch. Persons suffering from hyperpepsia are generally unable to digest starch thoroughly, because the stomach produces so large a quantity of acid that the saliva can not act upon the starch. Such people can find in nuts, dextrin, which is starch already digested, and fat, which is a substitute for starch. Although starch is one of the most natural of foods, it is possible to dispense with it, since nature is able to make a substitute of fat.

The peanut, the almond, the hazelnut, and the filbert, each contains more than fifty per cent. of fat. This is the purest and most digestible fat to be found in any food. Nuts are made up of little cells, each of which has its proportion of proteids, albumen, fat, dextrin, and other constituents. When the nut is crushed, it forms a creamy mass, which readily dissolves and digests. Other fats, when entering the stomach, float upon the surface of its contents, smearing them and hindering the action of the digestive fluids. They also contain germs which cause fermentation and decomposition, so that the contents of the stomach become rancid, and the conditions are made favorable for gastric catarrh.

But in nuts we have fats in a form in which they can pass through the stomach

mingled with food, just as cream will mingle with water, without any interference with the process of digestion in the stomach, and can pass to the small intestine, where the pancreatic juice and the bile act upon them, completing the process of digestion so far as is necessary to secure prompt absorption. The fat, being divided into small particles, is attacked by the digestive fluids at once, whereas fat that is taken in a fluid mass can be thus acted upon only after a long process of churning and manipulation by the stomach and intestines.

The albumen in nuts is another valuable constituent. The nut is the perfect analogue of meat. The peanut contains twenty-eight per cent. of albumen, while beefsteak contains only nineteen per cent., so that nuts may properly be called vegetable meats. Besides, one may find an abundance of beefsteak in nuts without murdering an ox or a cow,— without subjecting any animal to pain. In almond butter we have twenty-three per cent. of albumen, or twenty-five per cent. more than in the best beefsteak. The peanut and the almond, then, offer a complete substitute for beef. The filbert and the hazelnut contain from fourteen to seventeen per cent. of albumen, almost as much as beefsteak. All nuts are rich in albumen, so that on an average a pound of nuts contains as much beefsteak as a pound of beefsteak, and has other advantages besides. To repeat: All these various nuts contain food substances which in their chemical composition, in their nutritive values and their uses in the body, correspond almost exactly to meats. For example: the composition of fat bacon is almost identical with that of the almond. Doctors who prescribe bacon for persons who are pale and emaciated, might better advise almonds, in which the fat, instead of being in a free state, is in a form of natural emulsion, ready to be digested promptly without the possibility of interfering with the digestion of any other food.

As previously mentioned, the chief objection to nuts is the difficulty of masticating and preparing them for stomach and intestinal digestion. For a long time writers upon dietetics have been saying that nuts furnish a vast amount of nutrient material, which could be utilized if the nuts were only available. The fact has also been brought out that nuts are rendered more digestible by cooking. Unfortunately, it is only very recently that methods have been devised for their proper cooking and preparation as food.

It has been found that they must be cooked above the ordinary temperature of boiling water, to bring out some of their peculiar characteristics. The peanut, when properly prepared, after being subjected to a temperature of about 230° F. contains all the flavors found in common meats. It is possible so to treat the peanut as to get rid of the ordinary peanut flavor entirely, and at the same time develop the osmazome or meat flavors. Nuttose, which is a preparation of peanuts cooked under a steam pressure of 230° F., produces when being toasted for the table, an aroma closely resembling that of roasting turkey. Various nut preparations resemble flesh meats, at least as nearly as is desirable. True, they do not have the taste of decay, the "high flavor" so much affected by gormands, and which means simply high rottenness, but they have all the good qualities of animal foods, without any of their odious ones.

Nuts may be prepared in various ways. The almond is improved by cooking; simply boiling it makes it more wholesome. When slightly roasted in the oven, and salted a little, it is delicious. Crushed into a paste, and made into cream by the addition of hot water, it

becomes a most delicate and palatable substitute for butter.

Peanuts must be cooked longer than any other nut, because the peanut is really not a nut at all, but a legume. It belongs to a class of foods that are closely allied to peas and beans. In China there is a bean which contains eighteen per cent. of fat — the "soja" bean, which is largely used as an article of food by the Chinese. But this bean does not compare with the peanut in nutrient qualities. Peanuts are largely used for food in the German army. Thousands of tons are annually shipped from this country to Germany and France.

Some of these peanuts which have been sent to Europe come back to us in little bottles labeled "Superfine Olive-Oil," which is nothing but oil made from American peanuts; the dried residue is ground into meal, and used as rations in the German army in the form of a soup which possesses high nutritive value. The peanut is also largely used in German hospitals for making soups, and is certainly one of the most nourishing of all foods.

The chestnut, as before stated, contains a large proportion of starch. For this reason it can be manufactured into bread. The natives of Italy use chestnut-flour gruel, especially in times of famine. The chestnut flour is also made into dough, and baked in thin cakes, forming a very delicious food. The only objection to this flour is that it becomes slightly bitter when kept any length of time. In Lombardy and some other portions of Northern Italy, ordinary flour is mixed with chestnut flour in the proportion of one part chestnut to two parts of ordinary flour, a mixture which makes excellent bread. The ancient Romans lived almost exclusively upon chestnuts. The Arcadians, historians tell us, lived upon acorns — nuts which are allied to the chestnut. The sweet acorn might be regarded as a starchy nut. It may be soaked in water until the bitter principle is removed, then dried, ground, and baked, when it makes a very palatable bread. In some portions of Scandinavian countries, especially in times of scarcity, acorns are largely used for food. In certain localities, hogs are fattened on acorns, and deer become very fat in the fall from eating them.

Now, of all the food elements, with the exception of albumen, fat is the most important. We can live very much better without starch than without fat, because fats can completely replace starch, whereas starch can not completely replace fats. One can live a long time upon albuminoids, dispensing with starch, but fats are indispensable. The vegetarian diet is generally too poor in fats. In nuts we have a perfect substitute for all kinds of animal fat. By combining fruits and nuts we have a perfect dietary.

Nuts have the further advantage of stimulating intestinal activity. They are slightly laxative in their effects; laxative without being bulky and irritating. The fat of nuts is itself slightly laxative. All nut fats stimulate the liver, and encourage the process of digestion.

Persons suffering from dryness of the skin, emaciation, and wasting disease find their condition rapidly changed by adopting a dietary of nuts. Diabetics, persons suffering from Bright's disease, neurasthenics, people who need to gain rapidly in flesh and blood, those who are convalescing from some wasting disease, consumptives, — all are wonderfully helped by the use of nuts.

I think the time will come when our civil governments will recognize the great value of nuts, and when our legislatures will enact laws requiring people who cut down ordinary trees to plant nut-trees in their place.

GALLOPING CONSUMPTION AT THE TABLE.

BY F. MAGEE ROSSITER, M. D.

It is often asserted that the present generation lives more in twenty-five years than our ancestors of two centuries ago did in fifty. It may be said with equal truthfulness that the present generation eats as much in twenty-five years as our forefathers did in fifty, and in one half the time.

We stand aghast at the frightful ravages and the progressive onward march of consumption. One seventh of all the deaths to-day may be attributed to this dreadful malady. In some of the large cities, one out of every four that die, succumbs to this disease. But it is little realized and much less appreciated, that there is a "galloping consumption" going on at the table, even more extensive and destructive than tuberculosis.

Haste in traffic, haste in business, haste in education, haste in pleasure, has led to haste in eating, drinking, thinking, sleeping, until physical degeneracy and premature decay stare us in the face on every hand. But of all the evils resulting from the terrible momentum of modern life, hasty eating is the most far-reaching and the worst. It may safely be said that hasty and promiscuous eating annually results in more distress and more deaths than are caused by tuberculosis; it is even one of the most important predisposing causes of this disease.

Tuberculosis is not more at variance with the plan of nature than is the rapid consumption of food. That nature intended man to find a real pleasure in eating is evident from the fact that natural foods are variously and delicately flavored, and that man is endowed with the sense of taste to appreciate these flavors and with the sense of smell to enjoy natural odors. The surface of the tongue is the seat of the sense of taste, hence the pleasure that attends eating does not consist in the amount of food that can be disposed of, nor in the rapidity with which it can be eaten, but in the length of time it remains in the mouth, stimulating this sense of taste. It would be well for the rapid eater to take notice that the taste buds are on the tongue, and not scattered throughout the length of the esophagus or in the walls of the stomach.

To be convinced that few individuals appreciate either the pleasure or the necessity of eating slowly, one need but look about him anywhere. Tarry a few moments at a ten-cent lunch-counter or in a popular café. Here the business man, the lawyer, the clerk, the typewriter, rush in madly, almost with watch in hand, give their orders with feverish haste, gaze after the waiter with "time" and "hurry" corrugating their faces, fall upon sandwiches, mutton chop, pie, cheese, coffee, mustard, pepper, pickles, as if their life depended upon bolting the whole meal in five minutes. The business man becomes so accustomed to swallowing a large dinner in fifteen minutes that he feels as if it were an enormous waste of time to spend half an hour at the table.

Nor is this "gustatory lightning" confined alone to the lunch-counter and the restaurants. It may be seen especially at the breakfast table in almost any household. The father of the family is in a hurry to make the train, to get into the field, or to read the papers; his wife eats fast so as to finish when he does, and the children follow their example. So fruit and oatmeal,—cooked in five minutes and deluged with sugar and cream,—beefsteak, fried potatoes, bread and butter, are swallowed almost whole, and washed down

by frequent gulps of hot coffee, tea, water, or other drinks. The coffee is taken partly to make the food go down faster, and partly to brace up the system for the morning's work; for experience has demonstrated that the solid part of the breakfast can not be depended upon for any immediate comfort or sustenance. What wonder, when it is obliged to remain in the stomach several hours longer than nature intended, and where it often undergoes fermentative and putrefactive changes instead of being prepared to nourish the body.

The school boy and girl of to-day hurriedly eat a few mouthfuls in the morning, and rush off to school. At noon there is an hour's intermission, and this again necessitates hasty eating. We are a nation of dyspeptics and the foundation of our disease is laid in early youth by hasty eating and improper food combinations.

The train stops five minutes for lunch, and everybody rushes for the lunch-counter, and wildly attempts to eat a regular meal in three minutes. The statement of an eminent lecturer that people are literally digging their graves with their teeth can be demonstrated on all sides.

Galloping consumption of the lungs follows rapidly upon the galloping consumption of foods. Hasty eating results in many evils.

Nature furnishes man with thirty-two teeth, some for breaking off pieces of food, and others designed to crush it. The entire anatomy of the mouth clearly indicates that food should remain in it some time before being swallowed. If food remains in the mouth only a few moments, an insufficient amount of saliva is secreted and mingled with the food, hence salivary digestion is but partially performed.

If mastication is neglected, the food is not properly crushed or finely divided, and so is not readily acted upon by the saliva or gastric juice.

Food that is poorly masticated is swallowed in chunks, which resist the action of the gastric juice for a long time, and produce irritation of the walls of the stomach.

The secretion of saliva depends upon a mechanical excitation produced by a foreign body in the mouth, and also upon the action of the jaw. The softer or more liquid the substance, the less the secretion of saliva; the drier the food, the more saliva. Soft foods are quickly swallowed, and so but little saliva is mixed with them to pass into the stomach and continue the starch digestion. The saliva is also quickly neutralized by the acid of the gastric juice.

Hasty eating produces a sensation of thirst, hence the common practise in America and other countries of rinsing down food with tea, coffee, iced teas, ice-water, lemonade, and other beverages. This delays digestion by diluting the little saliva and gastric juice that have been given time to form; the cold drinks also lower the temperature of the gastric contents, so that digestion is completely at a standstill until the temperature at which digestion takes place is restored, and the fluid has been absorbed.

Hasty eating leads to overeating, so that the entire digestive system is overburdened, causing all the organs to do too much work,— "to put in extra time,"— to rid the system of this surplus of food. Excessive consumption of food eventually leads to a consumption of the tissues either in general or in part, because of the poisons circulating in the fluids of the body and retained in the tissues.

This galloping consumption of food, or eating on the run, is not only a great physical evil, but is a social evil as well. We have come to such a pass that conversation at the home table, if no guests are

present, is very little practised; for galloping consumption and fluent conversation can not be carried on at the same time. Thus far it is the conversation that has suffered, while the consumption is increasing at a high rate. The hearty laugh, that proverbial digestive tablet, and the light and airy table talk that make the charm of social eating, are in these days classed among the luxuries of life, and made the accompaniment of evening dress, cut glass, and three-hour banquets or elegant dinners. But they really belong among the necessities, and should accompany slow eating, careful mastication, and a quiet frame of mind. A longer time spent at the table every day, in thoroughly preparing food for the different processes of digestion, would save many a man or woman years of misery, ill health, and disappointing, ineffective work.

THROUGH THE GOOD HEALTH SPY-GLASS.

S. WEIR MITCHELL quotes the adage: "No man dies a triumphant death who dies of a disease below the diaphragm."

A bath-room one hundred and fifty-six feet long and containing thirty-six shower-bath rooms and dressing-rooms, has been built for the Illinois volunteers at Camp Thomas.

It was recently reported to the Kansas State Board of Agriculture, that scores of farmers go to the mills and buy musty wheat, which they feed to the chickens, and then take their eggs to market as first-class fresh eggs.

During the present decade there has been an enormous increase in the consumption of lard. The *National Stockman and Farmer* states that during the last six years the increase has been more than eighty per cent., while during the same period there has been an increase of nearly sixty per cent. in the quantity of lard exported.

The *Medical Record* states that a committee of the Danish Medical Association has caused to be distributed throughout that country placards and pamphlets giving careful instructions for the prevention of tuberculosis. The placards are hung in railway carriages and stations, schools and factories, and the pamphlets are distributed in public places. The disease has been increasing in Denmark at an alarming rate.

The emperor of China recently had some of his servants beaten because they could not get him the Christian scientific books that he had ordered. It seems that a few years ago the Christian and missionary women of China presented to the Empress Dowager on her sixtieth birthday a beautiful Bible. It was bound in velvet, with pure silver in bamboo pattern on the cover. His majesty saw it, and immediately sent to the American Bible Store and bought himself a copy. Since then he has taken a keen interest in Christian literature.

That the human voice was never intended for constant singing, and that the fundamental cause of hoarseness in singers is overuse of the voice, was urged by Dr. Simpson, of New York, at the 1898 annual meeting of the American Laryngological Association. The speaker referred

to the barytone voice, in which a man has a natural barytone with limitation as to high or low tones ; when a barytone makes an effort to accentuate high or low tones, he produces a condition called stretching the vocal cords. Even professionals must occasionally stop using the voice. The human larynx was intended to be used for conversation.

At the same meeting Dr. J. C. Mulhall, of St. Louis, spoke to the motto, "Long live the general health ; away with the spray." He said that one of the causes of inflammation of the nasal mucous membranes is self-poisoning from the intestinal tract. People eat hot bread and rolls for breakfast, cereals with sugar, and much candy, and thus lay up a large supply of carbohydrates that are not worked off. Pugilists are frequent subjects of pharyngeal catarrh, produced by their wild living and bad habits ; but as soon as they train down for a fight, these symptoms disappear ; all the bad things in the body are then eliminated.

The *Popular Educator* takes a religious weekly to task for "breaking out into a tirade" against a teacher who exhibited to her pupils the heart and lungs of "some small animal" which had been dissected in the interests of a class in physiology. The editor pertinently inquires :—

"If the exhibition of a piece of lean meat to show the structure of muscle, or of liver to show the position of the portal vein, 'is sufficient ground for the immediate dismissal of any teacher,' what shall be done with the mother who allows her child to see roast beef brought to the table, to see it carved, the red blood flowing at every cut, and then,— horror of horrors ! — to see that mother insist that the child shall eat this muscle and drink this blood ?"

A writer in *Gleanings in Bee Culture* mentions North Africa as a bee-paradise. The rosemary honey gathered there is said to be the finest honey in the world. The natives practise migratory bee keeping, moving their bees on camels. The hive in use is a long cylinder of clay, closed with a clay disk on each side. The honey is removed from the rear at the close of the season. Bees are never killed for their stores, but enough honey is always left for their subsistence.

Another writer in the same journal advocates hot instead of cold water treatment for bee-stings. He describes an accident in which himself and a mare were stung almost to death, but from the fatal effects of which both were saved by the immediate and vigorous application of hot cloths.

The *Public Health Journal* records a pertinent incident of Dr. Zacherine, the czar's physician, who died last spring. About six months after the accession to the throne of the present czar, in a lecture, he made the startling assertion that the tuberculosis which killed Alexander III as well as his young nephew, Grand Duke Alexis, and with which several members of the imperial family, notably the present czarevitch, are afflicted, was derived from the head cook of the imperial kitchen. This cook, a Frenchman, who was thereupon pensioned, died of consumption four months later. The *Public Health Journal* adds: "The professor's views upon the subject were subsequently endorsed by a number of the leading scientists of Europe, thus calling attention to a source of danger to mankind until that time unsuspected, since it can have occurred to but few laymen to inquire into the health of those preparing their food, or to ask whether the cook is not afflicted with some malady liable to be communi-

cated to others through the food which he or she has handled."

Dr. George F. Shrady, president of the Red Cross Society and editor of the *Medical Record*, says that the soldiers' chances for life in the present war are seventy-five per cent. better than they were in the Civil War. He thinks that this is due in part to the progress made in aseptic surgery. If the bullet that wounds a man does not strike a vital part, the field hospital methods of to-day are such that, unless there is so great a shattering of tissue and bone as to preclude the possibility of recovery, the man is almost certain to regain his health. To-day there is no such thing as hospital gangrene. At least, if there is, it is so rare as to be unknown to the majority of practitioners in hospitals. The result is that when a man is torn by splinter, shell, or bullet, he will be so treated in the field hospitals that there will be nothing to contend against except the direct physical injury caused by the wound.

The cities of Germany are extremely solicitous about their water supplies, says John W. Hill in the *Sanitarian*. Of a list of one hundred and twenty-one, but one (Rega) depends wholly, and one (Frankfort) partly, upon unfiltered river water. Of a total population in these cities of 13,607,000 nearly ninety-eight per cent. either obtain their public water supplies from unexceptional sources, or rely upon slow sand filtration to purify such water, and it is not known that the sources of the other two per cent. are of questionable quality.

To illustrate the extremes of good and bad water, attention is called to the death-rate in Chicago from typhoid fever for 1891, and in Munich for 1892. The death-rate per 100,000 population was, Chicago, one hundred and sixty; Munich, three. In Hamburg, before filtered water was introduced, the typhoid fever death-rate ranged from twenty-three to thirty-four per 100,000. For the year 1893, when filtration was first introduced, the rate fell to eighteen, and for the following three years was six, nine, and six, showing a reduction of more than seventy-five per cent.

Mrs. Louise E. Hogan, a member of the American Public Health Association, who has been investigating the complaints that the United States government has failed to supply the soldiers with proper and sufficient food, states that the quantity and the variety of food are ample, but that better cooking is needed. She says: —

"Were the rations drawn properly, with a due regard to season and a scientific understanding of physical requirements, there would be no room for complaint on the score of monotony, and if the cooks who prepare the meals were persons who understood how to handle food properly in camp, and how to prepare appetizing meals with skill, as might be done, with proper teaching, from a much more meager supply of food than that given by the government, there would be absolutely no reason for complaint.

"Consider for a moment the varieties of food allowed for the troops, that may all be obtained for the asking, if care be taken to keep within the percentages allowed. Where cooking is practicable, there may be had beef; mutton; fresh, dried, or pickled fish; pork and bacon; soft or hard bread, flour, corn-meal, baking-powder; beans; peas; rice; hominy; potatoes; onions; canned tomatoes; cabbage; beets; carrots; turnips; squash; coffee, green or roasted; tea, green or

black; molasses; sugar; syrup; vinegar; salt; and black pepper. Certainly the question of balanced rations for camp cookery in the army will be seen, from the above, to be one only of application of science to practise, for ample opportunity is given for experiments by the above list."

PHYSICAL CULTURE FOR WORKING PEOPLE.

BY CAROLYN E. BARTON.

LABOR, or the ability to use the arms and hands for productive or useful purposes, is not only the poor man's capital, but the creative power of the commonwealth; and whatever tends largely to increase its force, energy, consistency, and pliancy, tends to elevate a nation to an enormous degree, whether as respects wealth, comfort, or the power of self-defense; therefore, physical culture, that fruitful nurse of muscle and manliness, should be made a national question, and universally sustained on the score alike of patriotism, self-interest, and philanthropy.

Heretofore, physical culture has been viewed as demanding the attention of the sedentary only — as a science in which none but the clergy, the bar, and the commercial and non-muscular and well-to-do professions should interest themselves. The mechanic or laboring man has all along been supposed to realize all necessary exercise while pursuing his avocation, or else to be debarred by poverty or lack of time from the means and opportunity of improving his bodily health and vigor. But the world is beginning to understand that the mere contraction and expansion of muscle (and particularly when confined to one limb, as an arm, or one portion of the body) is not the only thing required to maintain the system in energetic health; some daily exercise in the open air — exercise that will bring the whole system into play — exercise that will in a measure be stimulated by emulation or congeniality — is requisite to make enduring, well-balanced men, who, whether they toil with the brain or the sledge-hammer, shall do their work with energy, ease, and skill.

In the name of justice and philanthropy, we ask, Are the means of sustaining or securing these conditions to remain within the reach of only the commercial and professional classes, of those who, however useful and necessary their avocations may be to the welfare of society, still live upon, and in fact are sustained by, the hands of the workingman?

Society is responsible for the condition of its laboring classes; these are the weaker brothers of the wealthy and educated, and as such they are entitled to their sympathy and care; to what nobler purpose can the latter devote their wealth and leisure than to spreading comfort, health, and cheerfulness among the honest sons of toil? What a large field lies open here for legislative, commercial, and individual action! Our working classes require healthier and more convenient dwellings; they need free baths, as well as free lectures and free schools; they should be made conscious that bodily vigor is their first best capital, and they should be taught how to increase and husband it; they should not only be encouraged by free libraries and reading-rooms, but should be provided with tennis courts, boating houses, and well-ventilated gymnasiums; through earnest appeals to their better nature, they should

be led to turn these recreations to their legitimate account. Let society provide avenues like these for the "irrepressible" energies with which a provident, but inexorable, nature has endowed the bodies of our robust young workingmen, and the desire to indulge in football or bicycle racing will be superseded by a dignified determination to show to the world that mind and muscle can inhabit the same body; that gentleness is one of the fruits of manliness, and that, if a fair field be shown to the workingman, he will be able to manifest himself as being both the wise man and the gentleman.

Hitherto, society has regarded its laboring classes much as the farmer does the uncherished berry bush of his pasture; society accepts their labor as he does its fruits, and there all interest ceases; but when society shall realize (as the farmer now begins to do) that care and culture "pay," then physical culture for the laboring man, the necessary accompaniments of which are improved physical conditions and surroundings, will become popular, and all classes will encourage it, and even urge legislation in its support. And will this pay? Can society sustain the cost of improving the physical condition of the masses?

Can so vast a portion of the community be afforded a large increase of the necessaries and comforts of life, without taxing capital, dividing up property, or impoverishing the nation?—Yes, indeed; for the question involved is not that of sufficient production,—labor-saving machines are fast settling that point,—but simply of righteous consumption. The greatest problem for society now to solve is, How can each of its members most abundantly, and yet *honestly*, consume the products of labor, and thus prevent the wheels of industry from being continually interrupted by the back-water of overproduction? Now it is evident that an increase of physical culture implies an increased consumption of material products; with increased consumption comes increased demand; increased demand calls for more labor; the wages of labor supply the means of purchase; and so the circle is complete; and this "wheel of fortune and plenty" may be turned, self-enlarging and increasing, benignant as it revolves, until every son of Adam shall live in his own palace, be clothed in fine linen, and fare abundantly every day; "for the raw material of nature is so exhaustless, and the inventive genius of man so boundless," that nothing but ignorant selfishness and folly prevent his progress to a state of universal comfort and health.

THE gout is rich man's rheumatism, and rheumatism is poor man's gout. Put your toe in a vice, and turn the screw until you can bear the pain no longer, that's rheumatism; give the screw one more turn, that's gout.—*Dickens.*

THE *Scientific American* calls attention to the fact that the common yellow buttercup is a poisonous plant, if eaten, and should not be allowed to grow where children are likely to congregate.

MR. RAREY, the celebrated horse tamer, says that he has known an angry word to a horse to raise its pulse ten beats in a minute. Think, then, how it would affect a child.

A MAN'S body and his mind are exactly like a jerkin and a jerkin's lining; rumple the one, you rumple the other.—*Sterne.*

HEALTH and good humor are to the human body like sunshine to vegetation.—*Massilon.*

THE GREAT MAN'S STOMACH.

BY MARY HENRY ROSSITER.

THEORETICALLY, it would be generally admitted that the great man's stomach is just like any other, that in a state of nature it is a pink, oval, wrinkled, muscular bag capable of holding about three fluid pints; that if abused by the great man, it would have no more respect for his peace than for that of the common sinner.

Practically, it is difficult to believe that nature never discriminates. It is agreeable also to idealize those whose achievements are extraordinary. The pride of man first exalts his hero to a pedestal and worships him, then undertakes to find his flaws. It is the instinctive desire to feel that touch of nature which makes us all akin, that inspires our constant interest in the personal history of distinguished men and women.

Lowell said of Agassiz: —

> "His magic was not far to seek,—
> He was so human! Whether strong or weak,
> Far from his kind he neither sank nor soared,
> But sate an equal guest at every board."

This magic of the human has unfailing power to charm — if it be not too human. Ben Jonson's airy lines, beginning,—

> "Have you seen but a bright lily grow
> Before rude hands have touched it?"

would suggest a more pleasing picture were we not, together with the fair white lily, unfortunately put in mind of the great, fat, gluttonous poet himself, with his big coarse face, marred by blotches, his enormous cheeks, and his corpulent body.

While we would fain believe that the poet's stomach is always pink and properly supplied with gastric juice, while we cherish the thought that he lives on ambrosia — in dainty measure, stern fact informs us that this is not the case. Carlyle's subjection to "the cursed hag, Dyspepsia," is well known. Milton suffered from intemperate abstemiousness, as Robert Burns from excessive self-indulgence. Victor Hugo feelingly declares that "indigestion was sent into the world to read a lecture to our stomachs." Voltaire exclaimed, "I would exchange a hundred years of immortality for a good digestion." Lord Lytton said: "There are two things in life that a sage must preserve at every sacrifice, the coats of his stomach and the enamel of his teeth; there are no comforters for dyspepsia and toothache." Byron, during an attack of indigestion, cries out at the dinner: "It kills me with heaviness, and yet it was but a pint of Bucellas and fish. Oh! my head! How it aches! The horrors of indigestion! I've no more charity than a vinegar cruet."

Thus it is evident that the possession of genius is no exemption from the operation of the laws of nature. It is just as important for the great man as for the individual interesting chiefly to the census-taker, to study and observe the principles upon which his physical well-being depends. Perhaps it is more important, if we are to believe, as has been intimated, that many of the memorable events in history have hinged upon the condition of somebody's stomach. We are told that Emperor William, of Germany, of whom it was predicted that he would bring disaster upon his government long before 1898, makes rash and critical speeches only after dinner. May not these apparent indiscretions be the fault of the dinners rather than of the royal disposition? for the emperor, from all accounts, has a lusty appetite. He eats three meals a day, the first consisting of an English breakfast. At this early meal there are generally on the

table coffee, tea, and meats of several kinds, including beefsteaks and cutlets. The "second breakfast," or luncheon, is at two o'clock, and consists of soup, a plate of meat with vegetables, a roast, and several side dishes. At six o'clock ordinarily, at seven when it is a ceremonial occasion, dinner is served.

The emperor is said to be fond of what are called by the French "*plats cavaille*," or dishes of the rabble. These are large odorous messes of braized meats. He is also partial to fish, oysters, fat soups with rice, macaroni, and force-meat balls. Is it any wonder that he sometimes feels belligerent with pieces of the corpses of so many different animals mixed up in his body?

It is stated that for one day the consumption of meat supplies at the Berlin palace is about one hundred pounds of beef, four veal heads, three hundred and sixty pounds of leg of veal, ten salted tongues, two hundred pounds of leg of mutton. Not that the royal family themselves eat it all. Of course the imperial cuisine provides also for many other persons, including members of the suite, the ladies of the court, and adjutant generals. But the intellectual atmosphere of this vast establishment can not be quite the same as if the staple of its food came from nature's granaries and orchards instead of from the slaughter-house.

Great clergymen are famous for their enjoyment of feeding the chickens—to their stomachs. Everybody laughs over the story of the little Scotch lad who, upon seeing the venerable minister approaching, rushed into the poultry yard, scattering his pet chickens and exclaiming breathlessly, "Rin, rin, here comes the mon that ate yer feyther."

One is hardly prepared, however, for the revelations concerning Tennyson's gastronomic peculiarities, published in the "Literary Recollections" of Max Müller's latest book, "Auld Lang Syne." It seems incredible that the author of "In Memoriam" should enter the dining-room of his young hostess, "whip off the cover of the hot dish," and exclaim, "Mutton chops! the staple of every bad inn in England." Yet this he did when a guest in Max Müller's own house. The author says further: "He was known to be a gormand, and at dinner he was evidently put out when he found the sauce with the salmon was not the one he preferred. He was pleased, however, with the wing of the chicken, and said it was the only advantage he got from being poet laureate, that he generally received the liver wing of a chicken."

If a knowledge of the weaknesses of the great be any encouragement to the unknown who struggle, the following story of Tennyson's attempt to give up tobacco is apropos. The distinguished author and editor relates: "It was generally after dinner, when smoking his pipe and sipping his whisky and water, that Tennyson began to thaw and to take a more active part in conversation. His pipe was almost indispensable to him, and I remember one time, when I and several friends were staying at his house, the question of tobacco turned up. I confessed that for years I had been a perfect slave to tobacco, so that I could neither read nor write a line without smoking, but that at last I had rebelled against this slavery, and had entirely given up tobacco. Some of his friends taunted Tennyson that he could never give up tobacco. 'Anybody can do that,' he said, 'if he chooses to do it.' When his friends still continued to doubt and to tease him, 'Well,' he said, 'I shall give up smoking from to-night.' The very same evening I was told that he threw his pipes and his tobacco out of the window of his bedroom. The next day he was charming though somewhat self-righteous. The

second day he became very moody and captious. The third day no one knew what to do with him. But after a disturbed night I was told that he got out of bed in the morning, went quietly into the garden, picked up one of his broken pipes, stuffed it with the remains of the tobacco scattered about, and then, having had a few puffs, came to breakfast all right again. Nothing was said any more about giving up tobacco."

Though the exhibition of a great man's bondage to a degrading habit may not be encouraging, it is at least a warning. The humblest among us would rather be remembered by his small world as the one who conquered rather than succumbed. But it is by no means certain in any given case whether the man or the habit will conquer. One would choose to be strong —he might prove weak. If he tempt not the chains, they will not be put upon him. He will have his strength for climbing, and need not spend it breaking fetters.

The gentle Thoreau undoubtedly was a great man who had a pink stomach. His principle of living has been defined as a policy of "indulgence in fine renouncements." In that famous story of his solitary life at Walden he shows that the noble mind may at least aspire to live above the level of demoralized appetite. Witness the exclamation, "Think of dashing the hopes of a morning with a cup of warm coffee, or of an evening with a dish of tea! Ah, how low I fall, when I am tempted by them!"

In a philosophical strain he writes: "The repugnance to animal food is not the effect of experience, but is an instinct. . . . It is hard to provide and cook so simple and clean a diet as will not offend the imagination; but this, I think, is to be fed when we feed the body; they should both sit down at the same table. . . . Fruits eaten temperately need not make us ashamed of our appetites. But put an extra condiment into your dish, and it will poison you. It is not worth the while to live by rich cookery. . . . It may be vain to ask why the imagination will not be reconciled to flesh and fat. I am satisfied that it is not. Is it not a reproach that man is a carnivorous animal? True, he can and does live, in a great measure, by preying on other animals; but this is a miserable way, as any one who will go to snaring rabbits or slaughtering lambs, may learn, and he will be regarded as a benefactor of his race who shall teach man to confine himself to a more innocent and wholesome diet. . . . The practical objection to animal food in my case was its uncleanness; and, besides, when I had caught and cleaned and cooked and eaten my fish, they seemed not to have fed me essentially. . . . Not that food which entereth into the mouth defileth a man, but the appetite with which it is eaten. It is neither the quality nor the quantity, but the devotion to sensual flavors. . . . If the hunter has a taste for mud-turtles, muskrats, and other such savage tid-bits, the fine lady indulges a taste for jelly made of a calf's foot, or for sardines from over the sea, and they are even. The wonder is how they, how you and I, can live this slimy beastly life, eating and drinking."

The memory of Tennyson is darkened by the shadow of gormandism. The memory of Thoreau is illumined by the quaintness and sweetness of his retired life. In the case of each the great man's relation to his stomach was, we may say, the determining influence in the picture.

In the words of Jerome K. Jerome, "It is very strange, this domination of our intellect by our digestive organs. We can not think, unless our stomachs will so. It dictates to us our emotions, our passions. After eggs and bacon it says, 'Sleep!' After hot muffins it says, 'Be dull and soulless, like a beast of the field

—a brainless animal, with listless eye, unlighted by any ray of fancy, or of hope, or fear, or love, or life.' After brandy taken in sufficient quantities, it says, 'Now come, fool, grin and tumble that your fellow men may laugh—grin in folly, and splutter in senseless sounds, and show what a helpless ninny is poor man whose wit and will are drowned like kittens side by side in half an inch of alcohol.' . . . Reach not after morality and righteousness, my friends; watch vigilantly your stomach, and diet it with care and judgment. Then virtue and contentment will come and reign within your heart, unsought by any effort of your own, and you will be a good citizen, a loving husband, and a tender father—a noble, pious man." Mr. Jerome might have added "great" to his list of adjectives; for in spite of the blows that are being dealt upon the functional importance of the stomach by the modern surgeon, it is fast becoming known and generally recognized that the true greatness as well as goodness of any man depends to a large degree upon the soundness and subjection of this member. Further to fortify this assertion the famous saying of Emerson may be quoted: "Every man would be a poet if his digestion were perfect."

WHY IS MAN NOT AWAKE AND SANE?

BY WILLIAM ALLEN WOOD.

WHILE reading Sir William Blackstone's Commentaries, my mind hesitated in order to consider the parenthesis in the following sentence: "If an acquisition of goods by either force or fraud were allowed to be a sufficient title, all property would soon be confined to the most strong and most cunning; and the weak and simple-minded part of mankind (*which is by far the most numerous division*) could never be secure of their possessions." This intercalation recalls several such expressions, as the one from George Eliot: "A perfectly sane mind is hardly at home in this insane world."

The question arises, Why is the world mentally unbalanced? And why is it that this unpoised state, as physicians and other scientists tell us, is every day becoming more manifest? Why do statistics show an unmistakable increase in the palpably defective classes?

For these inquiries I can find but one reasonable answer. There are two old proverbs which, when combined, form the basis of explanation. They are: "As a man eats, so is he," and "As a man thinks, so is he." Together, they make the more complete affirmation. "As a man eats, so he thinks," which is to be understood in the sense that the quality of a man's mind depends upon the quality and suitableness of his food. This is not a new thought, for similar opinions have been expressed by philosophers of all ages. The Spanish have a proverb: "Not with whom thou art bred, but with what thou art fed," which, though this may be a most inopportune time to quote from Spain, contains a great deal of sense.

Socrates was not more than half right when he said: "It is my belief, not that the good body improves the soul, but that the good soul improves the body."

A pure soul may live in a deformed body, but not in an impure body. Hence, if we purify the body, we help to purify the soul. The recognition of this principle is doing more for the regeneration of

humanity than all the attempts toward that object which have been based on other propositions.

Criminal reform, to be successful, must not be attempted merely through the means of moral suasion, but also through the employment of rational therapeutics, especially by the regulation of the prison dietaries. The redemption of all the dependent, defective, and delinquent classes and the awakening of the somnolents likewise depend on this innovation. The Athenian philosopher did not err in the following: "To require the help of medicine, not when a wound has to be cured, or on occasion of an epidemic, but just because, by their lives of indolence and luxury, men fill themselves like pools with waters and winds, compelling the ingenious sons of Æsculapius to give diseases the names of flatulence and catarrh,— is not this a disgrace?" Pythagoras and Euripides tell us how to attain the *summum bonum* — happy peace: "Fix on that course of life which is most excellent, and custom will render it the most delightful."

"What need mortals save twain things alone,
Crushed grain (heaven's gift), and steaming water — draught?
Food nigh at hand, and nature's aliment —
Of which no glut contents us,
Pampered taste hunts out device of other eatables."

Ours is the era that forgets the wisdom of the past. Our motto seems to be, Eat and drink *everything*, for to-morrow we die. Just so surely as to-morrow comes, if we do eat and drink everything, we do die.

Death is not alone a shuffling off of this mortal coil. Insanity and somnolence are civil death. A person acting in either of these conditions is not responsible. And yet in this somnolent and insane time, our nerves benumbed and mutilated by the most potent poisons of the three natural kingdoms, we boast of *living* as man has never lived before.

Is it hard to guess why humanity is not mentally acute and physically active? Is it difficult to discover the means of making mankind well?

HAVE you got a brook in your little heart,
Where bashful flowers blow,
And blushing birds go down to drink,
And shadows tremble so?

And nobody knows, so still it flows,
That any brook is there;
And yet your little draught of life
Is daily drunken there.

Then look out for the little brook in March,
When the rivers overflow,
And the snows come hurrying from the hills,
And the bridges often go.

And later, in August it may be,
When the meadows parching lie,
Beware, lest this little brook of life
Some burning noon go dry!

— *Emily Dickinson.*

BATTLE CREEK SANITARIUM QUESTION BOX.

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

1. CAN scrofula or any other blood disease be cured by dieting and taking baths?

Ans.— Scrofula is not a blood disease, as was formerly supposed, but is now known to be a tissue or systemic disease. It is a condition of the body in which there is but little power to resist germs. This, I think, was first pointed out by Dr. Lusk, an eminent New York physician. Some twenty-five years ago he called attention to the fact that scrofula is not a disease in itself; it is not a disease in the sense in which rheumatism or typhoid fever is a disease, but it is a peculiar susceptibility of the body to skin disease; the body lacks the power to resist germs, and when they attack it, the various symptoms of disease ensue. If they attack the glands, the patient has scrofula of the glands. If they attack the joints, he has scrofula of the joints, or "white swelling," as it has been termed. The real trouble is a weakness of the tissues, and a consequent inability to resist disease.

This difficulty can be eradicated, not by the purification of the blood alone, but by fortifying and renovating the whole body. The constitutional stamina must be increased. The standard of vitality must be raised. The individual must be put on a higher plane of living. This can be done only by adopting and following correct habits of life. We can not afford to violate the laws of health at any time, but in these cases it is absolutely necessary to observe them very carefully. We must eat the right food, take the right exercise and the proper baths, dress healthfully, and conform to every principle of healthful living.

2. What causes mental depression? How long does it take to get rid of it?

Ans.— The direct cause of mental depression lies in the nervous system; but the primary cause, in the majority of cases, is a diseased condition of the stomach. The ancients charged this symptom to a disordered state of the liver, hence they called it "hypochondria," which means, "under the ribs." The expression, "down in the mouth," means the same thing. In a majority of cases, mental depression is due to indigestion, and to that form of indigestion in which the stomach produces poisonous substances as a result of the fermentation of foods which remain too long a time in the stomach.

I have known people to get rid of it during the night; they wake up in the morning, and find that the feeling which they had the night before has disappeared. One of the best things to dissipate such depression is to adopt a pure fruit dietary, and to continue it until the tongue is clean. It has been found out during the last ten years that the majority of insane people produce in their bodies an excess of poison; an examination of their secretions shows this; and it has been further proved that this excess of poison, in the majority of cases, is absorbed into the alimentary canal. This means that insanity, in the greater number of cases, is due to the production of poisons and their absorption into the stomach and bowels. I have never found a case of melancholia in which the tongue was not coated and the breath foul; just so soon as the breath becomes pure and the tongue clean, the depression disappears.

3. If you were Uncle Sam's commissary general, what would you give the soldiers to eat and drink?

Ans.— I am afraid I would not be a

good commissary general, because if I fed the soldiers, they would probably not have a desire to fight; they would wish to have peace declared, instead of continuing the war and killing their enemies. The diet best adapted to the constant wants of man is not the best suited to the warrior. The best diet to make a man a fighting man is probably that which the lion and the wolf, the panther and the bear, delight in, and indulge in when they are hungry. Beefsteak will doubtless give a man fighting qualities, but this is not what the world needs. What the world needs to-day is the qualities which will give it peace and quiet. However, if a man had ten years in which to prepare to be a soldier, and wished to gain the maximum of muscle, strength, and endurance, his best dietary would be cereal foods, nuts, and fruits.

4. Explain the proper method of respiration,— is it abdominal or chest respiration?

Ans.— It is neither exclusively abdominal nor exclusively chest respiration; one should not breathe entirely with the diaphragm nor entirely with the chest. The proper respiration is that in which the whole trunk is enlarged by the taking in of air.

5. Please state what the acid is in the pieplant, the tomato, and the green gooseberry, and give the food value of each.

Ans.— Pieplant is simply wood and oxalic acid, and has no food value. The acid of pieplant is the same acid which is used for cleaning silver; it is a deadly poison. The tomato contains malic acid and a very small amount of oxalic acid. The green gooseberry contains malic acid and citric acid. The tomato has a food value of about six per cent., and the green gooseberry of five or six per cent. The nutritive value of these foods is small, because they contain so large an amount of water.

6. What combination of foods is best for hyperpepsia?

Ans.— The best cure for hyperpepsia would be a diet of granose or zwieback, — a diet consisting of dry food that must be chewed, together with such fruits as peaches, strawberries, prunes, baked sweet apples or very ripe sweet apples, and other fruits which are not excessively acid, with any kind of nuts, provided they are thoroughly masticated or otherwise prepared.

7. Why are the Irish so robust and rosy when their principal diet is potatoes?

Ans.— Because they add buttermilk and oatmeal to their potatoes. When the potato is supplemented by buttermilk and oatmeal, it makes a whole and complete dietary. The potato without the buttermilk and oatmeal would be insufficient, because the bulk would be too great. The potato contains only about 450 food units per gram, while oatmeal contains 1,800 food units per gram; hence a gram of potato contains only about one fourth as much nourishment as a gram of oatmeal. Therefore one would have to eat four times as much potato as oatmeal to get the same amount of nourishment. Allowing a pound and a half of oatmeal to be sufficient rations for twenty-four hours, one would have to eat six pounds of potatoes in the same time in order to get the proper amount of nourishment. In cabbage there is only one fourth as much nourishment as in the potato; so in order to subsist on cabbage, we would have to multiply the bulk by four again; and in order to get the nourishment in twenty-four hours of one pound of oatmeal, we would have to eat sixteen pounds of cabbage in the same time, which would be very uncomfortable. Still, some people try to live upon cabbage, celery, and similar substances, which were intended for cows and horses, but were not intended for human stomachs.

8. What is the best cure for habitual overeating?

Ans.— An old Quaker once told a friend that it was just as easy for him to be cured of drunkenness as to open his hand. The friend was anxious to know how that could be, and the Quaker said, "Whenever thee raises a glass of grog to thy lips, just before it reaches thy mouth open thy hand." The man saw the point, and tried the remedy. So it is easy to cure one of gluttony,—all you have to do is simply to stop passing food to your mouth. If a man eats more than he ought, he has only himself to blame; his hand is the servant of his will, and all he has to do is to withhold his hand. He must teach his hand to do its duty by his mouth, and the mouth will do its duty by the stomach. A good plan for such a person is to eat absolutely dry food. Granose is an excellent food for a person disposed to eat too much. Another, and perhaps a better, remedy for a person who finds he has an incorrigible habit of eating too much, is to eat only fruit. I sometimes meet people who say that if they don't eat just so much, there is a great vacant place in their stomachs; they seem to think they must be constantly barricaded with a big meal in front of their backbone. But fruit is something that one can feast or even gormandize upon with impunity.

THE HYGIENE OF LOVE.—NO. 1.

BY MRS. S. M. I. HENRY.

To love and be loved without any nervous complications, without chills and fevers, without despairing glooms or rapturous silliness, without sleepless nights or dream-laden days, without any breaking down of physical, mental, or moral strength, is the right and privilege of every man and woman.

Whatever is of nature must be hygienic, for nature is always in health and good order. It is only when nature is defied, insulted, disobeyed, discarded, that disturbance and embarrassment ensue.

Nothing is more natural than the principle that draws man and woman together, and which is known by the one name that best expresses the character of the great Creator; and because it is so very near to the heart of all that is eternal, that is most purely natural, most simply sweet, most expressive of God, it has become the point at which all perversion begins. Successfully to counterfeit gold would be a vastly greater accomplishment, as counterfeits go, than to counterfeit clay. So we find ourselves to-day with a vast hoard of spurious love on our hands which we do not know how to dispose of, and the most serious concern of the intelligent philanthropist is how to call in all counterfeits, and reissue to the next generation the pure coin of nature so that no one shall be defrauded, but humanity rescued from threatened panic.

The chief trouble that must be met at the very beginning is the fact that the majority of people have lost confidence in the pure gold of nature, and have become reconciled to the counterfeit, even believing that the spurious coin is the real issue, and therefore is as nearly of full-face value as anything ever can be, although they are bold enough to confess that it has from first to last all the tokens of "queerness" that should at once place it in the class of fraudulent products.

This view of the case is, of course, a

gross reflection upon the integrity of nature, charging dishonor where, if dishonor could be found, there would be proof that no truth is anywhere.

But there has been preserved and kept in circulation enough of the pure coin to prove that the authorized issue was all right, and to make a just judgment of its counterfeit possible. We have also to reckon with a sort of corroded imagination in the minds of many really good people which is almost as great a hindrance to healthy love as is the disbelief of others. These good people are likely to be parents who look with alarm upon every sign of the natural awakening of the sexual instinct in the young.

This is not to be wondered at, since they know just enough of the truth to make them realize the danger of error in thought or deed, and not enough to insure safe leadership. They know enough to produce shamefacedness in the presence of the wide-eyed, inquisitive young lives about them, but not enough to make them strong to answer all questions truly. They are themselves healthy enough in their loving to be able to keep off the *sick*-list, but not enough to make them soundly pure in all their thoughts. They are lame somewhere, perhaps unconsciously so, perhaps congenitally so, and hence never having known love's perfect health, are not able to speak confidently as to the possibility of being free from its infirmities.

They believe in the purity and truth of Nature, but are so little acquainted with her that they are more shy in her presence than in that of Custom, which they are able to comprehend, which they have had a hand in making, and with which they are not afraid to quarrel.

In the average home just so soon as the son or daughter begins to manifest a special interest in the son or daughter of some other home, one of two courses is pursued by the parents on both sides. Realizing that a crisis has come, and not knowing how to meet it, not having prepared for it, they allow themselves to fall into panic, and insanely begin either to scold or to ridicule the children as if they were guilty of some wrong-doing for being as God intended them to be, each interested in the discovery that the one is incomplete without the other; that for some reason, strange to them, since it has been neither revealed nor taught, they have each been left in an unfinished condition, but half of the whole that nature planned in man; and that for some other strange reason it seems to be considered a crime, or at least as very dangerous, even to think of that completed whole which can only be realized by the union of these separated halves.

Has nature, which is the material incarnation of God, erred? or do not father and mother understand her language? Nature answers to nature, and vindicates her every time, and it may be that father and mother understand; but the pestilence of social custom is in the air; an epidemic is prevalent; contagion is imminent, and the children must be inoculated with its virus for their protection. People do not often die of varioloid; it does not leave such deep scars as the terrible scourge of which it is supposed to be the preventive, so the young people are made sick in the hope that they may not have it quite so hard, instead of being by a careful, life-long process of health culture brought up to this critical time in beautiful harmony with every law which has been written in their being, so that no crisis shall intervene; but that each shall pass naturally from the unconscious incompleteness of childhood through awakening youth into that unity in the bond of perfectness which is the consummation of love.

There is a wide-spread, unconscious sensualism among the young of to-day

that is more alarming than any purely physical contagion could be. It is manifested in every look and motion of boys and girls as soon as they come into each other's presence. It is this that causes all those little efforts to trim themselves for each other's eyes which invariably lead older people to look at one another and frown, smile, or sigh, according as the secret current of thought runs in their own brains and hearts. The rush to the glass as the girl sees her boy friend coming toward the house, the suddenly adjusted hair, the bit of bright ribbon hastily fastened at the throat, the switching off the rumpled apron ; the adjustment of his collar or necktie, the pulling at the shoulders of his coat or jacket, the effort to set his head a little more bravely on his neck, to appear in some way to better advantage than he does habitually,—these are all recognized by the spectator as symptoms of "the disease;" and the nomenclature is correct. They are symptoms of a disease which, if not healed, will develop into that impurity of thought which has become the bane of the home, even if not into open immorality.

Why should the girl or boy try to appear finer in any way before the neighbor's boy or girl than before the home folks? Why try to appear other than one is? It is the office of love to reveal instead of to hide the inner life; love's counterfeit alone is false, and delights in pretense. To train the child to *be* rather than to *seem*, to estimate life and human relations according to the divine reckoning, and to give nature a fair show through all the years of his growth, will make it possible for a healthy love to crown a pure and happy childhood.

HELPING THE CHILDREN TO SELF-RESPECT.

BY MRS. E. E. KELLOGG.

ENCOURAGE the children to respect themselves by showing that you respect them. Froebel, the founder of the kindergarten, was wont to take his hat off to any little child he met, bowing, as he said, to the possibilities that were in him. Children who are undervalued, doubted, snubbed, are likely to lack true self-respect.

Self-respect naturally leads to trustworthiness. The following incident, related by a well-known kindergartener, illustrates how not to cultivate self-respect in a child :—

"Last winter I went to a so-called kindergarten connected with a very select school in a prominent city. The children were fine looking, and the lady in charge was evidently impressed in a certain way with the dignity of her position. One of the little boys, perhaps four years old, with great delicacy of organization and a busy brain, was constantly and almost unconsciously asking questions or making remarks about his sewing and such things as it suggested. He was indescribably interesting to me, from his combination of delicacy and force, but the teacher thought he asked too many questions, so turned to him and said, 'Merton, you are very selfish to take so much of my time asking questions.' He fairly quivered under the infliction. His face showed that his nature was a generous one, and that he had a pretty correct if indistinct idea of the meaning of selfishness. She was inexcusable in making this accusation. His delight in the new life constantly opening before him made expression a necessary part of his development, and if

she could not give intelligent and sympathetic attention to this expression, the child ought not to have been there; or, being there, if the eager questioning which was to the child an open door to the universe, must be repressed for the good of the other children, there were endless resources to draw from, if she had been wise enough to see them and loving enough to make use of them.

"The bruised little baby was completely silenced, and the satisfied air of the teacher seemed to say, See what control I have over these children! Not long after she came to me to explain some point she thought I might not understand, when one little boy, very much interested in laying his rings, said, 'O Mrs. A., I have made a balloon!' She turned upon him a very severe look, and said, 'Lloyd, you are very impolite indeed to interrupt me when I am talking.' She had given these rings to the children to play with, and was there for the express purpose of attending to them. No other ordinary claims could with any justice interfere with this first one, but if she deliberately took up some other interest, she still ought to have regarded the first claim enough to give the children the right to ask her attention, or else ask them to excuse her for the time she needed, just as she would have done with a grown person.

"But suppose she had asked to be excused, and the little fellow really was impolite in interrupting her. He was a child, and had come there for the express purpose of being taught. He needed forming as well as informing, and how dared she undertake this work if she had not first learned to be polite and respectful? She could have made it as pleasant as possible at the time, and then, later, taken or made an opportunity of showing the boy the better way. He would have remembered it just as well, and would not have been wounded. Instead of giving him an example of rudeness, she would have been to him, as she ought to have been, a worthy model. She was, whether she knew it or not, a pattern and guide to these children just when impressions are strongest. If she had had any conception of their point of vision and outlook, could she have spoken so rudely to them, making it doubly severe by doing so before a stranger? Just observe, when you have opportunity, how differently we treat children from the way we treat their elders. We notice details of their dress and movements that would be uncivil in the extreme to older persons."

Here is where parents as well as teachers are wont to err. We believe they do it without thought of the influence upon the child; often the critical word is spoken from a heart full of love, in which reigns a desire that all the child does or says shall accord with a perfect ideal. Helen Hunt Jackson says:—

"Probably most parents, even very kind ones, would be a little startled at the assertion that a child ought never to be reproved in the presence of others. This is so constant an occurrence that nobody thinks of noticing it; nobody thinks of considering whether it be right and best or not. But it is a great rudeness to a child. I am entirely sure that it ought never to be done. Mortification is a condition as unwholesome as it is uncomfortable. When the wound is inflicted by the hand of a parent, it is all the more certain to rankle and do harm. Let a child see that his mother is so anxious that he should have the approbation and good-will of her friends that she will not call their attention to his faults; and that, while she never, under any circumstances, allows herself to forget to tell him afterward, alone, if he has behaved improperly, she will spare him the additional pain and mortification of public

reproof; and while that child will lay those secret reproofs to heart, he will still be happy.

"I know a mother who had the insight to see this, and the patience to make it a rule; for it takes far more patience, far more time, than the common method.

"She said sometimes to her little boy, after visitors had left the parlor, 'Now, dear, I am going to be your little girl, and you are to be my papa. And we will play that a gentleman has just come in to see you, and I will show you exactly how you have been behaving while this lady has been calling to see me. And you can see if you do not feel very sorry to have your little girl behave so.'

"Here is a dramatic representation at once which that boy does not need to see repeated many times before he is forever cured of interrupting, of pulling his mother's gown, or drumming on the piano, — of the thousand and one little things which able-bodied children can do to make social visiting where they are a martyrdom and a penance.

"Once I saw this same little boy behave so boisterously and rudely at the dinner-table, in the presence of guests, that I said to myself, 'Surely, this time she will have to break her rule, and reprove him publicly.' I saw several telegraphic signals of rebuke, entreaty, and warning flash from her gentle eyes to his; but nothing did any good. Nature was too much for him; he could not at that minute force himself to be quiet. Presently she said, in a perfectly easy and natural tone, 'O Charley, come here a minute; I want to tell you something.' No one at the table supposed that it had anything to do with his bad behavior. She did not intend that they should. As she whispered to him, I alone saw his cheek flush, and that he looked quickly and imploringly into her face; I alone saw that tears were almost in her eyes. But she shook her head, and he went back to his seat with a manful but very red little face. In a few moments he laid down his knife and fork, and said, 'Mama, will you please to excuse me?' 'Certainly, my dear,' said she. Nobody but I understood it, or observed that the little fellow had to run very fast to get out of the room without crying. Afterward she told me that she never sent a child away from the table in any other way. 'But what would you do,' said I, 'if he were to refuse to ask to be excused?' Then the tears stood full in her eyes. 'Do you think he could,' she replied, 'when he sees that I am only trying to save him from pain?' In the evening, Charley sat in my lap, and was very sober. At last he whispered to me, 'I 'll tell you an awful secret, if you won't tell. Did you think I had done my dinner this afternoon when I got excused? Well, I had n't. Mama made me, because I acted so. That 's the way she always does. But I have n't had to have it done to me before for ever so long, — not since I was a little fellow [he was eight now]; and I don't believe I ever shall again till I am a man.' Then he added, reflectively, 'Mary brought me all the rest of my dinner up-stairs; but I would n't touch it, only a little bit of the ice-cream. I don't think I deserved any at all; do you?'

"When we consider seriously what ought to be the nature of a reproof from a parent to a child, and what is its end, the answer is simple enough. It should be nothing but the superior wisdom and strength, explaining to inexperience and feebleness wherein they have made a mistake, to the end that they may avoid such mistakes in future."

HOW TO DRESS THE CHILDREN.

BY ABBIE M. WINEGAR, M. D.

WHILE almost every other question which concerns the welfare of the human race has been duly considered, and while much thought has been given to promoting the intellectual growth of the child, the subject of children's dress, which to many seems very simple, has been sadly neglected, at least to such an extent that little heed is given as to whether the dress is planned so as to allow the development to its fullest extent of every function of the growing body.

It should be the aim of every mother so to clothe her children as to encourage the development of their highest physical, mental, and moral nature. The young child is as the tender twig which can be bent in almost any direction, and unless the training of the whole body is in the right direction, there will be defects in the child's physical development, which will to a greater or less extent influence the character of the entire life.

Childhood is the time to establish the foundation of future health and strength of body as well as mind. The principle holds true that the farther back we begin, the more momentum we gain. The body is a soft, pliable, yielding mass of tissue, which may be compressed from without, distended from within, bent forward, backward, or to either side.

The same principles hold true in clothing the child as in clothing the adult. There must be perfect freedom of every muscle and organ of the body. I think I am safe in saying that far more importance should be attached to the proper adjusting of the clothing of the child, than of the grown person, because it is not only necessary to allow freedom of motion, but consideration must be taken of the fact that the child is growing, and that there is a constant demand for more space for expansion; this makes it imperative to study the subject carefully, that this demand may be met.

When the child enters life, so far as external influences are concerned, its troubles begin with the first dressing. The first garment that is placed upon it is one which an older person, who is able to assert his rights, would never wear,— a tight band, which at once begins the compression and deformity which are so well developed in later life, especially in women. The child can speak the anguish it feels only in the one language common to infants, and crying, sad to say, has to the mother but one interpretation — hunger; so the suffering little one is given all the food it will accept, thus adding to its suffering by distending the body from within. This method of treatment continues through the first months of the child's life.

The tight band, however, is only one of the garments of torture which the baby must wear; to this are added several skirt bands, to which are attached skirts a yard or more in length; then comes the long dress which, with the skirts, hinders the free action of the limbs. These garments often lead to such deformities as bow-legs, round shoulders, curvature of the spine.

It is gratifying, however, to know that at the present time there is an effort to break away from this bondage, and mothers are beginning to inquire how they can best clothe their children; mothers' circles everywhere are taking up the study of this subject.

What shall our children wear? Let us repeat that the clothing should be such as to aid in the developing of the whole be-

ing, physical, mental, and moral. That which tends to the highest physical development must also influence the mental and moral side of our nature. Every muscle must have opportunity for free and unrestrained action, and every organ must be able to maintain its proper position, and perform its specific functions. This requirement may first be met by having the clothing of as light material as is consistent with the climate and season. It should always be such as to keep the body uniformly warm. The number of garments should be few, and so adjusted and supported as not to interfere with comfort, growth, or development. For the infant, the first garment should be a yielding bandage in the form of a wristlet made of stockinet or some yielding material, to be slipped on and off as desired, and requiring no pins; but two little straps to go over the shoulders and button in front. This is sufficient to support the usual dressing, and also allows the necessary expansion and contraction. The outer garments should be short, and made without waists, that there may be no compression.

Few garments are required to dress the infant; five or six are all that are necessary: the bandage, the diaper, a vest if desired, one or two skirts, and the outer slip. The clothing of the feet is an important matter. If the foot is compressed at an early period, painful deformities may result. When buying or making footwear for the child, care should be taken to get one size larger than the foot actually measures; the shoes should be soft and pliable, and the buttons such as will not press into the tender flesh. With a child dressed in this manner, there is every opportunity for development. It is important, however, to remember that from month to month, changes must be made in the clothing to meet the demands of rapid growth.

As the child advances in years, the garments which are suitable for the infant will need to be replaced by others adapted to the different ages and conditions, but the same principles hold true with the older child as with the infant. There must be the same freedom from compression and stricture, and a like opportunity for growth, exercise, and development. Fewer garments are now required, as the necessity for bands and some other articles worn by the infant no longer exists. The first garment should be a union undersuit, such as can now be purchased at any clothing or dry-goods store. Union suits can be made at home so as to be comfortable, healthful, and convenient.

The next garment should be a waist that fits the form, but sufficiently large to allow for growth. This should be made from material firm enough so that it will not stretch and pull in such a manner as to counteract its purpose. The skirt should be attached to this; either sewed or buttoned to it. The hose supporters should be attached to the bottom of the waist on either side. The outer dress should be made loose, and the entire garment, if possible, in one piece, that is, the skirt and waist permanently fastened together, to allow the child opportunity for active exercise without the annoyance of the skirt and waist separating, and appearing untidy. If, however, it is preferable to have skirt and waist separate, the skirt may be made to button to the waist, using a sufficient number of buttons properly to support it. Bands or corset waists are not at all necessary, and are the beginning of an evil which is so wide-spread as to need no comment here.

The question may seem a comparatively easy one while dealing with small children, and when we have them directly under our control; but the query may arise, What are we to do when our daughters reach the age when it seems to them nec-

essary to adopt a more fashionable dress? The child should be fortified for this period by previous training. By studying the human form in its natural grace and beauty, and by realizing that it is a beautiful temple prepared by the Creator as a dwelling-place for his Spirit, the child will come to look upon the natural human form as a part of the divine, and will feel that anything that mars or interferes with the freedom of this body should be avoided as contrary to the divine plan. Mothers should feel it a high and holy privilege so to instruct their children that only those things will appear beautiful which tend to the highest development of the whole being.

A dress, to be beautiful, should be the expression of a beautiful mind, and of a beautiful body in perfect health, and possessing natural grace and ease of movement.

ARTIFICIAL INFANT FOODS.

BY KATE LINDSAY, M. D.

To fit one to work at any trade, practise, or profession, many years have to be spent in preparation. Skilled workmen are always required for any work but that of preparing the human race for the battle of life. For this most important of all vocations, any one is considered fitted, no matter how ignorant he may be in relation to the work that has to be done, nor what important results in the improvement of the race will follow the work when it is done; nor can one estimate the damage which may result to the race from the injury done to babes in the cradle because of the ignorance of mothers and nurses.

The Creator has provided for the preparation of but one perfect infant food, and every infant is certainly entitled to it. Most infants could have this food were half the pains and care taken to insure a healthy womanhood that have been expended by scientists to find some substitute for this natural food. Nevertheless, as things are, some little ones must either be fed by hand, or else die of starvation; in fact, taking the civilized world over, the majority must be raised on some substitute, however imperfect it may be.

It is no doubt impossible to copy the natural food in every particular, or yet to form a food by any human manipulation that will take the place of human milk for the nutrition of the baby during the first year of life; but by careful study, and copying as nearly as possible the perfect model, it may at least be possible to lessen the great mortality which has so far been the result of hand-feeding of little ones.

To compound and prepare for an infant during the first year of life, food which will insure the proper growth and development of the body without damaging the digestive organs, is a task which requires patience, close observation, and eternal vigilance. No hard-and-fast rules can be laid down that will meet every case. It will require a cultivated habit of care and observation to be able to discriminate between what is food of the proper quality and the proper quantity for the little one and what is not; also to discriminate between a child that is doing well, and one that is not being well-nourished. An overfat child may be suffering from a lack of bone-making material, which makes all the tissues of its body so

soft and flabby that they will be incapable of doing any real work in after life without entailing pain and suffering.

It requires much care and painstaking for a mother to nurse her baby as it should be nursed, so that it may have no hindrance to digestion in the first year of life, the most important of all the postnatal periods of human life. It means that she should thoroughly know herself. Whatever injures her, morally, mentally, or physically, will be still more injurious to the little one.

Every year more and more mothers are unwilling to nurse their babies. After over a quarter of a century spent in the practise of medicine, the writer feels free to express the opinion that most women strong enough to bear a child are strong enough to nurse it, if they are only willing to do so. And furthermore, she is satisfied that with all that science can do for mankind, and all that any one can do for himself in after life in the way of rational dietetics and other proper hygienic measures, he can never counteract the damage done him in the first five years of his life, or even the first year. Do the best that can be done for these babies, they will not, as a class, grow properly, nor will they escape without more or less damage to the digestive organs.

In cases in which the only natural source of infant food fails, it requires much care to prepare a substitute as near the natural food as possible. It must not only be clean in the ordinary acceptation of the term, but free from germs; it must contain a definite amount of the elements, combined in proper proportion with water, and these food elements must be in a form in which they can be easily digested. The one who compounds this food must remember that an infant can not digest food suitable for adults, because it has no digestive fluids powerful enough to dissolve foods in a solid form. The capacity of the little stomach should also be taken into account. When the infant first begins to prepare its own food materials for absorption, just after birth, its stomach can hold only from six to eight teaspoonfuls.

Care must be taken to see that the food has a slightly alkaline reaction. The test for the reaction is the turning of red litmus paper slightly blue. If the blue paper turns red, it is due either to fermentation or to the natural acid condition of cow's milk. In either case it is unfit for food, and should be discarded. Do not attempt to remedy the condition by adding soda or lime-water.

In some infants the stomach is at times so deranged and so full of microbes that they can not take any kind of milk food, no matter how carefully prepared, without becoming very ill; in fact, milk is sometimes a virulent poison. Often animal food, even in the form of white of egg, and the various meat extracts, may fail to be tolerated by the stomach. In these cases, a resort must be had to the grains, or farinaceous foods. In them the much-needed food elements known as carbohydrates are in the form of insoluble starch instead of the soluble milk sugar of the natural food, which constitutes more than half of the solids of natural infant food.

All foods given children in the form of gruel or porridge should be boiled several hours, at least four or five; and if the meal is coarse and contains the bran, it should be carefully strained. The boiling can be done in a double boiler. As grain is likely to contain many injurious substances, as seeds of weeds, sand, smut, and the like, and even poisons, great care should be exercised in the selection and cleaning of it before milling. After milling, meal and flour are often kept until they are musty and wormy, and very unfit for food for adults, much less so for infants.

It is a matter of as much importance to see that the grain from which the gruel or porridge for the baby is to be made, is unspoiled and clean, as it is to see that the milk is clean and sterilized.

To make starchy food, such as rice, wheat flour, meal, barley, oatmeal, and the like, digestible, it is needful that something should be done to change the starch into some more soluble form, or at least partially to digest it before it is fed to the little ones. Thorough cooking will do this to some extent. Cooking will also liberate the starch granules from their envelopes, and thus enable the digestive fluids to come more closely in contact with the starch.

Besides cooking the starch thoroughly, there are other methods of predigesting it, as malting or mixing it with some substance containing a vegetable ferment, known as diastase. This ferment is an active element, causing the ripening of fruit; it is also active in the germination of grains, and prepares for the nutrition of the baby plants by changing the starch in grain into sugar, thus providing in a soluble form food on which they can live until the roots and leaves are so far developed that they can extract and prepare their own food from the air and the earth. Several grain preparations containing this ferment have been made by supplying the needed heat, moisture, and air to cause the grain to sprout, and then drying, thus stopping the process before the little plants have used up the changed starch elements.

In the past, most of the grain so malted has been again moistened and subjected to a second fermentation, for the purpose of decomposing the sugar and forming alcohol. This is a destructive process, and results in the formation of an intoxicating fluid, which is a rank poison. Instead of subjecting this malted grain to a second fermentation, it should be dried and ground, and this meal mixed with other meals in the proportion of one-half to one-eighth part of the malt meal to one part well-baked corn, barley, oats, or, best of all, good wheat meal. Add water enough to form a thin paste, and heat slowly, never allowing the temperature to rise above 150° F. There should be added to this mixture one per cent. of carbonate of soda before the heating begins. The fermenting process may be checked at any time by raising the temperature to the boiling-point, and then cooling quickly. If continued up to the point of completely changing the starch into sugar, it will form a thin, sweet fluid. It is best, however, to stop somewhat short of that point, as the continued fermentation may result in the formation of alcohol.

This malted food may be fed to the infant either alone or mixed with well-cooked strained gruel, or if milk can be tolerated, with equal parts of milk, or one fourth or less of sterilized cream. The many infant foods on the market have the starch more or less changed by the malting process, though many of them contain a large amount of raw starch unchanged and indigestible by infants under three months old, and but imperfectly digested by the child under two years.

No matter how thoroughly the starch of grains may be changed by predigestion of the farinaceous elements, there will always be a great lack of fats in this food, and either a deficiency or an improper form of the nitrogenous elements, so that there are no infant foods on the market made entirely of farinaceous food, which, taken alone, will sustain and properly nourish the infant, although they may serve to tide him over some attack of stomach or bowel disorder, in which no form of milk would be tolerated.

(To be continued.)

SEASONABLE BILLS OF FARE.

BREAKFAST NO. 1.

Cherries
Cocoanut Crisps
Cracked Wheat Porridge with Croutons
Fresh Berry Toast
Sliced Nuttose

BREAKFAST NO. 2.

Fresh Fruit Fruit Granose
Zwieback with Nuttolene
Sticks
Macaroni Baked with Granola
Caramel-Cereal

DINNER NO. 1.

Green Pea Soup New Beets and Potato
Fresh Cabbage Salad
Nuttose with Granola
Molded Rice with Currant Sauce
Beaten Biscuit Fresh Berries

DINNER NO. 2.

String Bean Soup
Stewed Potato with Nuttose
Lettuce Salad with Nuttolene Dressing
Summer Squash Mashed Peas
Toasted Whole-Wheat Wafers
Wheatose with Cream or Fruit Sauce
Fresh Berries Fruit Tart

RECIPES.

Zwieback with Nuttolene.— Heat the zwieback in the oven for five or ten minutes, to render it crisp. Serve hot with nuttolene.

Green Bean Soup.— Prepare a quart of fresh string beans by pulling off ends and strings and breaking into small pieces. Boil in a small quantity of water. If the beans are fresh and young, three pints will be sufficient; if wilted or quite old, more will be needed, as they will require longer cooking. There should be about a teacupful and a half of liquid left when the beans are perfectly tender and boiled in pieces. Rub through a colander, return to the kettle, and for each cup of the bean pulp add salt, a cup and a half of unskimmed milk; boil together for a few minutes, thicken with a little flour, and serve. The quart of beans should be sufficient to make three pints of soup.

Green Pea Soup.— Gently simmer two quarts of shelled peas in sufficient water to cook, leaving almost no juice when tender. Rub through a colander, moistening if necessary with a little cold milk. Add to the sifted peas an equal quantity of rich milk and a small onion cut in halves. Boil all together five or ten minutes until the soup is delicately flavored, then remove the onion with a skimmer; add salt if desired, and serve. If preferred, a half cup of thin cream may be added just before serving. Celery may be used in place of the onion, or both may be omitted.

Beets and Potatoes.— Boil newly matured potatoes and young beets separately till tender; then peel and slice. Put them in alternate layers in a vegetable dish,

with salt to taste, and enough sweet cream nearly to cover. Brown in the oven, and serve at once.

Beaten Biscuit.— Into a quart of whole-wheat flour mix a large cup of thin sweet cream in the same manner as for breakfast rolls. The dough must be very stiff, and rendered soft and pliable by thorough kneading and afterward pounding with a mallet for at least half an hour in the following manner: Pound the dough out flat, and until of the same thickness throughout; dredge lightly with flour; double the dough over evenly and pound quickly around the outside, to fasten the edges together and thus retain the air within the dough. When well worked, the dough will appear flaky and brittle, and pulling a piece off quickly will cause a sharp, snapping sound. Mold into small biscuits, making a hole in the center of each, thus: hold the biscuit in the left hand, and with the thumb and forefinger of the right hand press the dough until they meet. Place on perforated tins, with a space between, and put at once into the oven. The oven should be of the same temperature as for rolls. If they are soggy inside when cold, they were not well baked, as they should be light and tender. If preferred, use one third white flour, instead of all whole-wheat. Excellent results are also obtained by chopping instead of pounding the dough.

Nuttolene Dressing for Lettuce.— One tablespoonful of nuttolene beaten smooth in one-half cup of lemon-juice; add a pinch of salt and one half or two thirds of a cup of strained, stewed tomato. Beat together very thoroughly, and serve on fresh, crisp lettuce.

A PHYSICIAN'S VIEW OF SIN.

An article by Rev. David Beaton recently appeared in a religious journal, in which the writer expresses convictions that are fast gaining ground among those who see a natural relation between the physical and the moral constitution of man. The author says: —

"'Sin is any want of conformity unto or transgression of the law of God.' This definition is all but perfect from the point of view of the theologian, and carries even to the lay mind a fine sweep of ethical dignity in its resistless inference that the moral law is the will of God. But have we not almost universally thought of this law as relating to theft, murder, unclean desires, and all those moral errors that arise out of the unregenerate heart? How seldom, even among Christians of intelligence and piety, do we think of our eating habits as being a gross breach of some of the plainest laws of God.

"I heard a physician of international fame speak on this subject in a way that cast a searching light on some of the moral problems of our time. 'Intoxication,' he said, 'we all allow to be a sin; but intoxication lies not alone in drinking alcohol or chewing bang or smoking opium and tobacco, but in the excitation of any sensuous felicity for the mere pleasure of such excitement. Such unlawful excitement is more frequently procured by our pampered and gross habits of eating than by the use of alcohol and narcotics. The ordinary eating habits of the Christian world,' he went on to say, 'are poisonous, and therefore sinful. Mothers teach their children by the use of sweet cake, candies, condiments, pickles, and other noxious things, that

our object in eating is sensuous felicity. The young mind is thus perverted in the very nest, as to the physiological and moral purpose of eating. This sin is on the ground floor of the physical life, and one sin leads to another. The poisoning and blistering of the stomach by the use of vicious food leads to the craving for strong drink.'

"A young lady who was being treated for neurasthenia came under this physician's care. She confessed to him that she was a confirmed drinker of spirits. Her appetite had been awakened at first by highly spiced foods, then she had tasted beer and wine, and now she was drinking brandy and whisky at the rate of a quart a day. Her two brothers were confirmed dipsomaniacs, and she was overwhelmed in the same horror. 'The mother of those children,' said the physician, in tones of serious moral earnestness, 'was herself the cause of their sin.' As I listened to this arraignment of our common dietary habits, I could but feel that sin and law and God are realities brought nearer the physical life of man, and for which there is an immediate responsibility.

"The position here is not that intoxication and gormandizing are sins — that goes without saying. But it is that the eating of such things as science proves to breed disease, to produce a craving for strong drink and a desire for sensuous excitement, is sin; that there is a physiological basis for sin, and that many a depraved taste began with a diseased body; that there is an intimate relation between what a man eats and what a man is, morally and spiritually; that the person who eats for mere sensuous pleasure, who eats grossly, who excites the palate with spices, pickles, condiments, and other poisonous and irritating articles, is a transgressor of the laws of God just as truly as the liar and the thief.

"While staying at the institution where such scientific ideas are made the basis of the cure of disease and the reform of our eating habits, I was careful to observe the effect of this physiological view of sin on the minds and hearts of the people present. Said a business man to me, 'When I am at my business, I do a good deal of cursing, but here I feel no temptation to that sin.' Another expressly stated that under the diet of the institution he had no craving for the strong drink which he felt he must have in the ordinary round of life at home. What is the explanation of these physiological facts? and what is the cause of that sweet, calm, spiritual atmosphere which pervades the place? Is there not some intimate connection between the pure thoughts and the pure food? between the absence of temptation and obedience to the laws that govern the gastric juices?

"I have long felt that the social ideals governing our Christian families are too much like those of the fashionable world. Perhaps we Christians in our eating habits are as disobedient to the laws of nature revealed by science as we are to the laws of the Spirit revealed in God's word. Surely it is a contradiction in terms for a Christian to poison the body which God gave him for service, to be a gross eater when even the outside of the body is to be washed with pure water as the temple of the Holy Ghost.

"Pure food and a natural, simple manner of living will lessen the number of drunkards growing up in Christian homes, produce fewer cases of nervous disease and premature decay, which so often shame our high professions, and bring disaster to the home and the church. 'We need the recognition of the splendid imperativeness of God's law which rules alike the bodies and the souls of men, and the scientific education of our youth so that they will see that the beginning of

all sin is in the borrowing of pleasures that they have not earned. Ignorance and disobedience are alike fatal. The laws which determine the destiny of immortal spirits are servants now to our intelligence and will, in the familiar compass of our own bodies. Holiness is just health of soul; so health of body means a holy body. A redeemed manhood requires a knowledge of and obedience to the physiological laws of eating and drinking.'"

NO ALCOHOL FOR THE SOLDIERS.

THE staff correspondent of the New York *Voice* writes from Chickamauga that the soldiers at Camp Thomas are spending $5,000 a day for beer in the canteens, besides enormous sums squandered in the nineteen dives of Lytle and in the saloons of Chattanooga. He says that the average daily receipts of the canteens of Camp Thomas are fully $100, and relates some very saddening stories of camp scenes, that are the natural result of the $5,000 a day for beer. A contrast commanding the attention of every patriot is described by the well-known writer on foreign affairs who signs himself "Ex-attaché," in an article recently published in a New York daily paper under the heading: "Conditions of Modern Warfare on Land and Sea Demand Total Abstinence to Secure Success." Every soldier and every soldier's friend needs just the information contained in this paper, which is quoted entire: —

"Liquor has until recently played so important a rôle in warfare, to the horrors of which it has in no small measure contributed, that the fact of Sir Horatio Kitchener's recent victory at Atbara having been won by a force composed exclusively of total abstainers calls for serious consideration and attention. It is probably the first occasion that so brilliant a feat of arms has been achieved by a body of white troops who for months previously had not been permitted to touch a drop of any kind of stimulant whatever. For if not only 'Tommy Atkins,' of the line, but even his comrade, 'Sandy,' of the Highland regiments, whose name suggests whisky, has refrained from alcohol in any form whatsoever, and has restricted himself to tea, lime-juice, and Nile water, it can not be attributed to any conscientious scruples on his part or to the sudden development of high-fledged principles on the score of drink, but solely to the establishment of a new system by the British military authorities, which is exciting a good deal of interest on the part of the war departments of continental Europe, and which, in view of the conflict now in progress between this country and Spain, may likewise commend itself to Secretary Alger and General Miles.

"It seems that for some time, by orders of Field Marshal Lord Wolseley, the British commander-in-chief, careful and exhaustive experiments have been in progress with a view to ascertaining the relative effects of alcohol and of total abstinence upon the physical endurance and staying qualities of the troops. Advantage has been taken both of the annual maneuvers, as well as of the petty wars of which England has a few on hand in one part or another of the world almost all the time, to examine carefully the question. One regiment would be deprived of every drop of stimulant, while another belonging to the same brigade would be allowed to purchase as usual its malt liquors at the canteen, and a third, probably a Highland corps, would receive a sailor's ration of grog in the form of whisky. In

each instance the experiment went to show that, whereas at first the corps which had received an allowance of grog surpassed the others in dash and in impetuosity of attack, yet that after the third or fourth day its members began to show notable signs of lassitude and a lack of spirit and endurance. The same manifestations, though in a minor and slower degree, were apparent in the regiments restricted to malt liquors, whereas the men who had been kept from every kind of stimulant increased in staying power, alertness, and vigor every day.

"The result of these experiments led the British war department to decide, not on the ground of principle, but solely for the sake of maintaining the powers of endurance of the troops now engaged in the Soudan campaign, not to permit a single drop of stimulant in camp save for hospital use. Spirits, wine, and malt liquors have been barred from the officers' mess table as well as from the regimental canteen, and from generals in command down to the drummer boys and the camp followers liquid refreshments have been restricted to tea and oatmeal water.

"When one remembers how devoted the Englishman is to his beer and the Scotchman to his 'mountain-dew,' modern history abounding in the upsets of cabinets ill-advised enough to attempt an increase of the tax on these stimulants, which are regarded not as luxuries, but as actual necessaries of life, the boldness and likewise the difficulties of the innovation will be appreciated.

"But the scheme has fulfilled all expectations. Thanks to total abstinence, the men have been able to make forced marches of the most extraordinary character across the burning desert and under a blazing sun, the heat of whose rays can only be appreciated by those who have lived under the equator.

"The Soudan is famed for its deadly climate, which either kills or prematurely ages the majority of white folks who penetrate beyond its frontiers. Indeed, it often has been nicknamed, and with good cause, too, the 'Man-Eating Soudan,' by reason of the number of white lives that it has consumed. Yet, in spite of this, there never has been a campaign where there has been so little sickness, where so few men have been compelled to fall out, even in the longest marches, and where the troops have been got into such magnificent physical and moral training that they would actually cover thirty miles of sand with empty water bottles, without slaking their thirst once from the beginning to the end of the march, at the close of which they would still find themselves sufficiently fresh and vigorous to win a hard-fought victory such as that of Atbara.

"Of course, all kinds of devices and tricks were resorted to in the earlier stages of the present campaign to defeat this innovation of the war department, and one wily Greek liquor dealer even managed, no one knows exactly how, to get several wagon-loads of spirits up beyond Wadi Halfa for the purpose of retailing them to the officers and men of the expedition. But fortunately Sir Horatio Kitchener obtained an inkling of the affair, captured the convoy, and caused every bottle and barrel to be mercilessly destroyed, the liquor merely serving to poison the sand and slake the thirst of the ever-parched desert.

"Although the British admiralty has not yet followed the example of the United States, which has long since abandoned the daily ration of grog to the men of its navy, and which prohibits the use of stimulants on board when at sea, yet orders have been issued recently to the commanders of all British men-of-war in commission that in lieu of the double rations of grog formerly served out to the crews when going into action, not a drop

of alcoholic liquor, no matter whether spirit, wine, or malt, is to be allowed when there is any fighting to be done. In order to satisfy the thirst engendered by the heat, exertion, and smoke inseparable from a naval combat, supplies of oatmeal and water for drinking are arranged all over the ship.

"This, of course, is a radical departure from the practise which has existed until quite recently, and which still prevails in the navies and armies of every continental power of the Old World. But it is a step which is rendered imperative by the extreme importance of sighting with the utmost degree of exactitude the guns and rifles, upon the precision of which the success of every action, no matter whether at sea or on land, nowadays depends.

"It is no longer fierceness, fury, and reckless dash that are required of the men, but calmness and collectedness. In naval engagements there is little boarding to be done, in these times of ironclad warfare. Vessels are no longer armed with tier upon tier of small guns, some of the men-of-war of the early Victorian era having over a hundred of them. Modern battleships and cruisers are equipped with gigantic pieces, relatively few in number, but carrying projectiles of colossal weight over a range of several miles. It is no longer necessary to pepper the hull of a man-of-war full of small cannon-ball holes in order to sink it. This can be achieved by one well-directed shot from any of the great guns with which the warship of the present day is armed. Everything depends, therefore, upon the precision of the gunnery, and the belligerent whose every shot carries home is practically certain to win the day.

"This has apparently constituted the secret of Commodore Dewey's extraordinary success at Manila. Each projectile from his guns seems to have found its billet, judging by the annihilation of the Spanish fleet and the great loss of Spanish life, whereas, owing to the poor marksmanship of the foe, the harm done to the American squadron was ridiculously small. And in the same way the superiority of American gunners is certain to carry the day in every other naval engagement that may yet take place with the Spaniards.

"In order to appreciate its excellence it is only necessary to glance at the official report, just issued, of the prize firing of the battleships of the British Mediterranean squadron, which may be described as the *corps d'elite* of the English navy. According to the figures, the trials, which take place under conditions as nearly analogous as possible to those of actual warfare, the ships firing at a fixed target while steaming eight to ten knots an hour, showed a maximum percentage of hits of forty-three per cent., the general average being as low as twenty-two per cent. Thus the 'Royal Oak' with its ten big guns only hit the target four times in seventy rounds, while the 'Anson' battle-ship failed to make a single hit in twenty rounds. Yet the gunnery of the English navy is recognized by all the naval experts in Europe as vastly superior to that of the maritime forces of every other power in the Old World, and certain it is that the English government devotes far more money and attention to this feature of warfare than any other government, save that of the United States.

"Had, however, the gunnery of Commodore Dewey's squadron been on a par with that of England's Mediterranean fleet, the American victory at Manila would never have been of so overwhelming a character, nor could the commodore possibly have succeeded in annihilating the Spanish force with so little damage to his ships.

"As pointed out in the foregoing, English sailors are only deprived of their rations of grog when really going into action,

and are subjected to no such restrictions when engaged in mere maneuvers or gunnery practise; while in the Spanish, French, German, Russian, and Italian navies the old-fashioned custom of doubling the allowance of wine or spirits to the crews when going into action is still retained. May not, therefore, the abstinence enforced upon United States men-of-war have something to do with the superiority of American gunnery over that of the remainder of the world? Certain it is that a man who does not drink is more cool and collected, and therefore better able to shoot with precision, than one whose pulse is in the least bit quickened by a stimulant.

"The English admiralty has, in fact, recognized this by forbidding the use of liquor of any kind on the day when ships are going into action, and no one need feel surprised if the present war leads to the abolishing of the grog ration altogether in the British navy.

"In the case of hostile operations on land the same consideration prevails, and must weigh in the balance of victory or defeat. It is not merely that a soldier's staying powers are augmented by total abstinence, but likewise his shooting is improved. In these days, especially with the new quick-firing rifles and guns, there is a tendency on the part of the troops to fire wildly and to squander their ammunition at the outset of the engagement. Indeed, the one object of the officers is to keep their men calmly cool and collected and free from excitement, so that they may reserve their fire for the proper moment and then fire to hit.

"Indeed, what aroused most admiration at the battle of Atbara was the calm and collected manner in which the Highland regiments advanced across the bullet-swept plain in front of the Dervish zareba, apparently just as free from undue excitement and coolly keeping their formation with as much exactitude as if they had merely been on the drill ground.

"Lastly, it may be well to point out that the spectacle of bloodshed and the noise and din of battle are quite sufficient in themselves to arouse all the latent disposition to savagery that lurks in every human breast. This being the case, is it wise or politic still further to loosen the restrictions of civilization by the use of stimulants? If ever abstinence ought to be enforced and become of surpassing value, it is in times of war on both land and sea."

Defective Vision.

A physician, writing in the *Child-Study Monthly,* shows that defective eyesight is one of the results of a higher civilization and an unhygienic mode of living. He says: "The lower we descend in the scale of civilization, and the nearer we approach the primitive type of man, the less evidence do we find of defective vision."

He states that an examination was recently made of the eyes of two thousand Mexican school children to ascertain their refractive conditions. These children were selected because they represented a primitive type of people. Of this number only eighty-eight were near-sighted, sixty were far-sighted, and ten astigmatic. In contrast with this, the German empire shows fifty per cent. of its school children to be near-sighted. In one school in Vienna seventy-five per cent. of the pupils were near-sighted. Although this unhappy condition is not yet so prevalent in this country as in Europe, it is increasing to an extent which, as some one has said, "pleasantly assures us that if this tend-

ency to defect of vision is not checked, in the future everybody will be near-sighted."

The causes of defective vision, the writer thinks, are that civilized people live in houses which often exclude light, distance, and fresh air; that from childhood they are accustomed to looking at objects that are near; that irregularity in habits of eating and sleeping leads to ill health and consequently to weak eyes; that children are often sent to school too young and without proper attention to their physical condition; that the light in schoolrooms is either insufficient or badly arranged.

The following directions are given:—

"The care of the eyes should begin in infancy; guard well the eyes of the child at this period; not too much exposure to bright objects, plenty of fresh air, plenty of sleep. Guard the eyes from the direct rays of the sun, and avoid exposure to clouds of dust. Look to the children's physical condition before sending them to school, and if they inherit a tendency to tubercle or scrofula, do not think of the school age as the time they ought to be in school, but of the age that they can go to school and do the best work. Be careful of the children when they are convalescing from measles and scarlet fever, as near-sight very often begins to develop after these diseases. Look well to the general health, and the hygiene of the body, as all measures directed toward the promotion of good health benefit the eyes. Have the children's eyes examined before they commence school, and then you will better understand what form of refractive error the eye is liable to develop. Finally, see to the correction of all errors of refraction as soon as they manifest themselves. Lose no time in attending to the myopic eye. The researches of Cohn and Risley prove beyond doubt that when this error is corrected early, it does not tend to increase."

What Is Conduct?

Mr. C. Hanford Henderson, in an article on "The Philosophy of Manual Training," in the *Popular Science Monthly*, touches a basal truth when he says, in answer to the queries, "How much of conduct does education cover?" and "What constitutes conduct?"—

"Conduct has to do with the whole of life; and education, which has to do with conduct, must have to do with the whole of life. There is no action which is ethically different. Even the bodily functions, the act of breathing, the beating of the heart, the process of digestion, which in health are so automatic that we are quite unconscious of them, are nevertheless the product of knowable conditions, and as such are under the indirect control of the informed spirit.

"Whether the breathing be long and deep, bringing with it the power of wholesome, manly action, is a moral question. Whether the pulse beat be strong and steady, sending the blood coursing through the veins and making one the center of a radiant, helpful life, is a moral question. Whether the digestive apparatus is doing good work, renewing and refreshing the tissues, is a moral question. Since all these functions are open to modification, they are open to improvement, and the *quality* of the life dependent upon them may be made better or worse. In the last analysis, every act of life, be it bodily or intellectual, is morally significant. Modern man has tasted too deep of the tree of the knowledge of good and evil to plead ignorance and hide when the lord Conscience walks through the garden of his spirit in the cool of the evening. I must not linger too long over this idea. But it is a transforming idea. It allows no act of life to be commonplace. It makes every act of life a moral act, and if it be touched with emotion, it makes every act of life a religious act. It is a thought to

awaken enthusiasm, for it seems to me in a very real sense to transfigure life."

From a Heathen Country.

Many writers of the day have taken to promulgating "health commandments," "commandments of health," "ten rules of health," and so on. Next to an old paraphrase of the decalogue by Austin Bierbower, beginning, "Thou shalt have no other food than at meal-time," perhaps the following "Principles of Health" are of greatest interest, coming as they do from distant India, where the *Harbinger,* in which they are published, is constantly proving the appropriateness of its name by advocating sentiments and principles far in advance of its environment. Many of them are in advance of American environment: —

"1. Bathe with fresh water every morning before breakfast. Poor-blooded persons may use in winter a very little warm, but never hot, water. In bathing, rub all parts of the body with a rough towel from head to foot. Do not use soap daily.

"2. Do not put on dyed underclothes. Wash or change them at least twice a week. Night clothing and bedding should be well aired. Ladies should use loose garments.

"3. Abstain from fish, flesh, fowl, eggs, all intoxicants, wormy fruits, sour milk, impure water, cod-liver oil, much use of medicine. Besides distilled water, filtered, boiled, or deep-well water is preferable. Take moderate quantity of good food. Live upon cereals, pulse, fruits, vegetables, and milk; *i. e.*, adopt the vegetarian system of diet. Eat when hungry. Eat slowly and chew well.

"4. Take systematic daily exercise without exhaustion. Bodily and mental occupations may be in due alternation. Give reasonable rest to body and spirit by refined pleasures, so as never to be weary and lose the capability for enjoyment of life.

"5. Take sufficient rest, sleeping at least six hours about midnight. Early to rise and early to bed. Keep the air in sitting- and bed-rooms always clean and fresh, with a window open day and night, if there be no other ventilation. Keep no kind of lamp burning in the bedroom.

"6. Be in sunny air, and avoid artificial light as much as possible. Practise deep breathing through nostrils with the mouth closed.

"7. Keep the feet always dry and warm, and the circulation of the blood regular. Be regular in eating, drinking, sleeping, studying, and working.

"8. Cultivate calmness, cheerfulness, and generosity. Help others in thought, word, deed, and example. Aspire to the good and the beautiful.

"9. Study science, and appropriate one of the exact sciences. Elementary knowledge of hygiene and medical science is necessary.

"10. Do not be absorbed in material things, but raise your thoughts to higher things also."

THE ability of a man's body to resist disease is not measured by his weight, but by his specific gravity. It is not the weight or the amount of blood or of flesh that determines the health; it is the solidity of the flesh, the amount of power a pound. It was the scrawny and lean-looking men who went into Andersonville prison that came out alive, while the men who were rosy cheeked and apparently the healthiest, died.

PEOPLE with heart or lung weakness must stay away from the Klondike. It is too cold there for them. People who go should take nuts and nut foods to keep them warm.

EDITORIAL.

ONE of the most important factors in the deterioration of civilized races, is to be found in the unnatural conditions imposed upon the young during the school-going period of life. The long hours spent poring over books, sitting in an unnatural position in an overheated and ill-ventilated schoolroom, the cramming system too much in vogue in all public schools, the distaste which the cultivated habits of inactivity develop for vigorous muscular work, all these conditions, together with the wrong conceptions of life which are the natural result of our medieval system of education, turn out every year, at the season for college and university commencements, a growing army of school cripples,— lean, cadaverous young men and women, "sicklied o'er with the pale cast of thought," and maimed for life, unless an unusually vigorous constitution or extraordinarily favorable circumstances enable them to recover from the damaging influences to which they have been subjected.

CERTAIN diseases court the low lands. The grippe as well as the malaria, haunts the marshes and the fogs. While in Rome, a few years ago, the editor visited the old Campagna, where the marshes had been drained many years before. There on the edge of the Appian Way, on the top of a tomb perhaps six or eight feet square and running up into the air about twenty feet, was a peasant's tiny hut, reached by a ladder. The owner went to all this trouble to keep out of reach of the malaria. We passed several houses built on high posts, fifteen or twenty feet above the surface of the ground. People could live in these high places without danger, whereas upon the surface they were in constant peril. So it is with any disease. There is a certain level as regards our vital forces, upon which we have almost no power to resist attack. To be safe we must live above this level. We must keep our habitation of flesh above the plane of disease by the cultivation of correct habits.

THE conscious humor of our little jokes is often far surpassed by the unconscious. The fun very frequently lies in what we don't see. We are amused by the verses: —

> "The horse bit his master,
> How came it to pass?
> He heard the good pastor
> Say, "All flesh is grass."

But we see nothing funny in the idea of the master's eating his brindle cow because he would rather get flesh that way than make it himself from original elements. To the vegetarian this picture is just as humorous as the other; although to him it is rather a painful than a humorous thought — to contemplate eating grass that has been transformed into the flesh of an animal. He prefers his food just as it came from the hand of the Almighty. To think of choosing corn that has first passed through a pig, rather than the clean yellow corn as God made it! Food that is first fed to a cow, carried around in the cow's different stomachs, lodged in the stifling atmosphere of an unclean stable — food thus distilled through the cow is not quite so good as it was before. True, a man can not eat grass as it grows — at least he can not digest it — nor garbage as it is fed to the pig. The cow, by manufacturing milk, makes it possible for us to use food substances that we can not otherwise assimilate. But when we have abundant access to food especially designed for us in fruits and grains and nuts, why do we descend to these coarse substitutes?

A Sugar Manufactory.

Why do we eat candy, ice-cream, bonbons, sugar on oatmeal, and sweet in everything? Is it because we have learned that our system demands these things?— No, it is because our palates have been taught to crave them. A certain physician, when called to visit a patient who was suffering from acute indigestion, caused by eating something he knew

would disagree with him, was wont to say with a peculiarly ironical smile, "I suppose it tasted good going down." We are given to thinking far too much of the taste going down, and far too little of the real consequences of what we are doing.

The great objection to sweets in a concentrated form is that they are unnecessary. Nature puts into our natural foods just as much sugar as we need. Starch in the stomach is very rapidly transformed into sugar. Hence the absurdity of eating a quantity of sugar upon oatmeal, since half the weight of the latter is already starch.

The stomach fluid sometimes contains ten per cent. of sugar — a very high percentage. The pancreatic juice makes a little sugar, the intestinal juice makes a little sugar, the bile makes a little sugar, and the liver makes a little sugar. The sugar-making process seems to be thoroughly provided for in the body, so that we certainly do not need to take sugar with our food. By heedlessly gratifying our "sweet tooth" we do ourselves an injury, because a quantity of concentrated sugar interferes with the digestion of starch, and causes a flow of mucus in the stomach. In this way gastritis or chronic catarrh is produced.

NEXT to the sweet substances found in fruits, honey may be considered as offering the ideal sugar. But honey contains many other things besides sugar. It contains pollen from flowers, and dust. Bees sometimes settle in unwholesome places. Sometimes they become irritated, and inject a larger quantity of formic acid into the honey than is necessary, and it then becomes rank. Sometimes fragments of bees are found in it. Honey contains many germs, and hence, for eating, is improved by being sterilized.

THERE is a popular notion that milk is soured by thunder. It probably originated in the fact that milk often becomes sour immediately after a thunder-storm. However, it is not the sound, but the general state of the atmosphere, that is to blame. The milk sours because it is warm. The moist, oppressive atmosphere that immediately precedes a thunder-storm encourages the activity of germs in the milk, and they multiply very rapidly.

The same condition normally exists in the stomach. It is moist and warm, the temperature being 100° F., so that milk, when retained there, sours very quickly. If milk is taken alone, it passes out of the stomach in about an hour, but if eaten with vegetables or fruit, it is obliged to remain in the stomach with them, and often creates no small disturbance.

Education or Health?

At this season of the year many an anxious household is considering the question where to send John and Mary to school next winter. Father and mother are deluged with catalogues of seminaries, colleges, academies, private schools, boarding-schools. Some families are in quest of the fashionable school, some of the popular, others of the least expensive, many of the one offering the best intellectual advantages. But how little we hear of a burning desire to find the most healthful school,— a school where not only the surroundings and discipline are such as to promote the best physical development of the student, but where young people are also taught the basic principles of physical as well as mental and moral growth and power. How many mothers pass over the statement in the catalogue that "the board is wholesome and nutritious," with perhaps a smile at the request to parents not to send "boxes" of cake and pastry to the children, and never give a second thought to the real facts about this wholesome food. Later, when the daughter writes home that the board is just awful, that she "can't eat a thing" and is positively starving for some of that lovely chocolate cake that Bridget makes, a box of toothsome indigestibles is immediately prepared and despatched to the suffering maiden, with the sympathy of the entire household.

At old Fort Yuma, in Arizona, a few years ago, the Indians held a school meeting. Veteran warriors in primitive costume, consisting mostly of paint and feathers, came in

from a distance of thirty or forty miles to discuss the question as to whether they should allow their children to go to school and become sickly, or keep them in their native thickets and let them grow up as healthy animals. They had found out that the conditions and environments of school life were inimical to health, and were therefore disposed to abjure the schoolroom altogether. The other extreme is represented by an American mother who dismissed a physician because he insisted that her daughter, who had lost fifteen pounds in flesh since beginning a term in college, who was pale and weak and nervous, should give up her work and get out into the country air and sunshine. It is not necessary to health to grow up a savage. Neither is it essential to education to lose one's bodily vigor and soundness.

But parents should consider these things. Money may secure "advantages," application may win scholarship, but neither money nor application can assure the integrity and endurance of body and brain. It is no more absurd for Mrs. Newly-Rich to suppose that she can buy her daughter "a capacity" than it is for any of us to infer that will-power and ambition alone can supply the brain with fresh blood and the nerves with fresh energy each day. At no period of life does the human being need more wholesome and nourishing food, more sensible and regular exercise, more restful and abundant sleep, than during the years of active study. The importance of exercise and of sleep is recognized and is being emphasized by schools of all grades as never before. But the thorough and scientific study of foods with a practical view to the fare offered to students is yet unknown to general schools, public or private. If the boards of trustees of our colleges and preparatory schools were to take as much pains to offer to their patrons the very best and most carefully selected courses of daily food, as of ancient and modern languages; if the same thorough and scientific training were demanded of the cook who should provide food for the students as of the professors charged with preparing their intellectual nutrition; and if fathers and mothers were to consider these features as of paramount importance, the prospect for a healthy generation of lawyers, preachers, physicians, business men, mothers, teachers, authors, would be far more promising than it is at present.

Take Care of Yourself.

If a wagon is overloaded, or left out of doors, exposed to wind and rain, if the axles are allowed to get dry and the fellies to shrink, it will not last a quarter as long as if it had been properly cared for and protected. If the farmer does not keep his harnesses sheltered, cleaned, and oiled, they become brittle and break. A piece of machinery needs to be carefully oiled and dusted. Everything we use must be taken care of if it is to be serviceable and enduring.

So with that intricate machine not made with hands — the body. If it is neglected or abused, however ignorantly, it will rust and fall away. The man who might have lived a hundred years, dies at forty, because he has sped the wheels of life too fast, clogged them with refuse, or ruined the most delicate parts of his organism by exposure and excess.

If one owns a costly machine or animal, he does not forget that there are laws of hygiene to be observed in making it most efficient. His thorough-bred horse or his new thrashing-machine receives the benefit of all the information he can obtain as to its proper care and management. If he builds a house, he makes it a study to secure the best and most durable materials, and when it is finished, he does not begin to bang the doors and whittle the woodwork. We recognize and observe the laws of hygiene when what we call our "property" is concerned. But whether it is that we fail to see in our bodies the one invaluable and costly machine that has no duplicate, the most expensive house we possess, or whether we have grown so obtuse that we can not appreciate any investment less gross and material than lumber and iron, certain it is that the majority of people utterly ignore the laws relating to the welfare and preservation of their own bodies. We live almost as if there were no such laws. We even make light of rules of health.

In a general way, every one recognizes and admits the importance of fresh air and systematic exercise, but how many of us consider it as part of our imperative duty to take exercise every day in the open air? In a careless and indefinite sense, also, we acknowledge the scientific relation of food and health. The majority of people, however, when sitting down to dinner, do not consider whether this or that article of food is wholesome or not, whether it is needed by the system, and will help to repair and strengthen the body; but the test question for every dish is: Will it tickle the palate? Will it produce a new sensation or intensify some old one?

The owner of an elegant residence knows better, and makes it his business to know better, than to bring a crowd of street boys into his drawing-room to scrape off the finish. But the delicate walls of the stomach and alimentary canal are far more susceptible to the destructive agency of mustard, pepper, vinegar, and other condiments, than are drawing-room walls to jack-knives. The man who thinks he will not have to pay for the damage done to the walls of his stomach by what he eats and drinks, is just as much mistaken as the one who thinks it will not hurt his silk hat to wear it out in the rain.

The friendly injunction "Take care of yourself" ought to mean a great deal more than it does. To take care of one's self, simply by wearing rubbers in wet weather and looking out for the trolley-cars in the city, is neither scientific nor sensible. If we should take care of ourselves with the same scrupulousness and interest that we give to our investments or our pets, we would soon have a more practical and valuable knowledge of, and be in a better position to protect and keep in repair, our one piece of property, our one indispensable machine.

THE BILL OF FARE, NOT THE WEATHER.

JUST now great crowds of people are rushing about from place to place, trying to find a cool spot. Residents in seacoast States hie them to the shore towns and villages, which for the most part are called "resorts," as they are supposed to furnish a safe refuge from the scorching rays which "Old Sol" is pouring down upon the earth in all this region,—not for the purpose of tormenting human beings, but for the purpose of painting deep tints on our cherries, peaches, and plums, putting rich and delicate flavors into their juices, and of ripening for us an abundant harvest of corn and wheat.

The sun is no enemy of the race. The rich brown tint which the sunshine paints upon the cheeks of a country lass is as much a sign of high health and fine spirits as is the bright crimson of the peach a token of luscious sweetness. Heat — sunlight — is the most essential and powerful of all vital stimulants. There is nothing equal to its potency in all the range of forces, as a means of awakening and maintaining vital activity. Witness the magic quickness with which vegetation springs into life as soon as the vernal sun has melted the frost out of the soil, and reached the expectant rootlets of the forest plants and shrubs. How soon is the brown sward covered with a carpet of green. Think of the vast vital activity and energy manifested in a budding forest shooting out its new twigs in early spring, or in a great western cornfield filling up its well-wrapped parcels of golden maize.

The sunlight is God's message of mercy and peace to the world, at once the symbol of his glory and the vehicle of his infinite power. The idea that the sunlight or the sun heat is, in itself, a deadly thing, is quite an error. Cold is a depressing, paralyzing agent; heat is a physiological stimulant and tonic. Under any but the most extraordinary conditions, human beings are not injuriously affected by exposure to the sun, that is, normal human beings. Of course, a greenhouse plant taken out into the sun wilts and withers at once, because its feeble constitution,

the result of forcing or other unnatural conditions, has not sufficient vital resistance to enable it to adjust itself to the change. So also the hothouse-reared and artificially forced population of our cities find themselves unable to cope with a change of temperature which raises the thermometer ten or fifteen degrees higher than usual. The Arab of the Sahara desert, the black Apollos of the Soudan, the Indian tribes of Arizona and New Mexico, the native dwellers of the *terres calientes* of Eastern Mexico, are all habitually exposed, and for a great portion of the year, to a daily temperature the very mention of which in a New York or Boston paper would drive half a million people to the seashore. Imagine what would be the result if the thermometer should show a range of 120° to 130° F. in the shade for six weeks in midsummer. Thousands would die, but not of heat. Of what, then?—Of alcohol, of tobacco, of tea, of coffee, of ice-cream soda, of beefsteak and sausage, bacon, fried pork and lamb chops, calves' brains, pigs' feet and stewed entrails, fricasseed liver, deviled kidney, new and old cheese, ginger snaps, mustard, pepper sauce, Saratoga chips, griddle-cakes, and cherry pie(-crust). Babies die of sour nursing bottles and Mrs. Winslow's Soothing Syrup rather than of "heat." The fact is, we are looking altogether in the wrong direction for the cause of human maladies and mortality. Instead of studying the weather bureau reports and the forecasts of the weather prophet, let us carefully revise and supervise our bills of fare, and let us discover and nip in the bud the conspiracies of the cook and the caterer who are unquestionably far more responsible than is the weather for the enormous increase in sickness and mortality during the hot weeks of midsummer.

WHERE ARE THE HEALTHY YOUNG MEN?

THE result of the medical examinations which have been made for the purpose of determining the fitness for military service of the thousands of young men who have been volunteering for service in the army and the navy within the last few weeks, has been the subject of wide newspaper comment, and has arrested the attention of a large number of serious and thoughtful men and women in all parts of the country. These examinations have brought out the astonishing fact that an average of about one half of all the stalwart young men who have volunteered for service in defense of their country are so seriously affected as to be unfit for military service.

Here we have another decided evidence of physical deterioration. What does it mean that more than half of the most vigorous young men in the country are suffering from tobacco heart, weak lungs, and other defects, to such a degree that they can not endure the hardships of ordinary military service, which nowadays does not begin to compare in severity with the demands made upon the soldiers who composed the armies of ancient Rome and Greece? The significance of this fact can not be misunderstood. It means that race deterioration has advanced to an amazing degree; by comparing the results of the present examinations with those made thirty-five years ago, when the Union army was being recruited, it is evident that within the last third of a century there has been a decided advance in a downward direction.

We may possibly be growing wiser, but we are certainly growing weaker. The almost universal use of tobacco among young men, the extensive use of wine, beer, and alcoholic liquors of other sorts in all classes of society, the neglect of physical exercise, the vicious and dyspepsia-producing diet to which young men and young women are subjected in boarding-schools, college dormitories, hotels, boarding-houses, as well as their own homes, together with soul-and-body-destroying vices of various sorts, are making rapid inroads upon the constitution and the stamina of the race.

We note that certain senators and other politicians are complaining that the army regulations are too strict, but Dr. Sternberg, the surgeon-general of the army, a man of unquestioned fairness and integrity, assures the public that there has been no change whatever in the regulations. Evidently the change is in the men. It is about time that the leaders of our government and of society awaken to the fact that it is impossible to make good soldiers, and equally impossible to make good men, out of the sort of rubbish which is spread upon the average table; that sinewy, enduring muscles are not developed in the saloon, the billiard hall, or at the card-table, or at other sedentary occupations, as loafing, watching the issues of a horse-race or a base-ball match, strutting down the avenue with a cane and a blooded pup, or extracting nicotine from a cigarette or a well-filled Meerchaum pipe.

At the present rate of deterioration, it will not be long before this country will be running an even race with France on the road to national decay. France has abandoned all attempts to keep her military standard up to the level of sound physical development, having lowered her standard of height two centimeters, or four fifths of an inch, within ten years, and is now struggling with the problem of how to prevent depopulation. There is reason for believing that the same problem would be confronting us here in this country were it not for the incessant contribution of citizens from foreign countries, and the consequent infusion of new life into the old communities which are the most active centers for race degeneration, by the importation of the robust and hardy peasantry of Germany and Scandinavia, whose simple habits have thus far prevented any marked degree of physical decadence.

We must awaken to the fact that race deterioration is going on in our very midst to an alarming extent, and that the only remedy which can possibly be of any service to check this tidal wave of destruction which threatens the annihilation, not only of the nation, but of the race, is thoroughgoing reformation of the health habits of the individual. Municipal, State, and national sanitary laws, regulations, and reforms are of the highest value, but are incompetent to deal with this appalling question. Environment is a matter of the highest value in the cultivation of health, but will not compensate for the infraction by the individual of the known laws of physiological existence.

ANSWERS TO CORRESPONDENTS.

Kerosene on the Hair.— Mrs. G. H. H., Nebraska, asks if diluted kerosene used to remove dandruff, is injurious to the hair.

Ans.— No.

A Criminal Mind — Fruits — Eggs — Diet — Senna Tea — Hot-water Drinking.— A correspondent in Colorado (E. D. J.) sends the following inquiries: "1. What sort of a mind would a criminal or murderer have? 2. Why is it that people with the largest and finest-shaped heads often have frail bodies, all out of proportion to the mind? 3. Please give the nutritive value of raisins, prunes, figs, and dates. 4. How many eggs should be taken daily for a prolapsed and dilated stomach where quick nutrition is necessary? 5. Why is it that some persons are more inclined to be obese than others? 6. What diet will secure a rapid gain in flesh when the stomach is in the above condition, with hypopepsia? 7. Would the juices of meat, the fiber being chewed but not swallowed, give any nutriment? 8. Would you recommend senna tea when other laxatives and enemata have failed? 9. Is hot water preferable to cool water for drinking purposes, especially when there is heat in the stomach? 10. Do you recommend lemonade drinking? 11. When there is no gastric juice in the stomach, should acid fruits be eaten? 12. What fruits will best promote digestion?"

Ans.— 1. Such a person might be insane; he might be intemperate, and after laboring temporarily under the influence of liquor, he might be a man of uncontrollable temper. He might be a person of deficient moral sense, either congenitally or as a result of degeneration.

2. Perhaps because the mind has been cultivated to the neglect of the body. Our one-sided education is responsible for many such cripples.

3. The nutritive value of raisins is 66.3; of prunes, 69.2; of figs, 56.7; and of dates, 67.

4. We should recommend nuts and fruits in place of eggs for persons suffering from prolapsed or di-

lated stomach. If ordinary nut products can not be digested, such foods as malted nuts, ambrosia, bromose, nuttolene, and nut cream made from almond butter may be used instead.

5. The obese temperament is often inherited, though it is more often acquired by idleness and excessive eating.

6. A diet of fruits, grains, and nuts, employing especially the articles mentioned in reply to question 4, will give the best results.

7. Very little.

8. No. Senna tea will not succeed when other proper measures fail. The coloclyster, the graduated enema, the soap enema, the ordinary enema, the moist abdominal bandage, abdominal massage, laxative diet consisting of bromose or malted nuts with granose and antiseptic tablets, three or four after each meal, should be tried before drug remedies are employed, and if faithfully employed, will obviate their use.

9. In conditions of fever, cool water is better than hot. Hot water taken half an hour before eating is a valuable remedy in hyperpepsia A small quantity of cold water should be used instead of hot water in cases of hypopepsia.

10. Weak lemonade is in no way injurious, but the excessive amount of sugar often used in lemonade may prove harmful.

11. In such cases a pure fruit diet is often advantageous.

12. All fruits act as peptogens, promoting the secretion of the digestive fluids, and hence are helpful to digestion.

Biliousness — Fat-Producing Food — Exercise — Hot Water — Malt-Nutrine.—C. D. S., Texas, inquires: "1. How can biliousness be cured? There is a bitter, brassy taste in the mouth and a chalk-like sediment in the urine. 2. What food would you advise to increase flesh? 3. Is there any danger of a man of twenty-five years taking too much exercise? 4. Is the Dowd Health Exerciser a good machine for developing muscle? 5. Is bag-punching a healthful exercise? 6. Is the drinking of hot water beneficial in all kinds of dyspepsia? 7. Does the Malt-Nutrine put up by the Anheuser-Busch Brewery contain any nourishment? 8. Is it a good tonic?"

Ans.—1. By a fruit diet (see articles on fruit in GOOD HEALTH). The case described evidently requires a fruit dietary and the disuse of flesh foods of all sorts.

2. A dry diet consisting exclusively of granose will secure satisfactory results. Subacid fruits may be used to a moderate extent in addition.

3. Very little, providing he has a sufficient amount of sleep and proper food.

4. Yes.

5. All the exercise-machines we have ever seen are valuable.

6. No. Hot water drinking has been greatly overdone. Many persons have been damaged by flooding their stomachs with hot water. When fruit is freely used, water drinking is not so very essential. In cases in which hot water was formerly prescribed, a fruit diet, for a short time, will be much more effective in accomplishing the desired results.

7. Not worth speaking of.

8. No, it is not a physiological tonic; in a medicinal sense it may be considered a tonic, but in these cases tonics are not to be recommended; for a tonic, like a stimulant, makes one feel better when he is not better; it gives a person a sensation of increased strength when he has not increased strength, but is really weaker.

Dyspepsia.—Mrs. H. B., Iowa, an old lady, wishes advice as to treatment. She mentions the following symptoms: Gas in the stomach and bowels, so troublesome as to prevent sleep; weakness; nervousness; sore bowels; dull pain under shoulder-blades between shoulders, mainly on the left side; can not use arms much on account of pain.

Ans.—This is evidently a case of chronic indigestion. The patient should have an analysis of her stomach fluid, so as to furnish a basis for a prescription for diet, exercise, and necessary treatment. We should advise the patient, by all means, to visit the Battle Creek Sanitarium for a few weeks' treatment. A diet consisting of grains and nuts will doubtless prove beneficial. Malted nuts, granose, and nuttolene will prove helpful, also antiseptic charcoal tablets, two or three of which should be taken after each meal.

Weak Back — Indigestion — Book on Exercise.—Mrs. D. A. W., Mississippi, inquires: "1. What exercise or treatment is good for muscular weakness of the back? 2. What for indigestion accompanied by burning of the stomach and pain in the shoulders, with a bad taste in the mouth? 3. Where can I procure a book on exercise for weak women and on development of the chest? 4. What kind of waist do the nurses at the Sanitarium wear instead of a corset?"

Ans.—1. Massage, application of electricity, and Swedish movements.

2. The acidity to which the burning is due may be the result of fermentation or of excessive formation of hydrochloric acid. An examination of the stomach fluid should be made for the purpose of determining which condition is present.

3. We recommend "How to Get Strong," by

Blackie, which can be obtained from the Narragansett Machine Co., Providence, R. I.

4. A waist devised in the Dress Department of the Sanitarium, and known as the Freedom waist. Patterns for waists, and various styles of healthful dress, are sold by the Sanitary Supply Co., Battle Creek, Mich.

Swelling of the Glands of the Neck.— Mrs. C. D. W., Massachusetts, writes: "My daughter, aged nine years, has been troubled for two years or more with swelling of the glands of the neck. She has also had several attacks of phlegm formation, which she throws off by vomiting and constant coughing. Her diet for the last year and a half has been fruit and unleavened gems for breakfast, a small amount of meat with vegetables and a simple dessert for dinner, and more gems for supper. What would be a correct line of treatment and diet for one with this trouble?"

Ans.— Give the child a cool sponge bath, followed by vigorous rubbing, every morning. Have her live an out-of-door life. Discontinue the use of meats, adding nuts. Have her eat twice a day, making use of an abundance of fat-making food, such as maltol, malted nuts, and other nut preparations.

Wash for Wounds — Inhalations — Bruise — Pancakes.— "Inventive," New Brunswick, asks the following questions: "1. What is the best lotion for washing a fresh wound? 2. If a carbolic acid wash is used, of what strength should it be? 3. Is there danger in the application of pure carbolic acid to a raw surface? 4. What atomized inhalations would you recommend in case of too copious secretions of clear mucus, requiring frequent clearing of the throat and expectoration? 5. Might injury result to the lungs from such inhalation? 6. Which is preferable for a severe bruise, hot or cold application? 7. Do either hot or cold applications cause the surface capillaries to contract? 8. New Brunswick can not exist without pancakes. Can we not obtain an indulgence if we promise to 'grease the griddle' with a slice of turnip, as I have seen my mother do when pork rind was scarce?"

Ans.— 1. Boiled water containing one and one-half drams of common salt to the quart.

2. One or two per cent., but it is better not to use it.

3. Yes, if the raw surface is large, and if the lotion is kept in contact with it for some time.

4. We do not recommend atomized inhalations, but vaporized antiseptic oils, such as oil of eucalyptus, cinnamon, and in fact all the essential oils.

5. Injury may result from the inhalation of metallic atomized solutions and from the use of cocaine, morphia, and other opiate drugs which are commonly used for this purpose. We have seen very serious consequences from their use, not only to the lungs, but to the system in general.

6. Apply heat at first to relieve the patient, and every three or four hours subsequently, in the case of a severe bruise, using cold applications during the intervals.

7. Yes, both very hot and very cold applications cause contraction of the surface capillaries.

8. Yes, provided the pancakes are made without baking-powder or yeast.

Unleavened Bread.— Mrs. T. J. S., Massachusetts, wishes to know how unleavened bread can be made so as to be healthful, or free from germs.

Ans.— Rolls and crackers, if thoroughly baked, are practically free from germs. Gems and other soft breads are not exposed to a sufficiently high temperature to destroy the vitality of the germs found in the interior of the mass.

Nuts for Constipation.— D. J. O. asks: "1. Is the free use of nuts in any form good for a person who is troubled with constipation? 2. What diet can a person so troubled use, when vegetables can not be taken freely, and fruit causes distress?"

Ans.— 1. Yes.

2. Nuts, grains, and sweet fruits, such as baked sweet apples, steamed figs, huckleberries, and similar sweet or mildly acid fruits.

Food for Students.— A. T. B., Maine, writes: "1. What ration would you recommend for a student who furnishes his own breakfasts and suppers, but takes his dinners out? 2. What would be the probable cost?"

Ans.— 1. Fruits, with bread and nuts for breakfast, and hot water or fruits alone for supper.

2. The writer lived for three months on fruits, grains, nuts, and beans, at an average cost of six cents a day, and was well nourished, though engaged in arduous work.

Onions — Celery Water — Flushing the Colon — Floating Kidney.— L. V. M., Missouri, desires answers to these queries: "1. Do you consider the onion good for food? 2. What are its effects? 3. Do you consider celery water good for the nerves or for rheumatism? 4. Do you believe in flushing the colon? 5. Is there any danger of rupturing the bowels in this way? 6. How much water should be used at one flushing? 7. What is the cause of floating kidney? 8. What effect does it have on the system?"

Ans.— 1. We can not recommend it. The acrid oil which it contains is not only offensive in odor, but is an irritant to other nerves besides those of

the nose. It is partially removed by cooking, but not entirely. It was recently reported in the newspapers that a California gentleman had discovered an onion without the onion flavor. This onion might possibly be wholesome.

2. The onion must be classed among coarse vegetables, which should be discarded by persons suffering from slow digestion and gastric catarrh.

3. Water is good; the addition of celery does no harm, but is in no way beneficial.

4. Yes, in cases in which the colon is so dilated that it can not empty itself in the normal way.

5. The danger, if any, must be exceedingly remote. The writer is not acquainted with any case in which such an accident has happened.

6. From one to two quarts.

7. Enteroptosis, or a falling down of all the organs of the abdomen.

8. An exceedingly disastrous effect. Through irritation of the abdominal sympathetic, the digestion is disturbed, the bowels are rendered inactive, the whole nervous system is disturbed. Enteroptosis, or prolapse of the bowels and abdomen, is an exceedingly common condition, especially among women, and results in many chronic disorders.

Catarrh — Constipation. — G. W. N., a teacher in Iowa, writes that he is troubled with catarrh and dyspepsia, and wishes advice as to treatment. The symptoms are: Hacking in the throat, dripping of the nose in cold weather; stomach weak; constitutional constipation, of fifteen years' standing. Tart fruits relieve the constipation, but cause accumulation of gas and an uncomfortable feeling in the stomach, with drowsiness. He takes two hours' exercise out of doors daily, and a cold bath on rising.

Ans. — A steam inhalation practised every evening for fifteen minutes before retiring; the use of the pocket vaporizer for a few minutes many times daily; a cool sponge bath every morning, followed by vigorous rubbing; a moist abdominal bandage to be worn at night; the free use of fruits with nuts and grains. The grains must be thoroughly cooked in the form of zwieback, granose, or similar foods. Avoid the use of milk, cream, and butter. Other assistance may be important, as massage of the abdomen. A month in a good sanitarium would be a very wise investment.

Bowel Difficulty. — M. F. wishes to know what causes white, thin sheets, like wet tissue-paper, to pass from the bowels. Are they sections of mucous membrane?

Ans. — The cause is doubtless pseudo-membranous catarrh of the bowels. The white masses which pass the colon are simply coagulated fiber or mucus. They are not portions of the mucous membrane, as is commonly supposed.

Eye Bath — Apples — Fat. — A. H. F. W. H., New York, asks: "1. What would you recommend as an eye bath for twitching and a tickling sensation of the left eye? 2. What is the best remedy for a heavy cold on the lungs? 3. Is it well to eat apples at bedtime? 4. Does hot water produce fat in the body? 5. Is it good to take at all? 6. If so, in what way and at what time? 7. What is the best way to gain flesh?"

Ans. — 1. The hot spray to the eye is useful in cases of this sort.

2. Take a warm bath at bedtime, going to bed and remaining there until the cold is subdued. Drink half a quart of hot water or hot lemonade every hour; keep the skin active; eat nothing but fruit for three or four days, and apply a moist pack over the chest.

3. No. Nothing should be eaten at bedtime.

4. The free use of hot water encourages elimination, but if the amount taken is small, and if it relieves some digestive disorders, the natural result would be an improvement in the general health, which might be accompanied by a slight gain in fat.

5. There are cases in which the use of hot water is beneficial, and this is especially true in cases of hyperpepsia, when it should be taken half an hour before meals.

6. In hypopepsia a few sips of hot water may be taken half an hour after eating. The use of hot water in such large quantities as has been advocated by some persons is harmful.

7. By moderate exercise, abundant sleep, and the use of fattening food, such as nuttolene, nuttose, bromose, malted nuts, and other nut products.

Snoring. — H. B. asks for the cause of snoring, and how it can be prevented.

Ans. — Snoring is due to breathing through the nose and mouth at the same time. By keeping either the nose or the mouth closed, snoring may be prevented. Snoring is often occasioned by enlargement of the tonsils, especially in children. In these cases the tonsils should be removed. In older persons it is not infrequently the result of habit. The snoring can generally be cured by closing the mouth by means of some suitable appliance.

Freckles — Hair. — E. Q., Kentucky, is anxious to know (1) if there is anything that will toughen the skin so that it will not freckle, after the freckles have been removed; (2) why the hair becomes dry and brittle.

Ans. — 1. We know of nothing.

2. An unhealthy state of the scalp. The health

of the hair depends on the health of the scalp. When the scalp is adherent to the skull, or is hidebound, it becomes unhealthy, and the hair follicles cease to pour out upon the skin the lubricating substance which it is their duty to manufacture.

Piles — Dyspepsia.— Mrs. B. F. E., Utah, writes: "1. Please give a remedy for piles and for chronic constipation, with very offensive discharges. 2. Is lemon-juice, taken the first thing in the morning, good for a person greatly troubled with gas in the stomach and bowels? 3. What diet, besides granose biscuit, is good for constipation? 4. What proportion of health foods should a person eat three times a day to get well? 5. What is the best preparation to use in the water for washing out the stomach? 6. Is it beneficial to use cold packs for the stomach and liver if one feels chilly afterward?"

Ans.— 1. In some cases an operation for removal of the diseased organs is necessary. Indeed, this is often imperative. In the case referred to, it is quite possible there may be something worse than ordinary hemorrhoids. We should advise the moist abdominal bandage at night.

2. Possibly.

3. Granose flakes, graham zwieback, and, in fact, most foods which require thorough mastication.

4. Half at least.

5. The formula which is used in the Battle Creek Sanitarium is bicarbonate of soda, one teaspoonful to the pint of water.

6. No.

Oily Scalp — Treatment for Freezing.— L. H. D., Ohio, asks: "1. What are the cause and the remedy for oily hair; 2. Should borax be used entirely in the place of soap as a hair wash? 3. What is the best treatment for one nearly frozen to death?"

Ans.— 1. An oily state of the head is evidence of an excessive action on the part of the sebaceous glands of the skin.

2. Borax is an excellent remedy for removing surplus fat.

3. Thaw out the frozen parts with care, using cold water in a warm room. Then apply hot and cold to the feet or other disabled part, until they are as far as possible restored to their normal state.

Weak Eyes — Buttermilk.— A. D. S., writes of being very nervous and having weak eyes, and says buttermilk has been a benefit. "1. Are weak eyes and nervousness caused by dyspepsia? 2. What treatment should be given?"

Ans.— 1. Yes, often.

2. The treatment must depend upon the nature of the ailment, whether hyperpepsia or hypopepsia.

Bleeding Piles.— M. W., Michigan, asks: "1. What is the cause of bleeding piles? 2. What diet and treatment will cure them?"

Ans.— 1. A varicose condition of the veins of the rectum.

2. Removal of the diseased structures is the best and most expeditious remedy, but much can be accomplished for the patient without this.

Carbolic Acid — Thermal Vapor-Baths.— "A constant sufferer" sends the following questions: "1. Is diluted carbolic acid a good gargle for sore throat? 2. Are the thermal baths heated by alcohol as injurious as alcohol taken internally, only in a less degree? 3. Are they as beneficial as the water baths recommended by GOOD HEALTH? 4. What causes the bones in the lower part of the back to creak in moving, and feel as if they were grating on each other? 5. What can be done to remedy this condition? 6. Can it be caused by incorrect sitting or standing?"

Ans.— 1. No, it is likely to be swallowed. There are much better remedies. Peroxide of hydrogen is one.

2. No, because by combustion the alcohol is converted into CO_2, or carbonic acid gas.

3. On the whole, we prefer the water baths.

4. The difficulty is probably caused by the tendons' slipping over the surfaces of the bones.

5. Massage and electricity are the most appropriate remedies for such a case.

6. Wrong attitudes in sitting and standing may perhaps be rightfully charged as chief of the originating causes.

Catarrh.— O. S. K., a new subscriber in Pennsylvania, having read our department in the *Voice*, begs leave to ask advice in regard to his own case. He states his case as follows: "I am five feet seven inches high, and weigh one hundred and forty pounds. I do not use tobacco or liquor; drink only one cup of coffee for breakfast, none for dinner, and cocoa for supper; eat a good deal of beef and mutton, but no pork, and not much pastry. I take cold very easily, then sneeze a great deal, which causes a discharge of clear water from the nose; my eyes burn and hurt so I can scarcely endure the light for a day or so after an attack; when I sing or talk, my throat burns, and I get very hoarse. 1. What do you think is the trouble? 2. Would it be beneficial for me to ride a bicycle?

Ans.— 1. You are suffering from diminished vital resistance, or neurasthenia. A cold sponge bath every morning, followed by vigorous rubbing, a better diet, and out-of-door exercise ought to effect a cure.

2. Yes, with moderation. A month spent in a good sanitarium would be of great advantage to you.

LITERARY NOTICES.

"A MANUAL OF HYGIENE AND SANITATION," by Seneca Egbert, A. M., M. D., professor of hygiene in the Medico-Chirurgical College, of Philadelphia, is a volume embodying the fundamental principles of hygiene and sanitation. The author has considered subjects from the most recent scientific facts that are accessible. The following subjects are treated: Bacteriology, Atmospheric Air, Ventilation and Heating, Water, Food, Stimulants and Beverages, Personal Hygiene, School Hygiene, Disinfection and Quarantine, the Removal and Disposal of Sewage, Vital Statistics, and the Examination of Air, Water, and Food. These subjects are treated in a brief but comprehensive manner.

We are glad to note that the author sounds a note of warning against the use of shell-fish. Of these he writes as follows: "Shell-fish are particularly liable to develop poisonous ptomains in the process of decomposition, and, consequently, only such as are absolutely fresh should be used." He also mentions the fact that oysters and clams are likely to convey the germs of infectious diseases.

We do not agree with the author's views in regard to the administration of alcohol. The evidence of such men as Dr. N. S. Davis, Sir B. W. Richardson, and others who have made a careful study of this subject, proves that alcohol is neither a food nor a stimulant, and that it is absolutely dangerous to administer, especially when the vital powers are in a weakened condition. The experiments carried on by Professors Chittenden and Mendel also prove that even small amounts of alcohol retard the digestive processes.

While we are not in harmony with the author's views in respect to the administration of alcohol, we recommend the rest of the book as one of value, and one that can be studied with profit by medical students and physicians. (Lea Brothers & Co., Philadelphia and New York; cloth, $2.25 net.)

All the articles in the *Forum* for July are particularly readable; there is not a dry paper in the issue. While so much biographical matter relative to Mr. Gladstone is presented to the public, the *Forum* has for its leading article a sketch of the deceased statesman by Mr. Justin McCarthy, M. P., written four years ago with the stipulation that it should not be published till after Mr. Gladstone's death. It is a study from personal memory of the man, rather than a chronicle of his career. Mr. H. S. Townsend, Inspector-General of Schools in Hawaii, writes of "The People of Hawaii." He quotes facts to show that the educational system of Hawaii is more comprehensive, the attendance at school better, and the ability to read and write more general among native-born population than is the case in the average agricultural community in the United States; and that in the departments of literature, science, and art, the contributions of the Hawaiian people are more liberal than are those of the average of similarly circumstanced American communities."

Simon Pokagon contributes a quaintly interesting article on "Indian Superstitions and Legends." The old chief has decided that the red men are not the only superstitious people in the world, and proves it by an anecdote. While out hunting with a white man, he refrained from killing a beautiful white buck because his people had always believed the animal to be sacred, and that whoever killed one would not live long.

"Pokagon, you are as superstitious as an uneducated redskin," exclaimed his partner. "Don't you know anything? Why, we could have sold that deer for more than fifty dollars." "Yet this same man," adds the old philosopher, "a few days later, when we had started on our morning hunt, went back to the lodge, a distance of at least half a mile, to get an old horse-chestnut which he claimed had brought him good luck for years. He would not hunt on Friday, fearing he might get shot. I suggested to him one Friday morning that if he should fill his pockets with chestnuts, he would be perfectly safe. He talked very eloquently to me for some time; but he did not thank me for my advice."

The *Forum*, wishing to interest every one in the spread of learning, offers to send six numbers of the magazine for only one dollar. (The Forum Pub. Co., 111 Fifth Ave., N. Y. 35 cents a copy; $3 a year.)

Unlike the traditional spinster, the *Saturday Evening Post*, Philadelphia, is an interesting periodical because of its age, it being one hundred and seventy years old. Founded in December, 1728, it was sold to Benjamin Franklin in 1729, who proceeded to make it the foremost journal of the times in this country.

In 1765 Franklin sold his interest in the paper, since which time it has been conducted under various administrations until in May, 1898, it came into the possession of the Curtis Publishing Company, the enterprising publishers of the *Ladies' Home Journal*.

The *Post* is a sixteen-page, high-grade, illustrated weekly, devoted to current history, religion, biog-

raphy, poetry, fiction, and choice bits of literature from all modern sources. Its aim is to entertain and to inform, and to give the best stories and general literature, and to keep its readers thoroughly abreast of the times. (Price, $2.50 a year; 5 cents a copy.)

The *Outlook* is a weekly newspaper and an illustrated monthly magazine in one. It is published every Saturday — fifty-two issues a year. The first issue in each month is an illustrated magazine number, containing about twice as many pages as the regular weekly issues, and numerous pictures. The contents of the July number include the tenth article by E. E. Hale on "James Russell Lowell and His Friends," "The First Black Regiment," "With Grant at Vicksburg," and other articles of special and wide interest. Mr. Kennan's article did not reach the publishers in time for this issue, so its place is supplied by "The Fight of the Rough Riders," an account of Colonel Roosevelt's brave stand against the Spaniards in ambush.

The announcement of Battle Creek College for 1898–99 has just been issued. It is a fine specimen of the typographic art, and contains numerous halftones of the various buildings and surrounding campus, and a few of the fine views around this Queen City of Michigan. It contains a short history of the institution, with its object and principles of education, and more than seventy pages of text descriptive of the various courses furnished to pupils. The faculty have recently established a department of hygiene, in which will be taught the principles of healthful living, hygienic cookery, healthful and artistic dressmaking, and other allied branches. With the present awakening on these subjects that is taking place in almost every part of the world, this department ought to attract hundreds of earnest pupils, and be the means of untold good in the relief of human suffering.

The *Christian Educator* is midway in its second volume, and has found it necessary to extend its limits from sixteen to thirty-two pages, only one of which is given up to advertising. The scope of the magazine for the coming school year is shown in the published prospectus, and includes the following subjects: Industrial Education, the Farm, the Schoolroom, the Home School, Physiology and Hygiene, Nature's Laboratory, besides news, instruction for teachers and parents, and queries for students. (Review and Herald Pub. Co., Battle Creek, Mich. Price, 50 cents a year.)

The *Child-Study Monthly* is a journal devoted to the scientific study of child life, especially in those departments that have a direct bearing upon the practical problems contained in the education of children. It contains articles that can not fail to be of benefit to both teacher and parent. Illustrative cases are frequently reported, and more or less statistical and experimental matter. The journal is bright and readable, and interesting even to one who simply "loves children." (A. W. Mumford, 45 Auditorium Bldg., Chicago, Ill. Price, $1 a year.)

Babyland and *Little Men and Women* for June are twins. You can not tell them apart except by the name — that is, when you look at the covers. But they are such delightful little twins, so well behaved and so sweet and pleasant all the time, that every home where there are children would seem incomplete without them. *Babyland* is gotten up in a way to delight the eyes and hearts of the wee ones in the home nest; *Little Men and Women* is for the older children. (Charles E. Graff, 100 William St., New York. Price of *Babyland*, 50 cents a year; of *Little Men and Women*, $1 a year.)

With the July number the *Arena* begins its twentieth volume. The next six months will be a crisis in the history of this country, and the *Arena* makes the very liberal offer to send the magazine for six months — July to December — for one dollar. (The Arena Publishing Company, Copley Sq., Boston, Mass.)

One of the most helpful little books we have seen is "Readings from the Bible," the scheme for which was suggested by Professor David Swing, and was carried out under the supervision of the Chicago Women's Educational Union, the work being done by an editorial committee consisting of W. J. Onahan, J. H. Barrows, and C. C. Bonney, representatives of Jewish, Catholic, and Protestant churches.

The work consists of one hundred and fifty selections, all classified, and to some extent graded to suit the age of the readers. A table of contents, a topical index, and an index of texts make the book easy of reference. As to subject-matter, it is the best in the world,— just the Bible, without a word of comment. The selection and arrangement have been made with the greatest care, and the result is a book which can not fail to be a blessing wherever it is read. It was designed for school use, but will doubtless prove equally appropriate for family or personal use.

PUBLISHERS' DEPARTMENT.

THE readers of GOOD HEALTH will be interested in some incidents of a recent extended trip to the South and West made by the editor of this journal, in the interests of medical missionary work. At the Industrial School for colored children established by Booker T. Washington at Tuskegee, Tenn., he addressed a body of about a thousand students, giving them "straight health reform doctrine," describing the evils of pepper, pickles, pepper-sauce, mustard, meat eating, and explaining the virtues of peanuts, almonds, fruits, and other pure foods. The students were greatly interested in finding out how many delightful foods could be made of peanuts. At Tuskegee he also spoke to four or five hundred young women upon the subject of dress reform. According to his report, not one of them could really take a full breath. They were laboring under the delusion that to be truly refined and delicate it was necessary to have a small waist. As the result of some practical lessons from charts of the human form, their ideas were so revolutionized that a rule has been made that henceforth no young woman can attend that school who in any way constricts her waist.

At Galveston a large audience assembled in the Y. M. C. A. building to listen to a lecture on "Race Deterioration." A nurse from the Battle Creek Sanitarium is very busy in this city, giving as many as twenty-five or thirty treatments a week.

At Laredo Pass, a frontier town in Texas, a man who had been a patient at the Sanitarium, boarded the train, saying that he heard Dr. Kellogg was passing through, and he felt that he must tell him how much good his stay at the Sanitarium had done him, how much he was indebted to health foods, and how many people were inquiring about health foods. Even the station-master at this place wished the doctor to prescribe for his stomach. The latter divided his lunch box of health foods with him, so that one man was started on the right line at once. The sleeping-car conductor came through, and seeing the sign "Granose, Battle Creek," on the lunch box, asked if the gentleman had ever been to Battle Creek, and if he knew Dr. Kellogg; when told that he had heard of him, "Well," said he, "I would like to see him. I lived on granose all last summer, and it saved my life, and I am eating health foods now."

So it was everywhere. People were hungry for information as to how to get well, how to keep well, how to get out of their physical ills.

A new sanitarium is nearly finished at Guadalajara, Mexico. Mexicans are coming from every direction and from hundreds of miles in the interior to watch the progress of this institution, and it is bound to become a center of health, not only for Mexico, but for all the Spanish people of South America. The superintendent of public instruction and the public officials in Guadalajara are so kindly disposed toward this work that they have helped it along in different ways,—particularly by widening the street in front of the sanitarium so as to convert it into a boulevard.

In the City of Mexico, Mr. and Mrs. Cooper are carrying on self-supporting medical missionary work. There are no trained nurses in Mexico, but under the auspices of the government, these staunch workers have established a government training-school in connection with a large hospital. They spend three hours a day in this school, and have the rest of the day for their own enterprise.

An exciting episode attended the beginning of the doctor's homeward journey. The train was wrecked by running off the track, and many of the passengers were injured. Two of the porters were badly scalded. They were three hundred miles from help, and had to wait twenty-four hours for a new train. These were unusual circumstances under which to give practical demonstrations of the efficacy of hydrotherapy, but the doctor proved equal to the occasion, applying towels wrung out of ice-water to the scalded limbs, and dressing bruises.

At Ogden it was learned that a School of Health had been organized in Salt Lake City. Mr. and Mrs. Hansen were conducting it. It was made up of leading Mormons and other prominent people of the city. A Mormon lady called Dr. Kellogg's attention to a sermon preached in 1842 by Hyrum Smith, brother of Joseph Smith, on "Health Reform and the Religion of the Body," in which some of the most rational and scientific principles of the present time were advocated.

In California the California Medical Missionary and Benevolent Association was organized. Dr. Sanderson and Dr. Moran and his sister are doing splendid work.

At College View, Neb., a very fine class of nurses was found in the sanitarium. This sanitarium has been from the first a "Simon-pure" health institution. It has never been polluted by tea, coffee, or meat.

THE publishers are pleased to announce the beginning in this number of a series of illustrated articles by Felix L. Oswald, A. M., M. D., on the sanitary aspects of the campaign in the West

Indies. Dr. Oswald is well known to our readers, as well as to magazine readers generally, and is especially qualified to present this subject, having passed the six years from 1869 to 1875 and the Christmas holidays of several recent winters, in the country where the present war is waging. He sees in the conditions of the war an unrivaled opportunity for revising many hygienic theories by the test of practical experience.

A HANDSOME BOOK FOR A TWO-CENT STAMP. NEW PUBLICATION BY THE D. & C. LINE.— To those who contemplate taking a summer outing, we will mail for 2c postage our illustrated pamphlet, which contains a large number of fine engravings of every summer resort between Cleveland, Toledo, Detroit, and picturesque Mackinac. It has many artistic half-tones of points of interest in the upper lake region. Information regarding both short and extended tours, cost of transportation, hotel fare, etc. Address A. A. Schantz, G. P. A., Detroit, Mich.

WE take pleasure in calling the attention of our subscribers to the advertisement of the Battle Creek Sanitarium Dress Department, which appears in this number, as the outfit advertised will be an answer to the many queries that come to us in regard to infants' clothing.

THE Battle Creek Sanitarium Health Food Company gave a hygienic food exhibit in July at the Temperance Congress at Prohibition Park, Staten Island. The object of the exhibit was to show that a hygienic diet is a powerful remedy for intemperance. Samples of foods were given to all visitors.

THE Toledo Cooker, an advertisement of which appears in this number, is in use at the Battle Creek Sanitarium, and is giving great satisfaction. It is a utensil that deserves the highest recommendation as a cooker.

DOROTHY'S INQUIRY.— Dorothy has a baby brother who has recently been ill with the coming through of his first teeth. I think he has the baldest head I ever saw on an infant. It has caused Dorothy great anxiety. She stood at the mother's knee one day, gently patting the little head.

"Be careful, Dorothy," said the mother. "You know poor little brother is sick. He is cutting his teeth."

Dorothy patted the bald head reflectively.

"Mama," she said, "is it going to make him sick when he cuts his hair?" — *Washington Post.*

THE PIONEER LIMITED is the name of the only perfect train in the world, now running every night between Chicago, St. Paul, and Minneapolis via the Chicago, Milwaukee & St. Paul Railway — the pioneer road of the West in adopting all improved facilities for the safety and enjoyment of passengers. An illustrated pamphlet, showing views of beautiful scenery along the route of the Pioneer Limited, will be sent free to any person upon receipt of a two-cent postage-stamp. Address Geo. H. Heafford, General Passenger Agent, Chicago, Ill.

HOME-SEEKERS' EXCURSIONS.— On the first and third Tuesdays in July, August, September, and October, 1898, the Chicago, Milwaukee & St. Paul Railway will sell round-trip excursion tickets (good 21 days) from Chicago, Milwaukee, and other points on its line, to a great many points in South and North Dakota and other western and southwestern States, at about one fare. Take a trip West and see the wonderful crops and what an amount of good land can be purchased for a little money. Further information as to rates, routes, prices of farm lands, etc., may be obtained on application to any coupon ticket agent, or by addressing the following-named persons: W. E. Powell, Gen'l Immigration Agent, 410 Old Colony Bldg., Chicago; H. F. Hunter, Immigration Agt. for South Dakota, 291 Dearborn St., Chicago; or Geo. H. Heafford, General Passenger Agent, Chicago, Ill.

THE Good Health Publishing Company is supplying the soldiers' camps at Tampa, Chickamauga, and Washington with one hundred copies of GOOD HEALTH each month.

AN important School of Health was held at the Waseca, Minn., Assembly in July. Dr. Kellogg gave several lectures, among his subjects being "Stomach and Brains" and "Cultivated Deformities and Rational Dress." The cooking-school was in charge of Mrs. Kate Nuding, who is an able demonstrator. Dr. Kellogg is announced to lecture at Chautauqua, N. Y., August 16.

OUR attention has been called to an error which escaped us in the May issue, page 301. It is there stated that "grains and meats do not go well together, but fruits and meats might agree." The contrary is the truth. The sentence should read, "Fruits and meats do not go well together, but grains and meats might agree."