



GOOD HEALTH

JULY, 1903.



The Healing Power of the Sun.
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 Mosquitoes and Human Habitations.
 Sensible Dress for Children — *Illustrated*.
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MENS SANA IN CORPORE SANO.

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and
Irritated Skin
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GOOD HEALTH

WAS

NEVER BETTER

Than at the present time. Each issue is full of practical, well-written articles on subjects of which every well-read, intelligent, thinking person wants to know. The series of articles on "Nature's Methods in the Sick Room" are well worth the price of a yearly subscription to the magazine, treating as they do on all natural methods in a plain, common-sense manner, discarding superfluous language, and giving practical facts and rules for the laity in the treatment of disease.

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Battle Creek, Mich.



FALLS OF MINNEHAHA.

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THE HEALING POWER OF THE SUN

BY J. H. KELLOGG, M. D.

MAN is naturally an outdoor animal. The tropics being his natural home he lives in cold countries only at the expense of an enormous outlay of labor, and probably also with a very considerable shortening of his life.

The value of outdoor life is best appreciated by those accustomed to sedentary life when opportunity is afforded for them to spend a few days in the open air. It needs no lengthy argument to demonstrate to such a person the value of continuous outdoor life as a health promoter. The value of such a life does not consist wholly in the purity of the air and the exercise, matters of great importance, but also in the cooling effect of the air in motion, and especially in the vitalizing influence of the sunlight.

The rays of the sun contain heat and chemical rays as well as light rays. The heat rays act powerfully upon the glands and vessels of the skin, while the chemical rays influence the nervous system in a remarkable way. It is the chemical rays which cause so-called sunburn.

The sun is the source of energy to the world. The marvelous energy manifested in plant life is derived from the sun acting upon the green parts to organize and vitalize the elements of the earth and air into living substances. The same energy of the sunlight is

essential to animal life, invigorating and vitalizing the tissues and quickening all the processes of life. The sun bath is now a well-recognized and much-valued therapeutic agent.

In this form of treatment the whole body is exposed to the direct action of the sun's rays. Persons who are not accustomed to exposure to the sun, and individuals who have light hair and light skins, should make the first exposure to the sun of short duration,—ten or fifteen minutes. Longer exposures are likely to produce sunburn. No particular harm is done by sunburn excepting the inconvenience occasioned by it. The pigmentation of the skin induced by sunburn protects the skin from further injury in this way.

The body may be exposed either in the open air or before a window. When the sun's rays are so intense that the heat is depressing, the heat rays may be filtered out by means of a blue-glass screen placed between the patient and the sun.

After the sun bath, a cold plunge, a cold shower, a cold towel rub, or a wet-sheet rub should be administered to tone the skin and the nerves.

In the summer time in a hot climate the sun bath may be very conveniently taken in an outdoor gymnasium. A sand pile furnishes a most appropriate couch, as the heat which it accumulates

may be utilized as an aid to induce perspiration when this is desired.

Every home should be provided with a convenient place for taking the outdoor sun bath in summer time, and sun bath indoors during the cold season. Civilized human beings suffer greatly because of the seclusion from the sun occasioned by modern modes of life. Those who reside in cities, like the cave-dwellers of the olden time, are by their opaque walls and shaded windows, almost excluded from the sun. The results are shown in the pale faces of old and young, the rickety children, the growing prevalence of consumption and other constitutional maladies, the increase in deformities and degenerations, and other evidences of race deterioration. Out-of-door life and a return to

the simple habits of our ancestors is the only way in which the race extinction to which we are at present rapidly hastening, can possibly be averted.

The sun bath is useful in almost every form of disease in which an acute febrile process is not present. It is especially valuable in neurasthenia, all forms of dyspepsia, rheumatism, diabetes, gout, skin disease, and chronic maladies of every sort.

By means of special appliances, the actinic rays of the sun and of powerful arc lights may be separated from the heat and light rays and by concentration upon diseased parts with lenses are utilized in the cure of skin cancer, lupus, or tuberculosis of the skin, acne, psoriasis, or dry tetter, and other superficial diseases of the skin.

A TEMPLE OF HEALTH

THE destruction of the main buildings of the Battle Creek Sanitarium on the morning of Feb. 18, 1902, afforded an opportunity such as has rarely been offered for the construction and equipment of a building which should stand as a model for the world as a temple of health and healing. The managers of the institution were not slow to recognize this, and although not a little embarrassed, financially and otherwise, by the great loss sustained by the fire, soon set about making plans for the erection of a new structure which would be in every way more suitable for the purposes required of it than the burned buildings had been.

The completion and equipment of this temple of health marks another advance step in the progress of scientific medicine. The Battle Creek Sanitarium method of dealing with several large classes of invalids which are gen-

erally considered as incurable, has come to be recognized the world over as having superior merits.

Naturally those who have had the benefit of nearly a third of a century's experience in pioneer sanitarium work, should be better prepared than those of less experience to appreciate the requirements for an institution of this sort. In the gradual development of the sanitarium idea and sanitarium work, the managers had been compelled to study carefully every problem connected with building construction, furnishing, the general arrangement of bathrooms and other treatment rooms, and a thousand questions of practical importance which daily experience in the treatment of several thousand invalids annually had brought forward for consideration.

The first thing essential was, of course, to develop and perfect a general plan. This was something which could

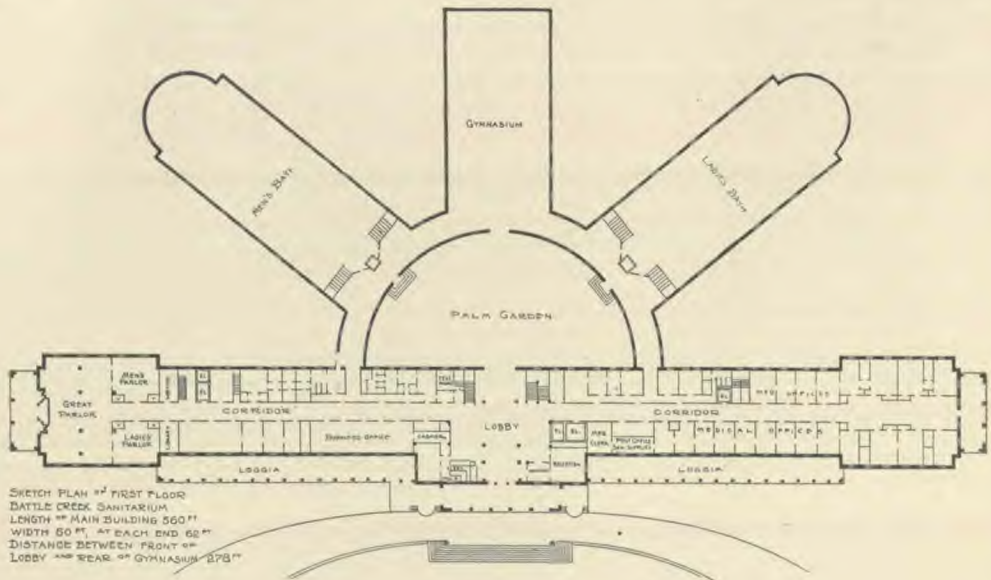
not be supplied by any contractor or architect, no matter how skilled in the planning of ordinary large buildings. The building to be erected was to be neither a hotel nor a hospital, but it must have some of the features of both without the objectionable features of either. It must be more homelike than a hotel, and must be less suggestive of surgery, fever wards, and medical paraphernalia subjects than the ordinary hospital. It must be in every sense of the word "A Temple of Health," a place absolutely free from all depressing tendencies, full of life and sunshine, cheerful, sanitary, up-lifting to the fullest degree, and in every particular suited to the culture of health, — physical, mental, and moral.

The accompanying cut shows the general plan and arrangement of the building, as represented in the first-floor plan. The design is that of a main building with three separate buildings in the rear, connecting with each other and with the main building by a semi-

circular corridor. The space between the buildings is occupied by a fourth building of elliptical shape, also connected with the corridors. The main building runs north and south, faces the west, and connects by corridors with the building on the east, the central one of which is the gymnasium. The building north of the gymnasium is the gentlemen's bathroom; the one south of it, the ladies' bathroom. The smaller elliptical building between these and the main building, is the palm house.

The main building is 525 feet in length, exclusive of the porches, and 46 feet in width, the width being increased at either end and in the center to 58 feet. It is five stories in height, with a ten-foot basement, and a roof story of lighter construction and somewhat less width occupying nearly the whole length of the building.

The treatment buildings are each 150 feet in length, 66 feet in width, and three stories in height above the basement. The gymnasium is 120 feet



THE FIRST FLOOR PLAN.



CONSTRUCTING THE HEAVY IRON FRAMEWORK.

in length, and nearly the same height as the treatment buildings.

The general style of the building is that known by architects as the Italian Renaissance. There is a wide porch at each end and in the middle, reaching from the basement to the fourth story. The central porch is surmounted by a graceful pediment. A wide veranda extends along each side of the central porch nearly the whole length of the building. The outer walls of all the buildings are faced with pressed brick, the body being a lively buff color, broken at regular intervals by pilasters of gray brick. Suitable reliefs of cut stone produce proper architectural effects. The general style and coloring is exceedingly pleasing to the eye, and has drawn forth expressions of admi-

ration from those who have seen the building.

The visitor alights from his carriage nearly at the level of the main floor, the ground having been raised several feet at the front of the building. On entering one of the three large doors of the main entrance one finds himself in a spacious lobby the ceiling of which is supported by a number of pillars of simple, graceful form. He notes the clerk's desk and the information bureau at the left, the reception room at the right, and a large elevator a few steps farther on. Crossing the center, he finds at the left, a broad marble stairway; at the right, a post office and literature depot, and a cosy corner.

Opposite the main entrance are two doors leading through the palm house

to the gymnasium. These doors are of glass, and are placed about ten feet apart; the intervening space is filled with plate glass, making a glass partition between the palm garden and the lobby. Over the doors and the glass-filled opening, at a height of about ten feet, is a narrow flower balcony, some twenty feet in length; over this balcony is a series of high, broad windows through which a flood of light enters the main lobby from the east, producing a wonderfully bright and cheerful effect.

The glass partition between the lobby and the palm house places before the visitor, on entering the building, a charming vista of palms and tropical plants resembling an Oriental garden with a cool fountain playing in the center, the entrance to the gymnasium appearing at the farther end, a distance of 150 feet from the main entrance. No one who has ever traveled in Mexico can forget the delightful impression produced by the glimpses of tropical splendor concealed in the inner gardens of well-to-do Mexican homes, and now and then half revealed to the passer-by through a barred iron gate or an open shutter. This uplifting, inspiring influence is obtained by the arrangement suggested. Contact with nature, with lovely flowers, the ever-wonderful miracle of growth, the opportunity to witness the resourcefulness of life, the activity and energy of the living forces acting in the plant, is always encouraging and inspiring in its influence.

Starting down the main hall toward the north, one finds, first, at the right, close to the grand stairway, a telegraph office and the central telephone offices for the Sanitarium telephone system. Here are also found a force of call boys. This is the headquarters for "wants" communicated by the tele-

phone system. Across the hall at the left is the cashier's office. Just beyond this is the business manager's office, the stenographer's office, the chaplain's office, a series of medical offices, the library, the ladies' parlor, and lastly the grand parlor at the north end of the building.

In the center of the parlor on the north side is a great fireplace which faces the hall, so that its cheerful light can be seen from the extreme end of the building, more than five hundred feet away.

Turning back toward the lobby from the grand parlor, we find upon the left, first the gentlemen's parlor and the writing room, then the north elevator, and next a row of medical offices especially for gentlemen. These offices are reached by a private corridor, leading from the gentlemen's bathroom.

Returning to the lobby and starting south, we find on the left-hand side, first the post office, then a series of ladies' offices which are connected with the ladies' bathroom by a private corridor. This corridor is also connected with the south elevator. The arrangement is such that ladies may visit the bathroom and return to their rooms without entering the public hall on the main floor.

On the west side of the south hall, beginning at the main lobby, are offices for the superintendent, the medical clerk, and various specialists,—eye, ear, nose, throat, nervous disorders, etc. There are also dental offices, and offices for the special application of electricity, phototherapy, compressed air chambers, arctic bath, the X-ray, and various other unique methods of treatment.

The second, third, fourth, and fifth floors of the main building are wholly devoted to patients' rooms. About

half of the rooms communicate with private bathrooms.

On each floor there is a general bathroom for ladies, a similar one for gentlemen, and parlors in the center and at each end of the building.

On the sixth floor is found, at the north end, the operating-room. Next is the kitchen, the serving room, the dining room, and the solarium; at the south end is the roof garden.

The two bath buildings are identical in size, appearance, and arrangement. The south side of the basement of each building is devoted to lavatories, special douches, and other treatment requiring toilet arrangements. Special ventilation has been provided for these rooms. Rooms for nurses' supplies and some class rooms are also found in the basement. The east end of each basement is cut off for a swimming pool thirty feet wide and sixty feet in length, the pool running crosswise of the building, thus giving opportunity for plunge baths, diving, and swimming.

The first floor of the bath building is devoted exclusively to baths of various sorts. Arranged along the outer wall on the north side, are small compartments, each devoted to some special form of bath. Groups of dressing rooms and finishing rooms containing massage couches are arranged close to the bath compartments so that the patient can prepare for his bath within two or three steps of the place where his treatment is to be received and completed.

On the opposite side of the bathroom are to be found rooms devoted to Turkish baths, electric-light baths, Russian baths, vapor baths, and other facilities for the application of thermotherapy and phototherapy. There are several shower baths and douches arranged at

proper intervals, together with shampoo rooms and other conveniences. At the farther end are the plunge and the great swimming bath, which are very important features of the treatment system.

The third floor of the bath building is devoted to light and air baths. There are also some rooms which will be occupied by nurses until required for other uses.

The gymnasium building (66 x 120 feet) will afford ample opportunity for gymnastic training and indoor exercise. It has a high, trussed roof, a gallery for a running-track, and is supplied with every convenience which can be usefully employed in physical training.

In the basement of the gymnasium is found machinery for the application of mechanical Swedish movements. Many of these machines were originated in the institution, and are extensively manufactured in the Sanitarium machine shops, which are constantly employed in work of this sort for the benefit of the Sanitarium and its branches.

A portion of this room is devoted to gymnastic sloyd, a special feature of the physical-culture department, which has been installed within the last year by the aid of Professor Aksel Mikkelsen, the government superintendent of sloyd for Denmark.

By a special and unique arrangement, light and air are admitted to every part of the extensive bath and treatment apartments. This is accomplished by means of a light shaft, nine feet wide, and extending nearly the entire length of the bath building, reaching from the first floor to the roof. This admits light everywhere, so that there is not a dark corner in the whole building, and ample provision is made for the freest circulation of air. Each floor opens directly into the light shaft, so that it is impos-

sible for the air to be confined anywhere.

The north end of the basement of the main building is occupied by fresh-air ducts, automatic heating apparatus, and stores, next to which is a sort of annex to the main kitchen on the roof. Here all the rough work of the kitchen is done, such as the preparation of fruits and vegetables, and the polishing of silver. Here are found the enormous stores of canned fruits, dried fruits (foreign and domestic), health foods, and other Sanitarium delicacies which are daily served to Sanitarium guests. There is no wine cellar and no meat room, but the amply stocked storerooms are always well supplied with choicest fruits and perishable table delicacies.

In the central portion of the basement beneath the lobby, are to be found the great pumps which operate the five

elevators, and the hot- and cold-water supplies.

South of the center are the pharmacy, accessible both from the corridor and from the lower floor of the south veranda, the office of the head engineer, the steward's office, the office of the electrical engineer, and the nurses' headquarters. There is also a reading room for nurses, a call-boys' headquarters supplied with lockers for uniforms, and a model cooking school where patients receive instruction.

The south end of the basement, higher than the rest on account of the slope of the ground, is fitted up for a chapel, for which purpose it is admirably adapted, being high, light, and quiet.

The total area of porches and verandas is over thirty-two thousand square feet, or about one and one-fourth acres,



ONE OF THE GREAT SWIMMING BATHS.

affording standing-room for more than fifteen thousand people, and furnishing ample room for more than a thousand couches, accommodating as many patients with air and light baths. This calculation includes the roof garden, one of the most practical and attractive features of the institution, located at the south end of the sixth story, and beautified in the summer season by palms, flowers, and foliage plants. It is well supplied with reclining chairs and couches for the use of the patients.

North of the roof garden and adjoining the dining room, is the spacious solarium, which, in addition to numerous long windows on the sides, is provided with an enormous skylight, through which the sunlight pours down, to the great benefit of those whose extreme feebleness compels them to take their daily light baths indoors.

The dining room proper, extending from the serving-room to the solarium, is 170 feet in length and 50 feet in width. To this length should be added that of the solarium, which may be used when needed, giving a total length of 220 feet, and an area of 11,000 square feet, or a little more than one fourth of an acre.

The surgical operating-rooms are separated from the culinary department by solid walls, with no communicating openings. The operating-room is spacious and high, provided with a mammoth skylight and ample sidelight as well as artificial lights. It is flanked on either side with anesthetic rooms, bandaging-rooms, a preparation room, and other necessary apartments including an emergency room. Here is ample room for surgical stores and supplies of all sorts, and every appliance pertaining to a thoroughly equipped modern operating-room.

The walls are finished with white

cement, which is polished as smooth as glass, and is almost as hard as stone. The floor is of marble mosaic. Everything is nonabsorbent and easily kept free from dust and germs.

A sufficient number of rooms to accommodate surgical cases are set apart for this purpose at the north end of the fifth floor, beneath the operating-room. By this arrangement, surgical cases are not required to occupy a separate building, but at the same time, are so isolated that there is no contact between them and other patients.

The traditional dread and apprehension which are connected with the word "hospital" or "surgical ward" often exercises a strongly deterrent influence upon sensitive and timid patients who are in great need of surgical attention, but who will suffer long and almost face death before consenting to go to a hospital or a hospital ward, although this prejudice is certainly unfounded.

Especial attention has been given to ventilation, one of the most important features of sanitarium construction. Each room is provided with a duct leading straight out through the roof, by which the cold and impure air is removed from the floor, pure warm air being introduced from the corridors. Fresh air is let into the corridors through indirect heaters in the basement. This secures a constant movement of pure air from within outward, and from the wall to the corridors leading into the rooms. Fresh air is admitted in large quantity, not only on the first floor, from which it finds its way through the stairways to the upper corridors, but also near the end of each corridor, so the air is everywhere kept fresh and pure as out of doors.

The parlors and other public rooms are ventilated by large special ducts, with which, in some instances, ventilat-

ing fans are connected so as to secure a sufficient draft at all times, even under the most unfavorable atmospheric conditions. A special plan has been introduced whereby the floor of the parlor is heated in cold weather, a feature which many invalids who suffer with cold feet will very much appreciate.

The heating system combines with the direct and indirect systems. The piping is done in such a manner that the so-called "vacuum system" may be employed when desirable. Arrangements have also been made for automatic heat regulation, not only for the entire building but for individual rooms, so that the heater of a room may be set at any point desirable, 60° F., 65° F., 70° F., as may be required, and the temperature will be automatically maintained at this point. This will be found especially convenient for feeble patients who are not able to look after temperature regulations for themselves.

The question of floors was one of the most difficult problems. After an ex-

haustive study of the subject, it was finally decided to adopt a concrete floor, which consists of a combination of sand and Portland cement so arranged as to utilize the remarkable properties of artificial stone in resisting crushing strain, while at the same time utilizing the great tensile strength of large twisted steel-wire cables, placed at intervals of a few inches, connected together with a carefully woven mesh-work of steel wire. The rough concrete floors must be finished in some suitable way.

After canvassing the question thoroughly, and investigating all sorts of materials which have been used for floor surface within recent times, marble mosaic was decided upon as on the whole affording the best solution of the problem. This floor surface consists of bits of marble of different colors held together by strong cement, and constituting a layer consisting of almost pure marble and about one-half inch in thickness. Such a surface takes a fine polish and is waterproof.



REAR VIEW OF THE MAIN BUILDING.

HELD IN TRUST

BY MRS. E. E. KELLOGG.

NO occupation, profession, or mission in life is of greater magnitude or moment, no privilege so high and holy, no calling so fraught with wondrous possibilities, as that of true parenthood. To parents is intrusted in a great measure the working out of God's ideal for each child in their family, and upon the manner in which this trust is fulfilled will it largely depend whether their individual characters shall be rounded in the fullness of a noble manhood and womanhood, or dwarfed by neglect and deformed by sin.

In no other relations of life are the finite and the infinite more closely connected than in the work of the faithful father and mother. They stand before God as surety for those beings made in his likeness whom he has given into their care, as "co-workers with him" in their education and development. Their self-assumed responsibility is one of overwhelming magnitude. Do parents feel to shrink from it? do they ignore it? do they shirk it or try to delegate it to others? The responsibility, however, is still theirs—they cannot escape it.

Anent this responsibility is the great and blessed privilege to *start aright* the one just entering upon life's perilous journey, and with reverent care to foster and develop, as time goes by, the God-image implanted by the Creator.

Psychologists tell us that the mind receives more impressions in the first seven years than in all the after years of life. This susceptible formation period belongs especially to the home and the parents. We say parents, for while the mother's is rightly esteemed the supremest work for the child, a true

home training involves the father's influence and co-operation.

In these impressionable years the seeds of both good and evil take deeper root in the character because the child is lacking in the power of resistance which comes in later years. Herein lies a wondrous opportunity for parents so to preoccupy the soil with good that there will be no room for evil, so to accustom the child to the atmosphere of that which is pure and wholesome that he cannot breathe freely in any other. Even inherited tendencies may be entirely or greatly modified by proper training begun in their early years. If a child has inherited a tendency to some bodily disease or infirmity, the watchful physician directs his treatment toward supplying such conditions as will strengthen the weak points, and build up the system in directions where exists the greatest need. Perverse tendencies, mental and moral, inherited or acquired, must be treated in like manner by so developing the strength within that it shall dominate over weakness, by so nourishing and cultivating right inclinations that the wrong ones will be crowded out.

It is the misfortune of many parents that they fail to awaken to their responsibilities early enough in the life of their children. They think as they hold the dear little one in arms or guide its first faltering footsteps, when the child grows older then responsibilities will increase; if for the present his physical needs are well supplied and the enjoyment of his waking hours assured, that is considered all-sufficient. All his thoughts and inclinations are left to a chance development during this suscep-

tible period, when every word he hears and every act he sees may serve to influence the bent of his whole life.

It cannot be too firmly fixed in mind that the golden opportunity for parents lies in utilizing in the best possible manner the very first years of the child's existence. Let them neglect this period, allowing the days to slip silently by unimproved, and it matters not with what zeal they labor in after years, the result will never be so permanent as might have been secured from the careful ingrafting of precept and principle in those early years. They will also be likely to find that because of their failure to sow and tend the good seed, while they were asleep to duty, an enemy has sown tares and weeds in the young heart which all the remainder of his life must be spent in endeavors to uproot.

Doubtless all have read of the young mother who, anxious to rear her child rightly, asked of a wise teacher, at what age she ought to begin his training. Learning that the child was three weeks old, he replied, "Madam, if you have not already commenced to train him, you have *lost* three priceless weeks." It requires much less effort to form character right if the beginning is made at the outset of life. "It is difficult to turn the course of a great river, but that of the small stream at its source may be easily changed."

Many mothers are alarmingly careless in regard to the use of these first years, not infrequently looking upon their little ones as a plaything or a burden, delegating the chief care of them to an untaught hireling to whom they would not willingly intrust the care of their furniture or bric-a-brac. The personal ease, the social pleasures, the time thus gained for other pursuits and enjoyments, can in no wise com-

pensate for the loss both to herself and her child which accrues to the mother from such a sacrifice of her God-given privilege. As another has said, "God sends us the children for another purpose than merely to keep up the race—to enlarge our hearts, make us unselfish, full of kindly sympathies and affections, to give our souls higher aims, and to call out all our faculties, and to extend enterprise and exertion." No parent can afford to lose the blessing that may thus come through the ministry of "the little child." If the burden lie heavily upon the mother's shoulders, let them be lightened by throwing the weight of the household cares, the sewing, washing, and ironing, upon hired help, leaving the mother free for comradeship with her children. Not that she must be constantly with them; this would not be for the best good of either herself or her children. In order to be a true mother, she must go into life that she may herself receive the wherewithal to give to others. But society, clubs, church work, whatever duty or pleasure summons her, should be subordinate to her calling of motherhood.

The highest duties of motherhood lie beyond the mending of pinafores and the washing of little hands and faces. These are simply means to an end, not the end itself. These the mother can, if need be, delegate to other trusty hands, but the "working together" with God in the building of her child's character she should claim as her own special prerogative, and no engrossment in business or other outside interests should prevent the father from sharing in this high calling. In the attempt to direct the growth of their child in right channels comes an inevitable reaction in constant development to the parents.

MOSQUITOES AND HUMAN HABITATIONS

BY F. J. OTIS, M. D.

THE mosquito certainly inhabits the earth. It has been a very annoying pest, yet very little effort has been made to understand and control the widely spread nuisance until it was suspected that these little insects had something to do with the spread of disease.

It was soon proved that they carried the malarial parasite from the sick to the well, and that the disease could not exist without them. Then came the question of limiting their multiplication or controlling them in some way. It was found that not only could the spread of malaria be controlled, but the increase of mosquitoes at large could be greatly limited. How this may be done can be readily understood after a study of the life-history of the insect.

Mosquitoes live and multiply where there is an abundance of water, and subsist upon the juices of plants. The female has a very strong beak, so she can penetrate the firmer plant structure in search of food, but the male has not so strong a beak, and so subsists on the more juicy plants.

The female lays her eggs on the surface of quiet or stagnant water, in little rafts composed of the cigar-shaped eggs standing on end. The general color is a light gray or almost white on the upper side, while if they are observed from the lower side, they are of a silvery appearance. The raft is concave above and convex below, so that it is really a miniature boat. The eggs float about on the water for but a few hours, a day or two at the longest, when they hatch, producing little larvæ. These vary somewhat according to the different kinds of mosquitoes, but they

are really not water insects in the strict sense, for they have a breathing apparatus, and cannot live below the surface for more than ten or fifteen minutes.

The most of their food is obtained at the surface. They lie there with their breathing tubes just above the surface of the water, and manipulate the little cilia about their mouths in such a way that a current of water is brought past the mouth, which brings to them little insects and particles of foods that are floating upon the surface.

It is in this stage of the mosquito's life that the scientist takes charge of the little fellow to destroy him and the future generations. If kerosene or some oily material is poured on the surface of the water, it can be readily seen that these little fellows will thrust their breathing tubes up into the oil, and get oil instead of air. It also destroys their food supply, as the little particles of food will float on the oil instead of water, so that they can neither eat nor breathe, and must die. It takes a very small quantity of oil to accomplish this.

These little larvæ can exist only in water or very soft mud, so that as quick as the dry season comes the pools lessen in size, and they are gathered and concentrated in the lower portions. The pool may dry up completely, but if a rain comes before the mud in the lowest portion has become dried, the pool resulting from the first shower will be found to be full of larvæ, but if the mud becomes quite dry, the little larvæ will be killed, and the number of mosquitoes in the locality will be much less. However, the female mosquito may live a long time in dry weather, and be ready to supply a great number of

eggs to a newly formed pool, and in only a few days have it swarming with mosquito larvæ again.

The mosquito larvæ develop into the pupæ form. These do not look in any way like the larvæ. Instead of living in the water, and breathing through the air tube near the tail, they now have two tubes very much like ears extending from the side of the head, so that when they are close to the surface these tubes project into the air above and constitute the trachea. In this form the insect is lighter than water, so remains near the surface very readily. It has a very powerful little tail by which it can lower itself to the bottom of the pond if there is any disturbance. Then when quiet is again restored, the little fellow will slowly float to the top again. Here again the oil may be used to destroy the insects. The pupæ are shaped more nearly like the adult mosquito, and after a few days in this form of existence the adult mosquito is liberated to seek his home among the leaves of the swamp vegetation.

Mosquitoes do not travel very far. They live and die within a half mile of their birthplace, unless some very strong wind carries them away or they get entrapped in some cargo and are thus removed to other parts.

It has been difficult for scientists to fully appreciate this fact, as many localities far removed from water had so many mosquitoes; but careful investigation has shown that mosquitoes multiply very rapidly in cans containing water, and in little pools that have formed in the tracks of domestic animals about the barnyard and in similar places. Whenever freshly broken ground is left rough, so that these pools form more readily than before, mosquitoes are noticed to increase very greatly in numbers. Under these circumstances, they seem to go through the various forms

so very rapidly that a vessel that will hold water for from twenty-four to forty-eight hours will make the multiplication of mosquitoes possible, and as one mosquito will lay from two to four hundred eggs it can be readily seen that in the course of three or four days we could have from three to four hundred times as many mosquitoes about the locality as existed previously.

To rid ourselves of these little nuisances, all that is necessary is to see that all these cans are up-turned, the little low places are filled up, and that no water remains in the eaves troughs or rain barrels about the premises. If these conditions can be controlled within three hundred yards of our premises, we can practically control mosquitoes about our homes.

During the winters, the pupæ form goes into the pitcher plants and into protected places in the grass of the swamps where it may be frozen up completely, but in the spring they thaw out, and continue their life uninjured. The adult mosquitoes that are overtaken by the cold weather, seek shelter beneath stone bridges, in cellars of houses, always where there is some water, as the adult mosquito cannot live more than a day or so without a good drink. In the dry seasons, the mosquito race is perpetuated entirely by the adult female. The larva and pupa forms dry up and die. The plants get old and hard, and the male can no longer obtain his food from them and so dies, but the female having a stronger beak can penetrate the firmer plants, and still obtain her living. As the season becomes drier she goes into a state suggesting hibernation, and remains quiet in some locality where she can get moisture, staying until the rain comes or water may be found again, when she deposits her eggs and the locality is soon as well stocked with the insects as formerly.

SENSIBLE DRESS FOR CHILDREN

BY DINAH STURGIS

IT is enough to make the judicious grieve, and does, to note the increasing elaboration in dress for children. Fashion—that soulless juggernaut—not content with making dress for women something to marvel over, with its extraordinary intricacy and extravagance, has lately set to work to multiply garments for children, and enormously increase their decoration. No other proof is needed of the fact that great numbers of women spend a great deal of time in cutting up material for the sake of sewing it together again intricately, than the notable increase in the number of firms whose business it is to manufacture paper patterns for cutting out children's clothes. Most of these firms cut their patterns by machinery and by the thousands, and as they are sold for a few cents they are a continual temptation to the many women imbued with the notion that they ought to buy anything and everything that is cheap.

It is a difficult matter to escape feeling something of the effect produced by the combined actions of most of the people about one. One woman in a neighborhood who thinks of little else besides dressing herself and her children for show, is almost as dangerous as any other contagious disease. The one safe resource of her neighbors is to inoculate themselves with common sense,—and this means having a theory and practice of their own as to dress that will act as a preventive against the harmful seizure that makes of dress an end instead of a means.

But children must be clothed! Yes, this is true in most parts of the world. And every mother with natural pride

desires to see her particular little brood as attractive as possible, and this is natural? Yes, this is natural, and up to a certain point commendable. The point where it ceases to be commendable is when the sense of proportion is distorted and more attention is paid to dress than to other things that are of more consequence.

There is no rule or set of rules in dress that applies to all people. Every family is a separate proposition. Children in a city require many things that children in the country do not, and the children in one stratum of city life require one thing and those in quite different strata require quite different things. But there are certain fundamental principles that apply to children's dress everywhere. Children should be dressed hygienically, and comfortably; they should be dressed in proper proportion to the financial means of the family, and in such a way that their dress is not a strain upon the mother either to provide it or to keep it in order.

It is an entirely praiseworthy plan to dress children sufficiently in the mode of the day so that they shall not look eccentric; but the best mode of the day and not the worst should be the standard. The children of royalty and the real aristocracy of society are much more sensibly dressed always than the children of the newly rich and the social climbers who have more money than wit, and know of no better way to make their mark upon their fellows than to make a personal show of themselves. While the cheap pattern makers and makers of ready-to-wear clothing are turning out elaborate styles and

great quantities of them, the custom children's outfitters to really elegant families are displaying some designs that are simple and in every way practicable for those who make the clothing for their own children or who have it done at home.

Take the matter of the first suit for boys after they eschew little girls' dresses. The Russian smock is now in marked vogue, and if made of the right material with the right trimming it suits practically every small boy's needs. The right material for a church wedding in New York is held to be just now white corded silk, but for play suits it is sensibly conceded to be kitchen crash (which washes very easily and can be easily ironed without any starch). For the cool mountains, serge is a good material, and for the hot country, the cottons such as galatea are to be commended. Under this suit nothing need be worn but a woven union suit and a waist (with elastic-fastened buttons) upon which to attach the stockings and little bloomer knickerbockers.

Figure 1 of the accompanying illustrations shows one simple model for the Russian smock suit. The model is in scarlet serge trimmed with black soutaché braid for which there is a marked revival of liking at present. The belt is fastened with a buckle

the illustration, but for everyday wear a button and button-hole are simpler and just as attractive. The belt is loose and held in place by a strap under each arm. In place of the braiding, wash suits can be prettily finished off with long-stitch machine stitching done in rather coarse white thread.

For play suits the sensible fashion prevails now of omitting stockings altogether, protecting the soles of the feet with sandals only. The ridiculous fashion also prevails among people who know no better, of dressing children's feet with high shoes and short socks leaving the legs bare from above the knees to the tops of the short socks. This custom is sensible when the weather is so warm that it is safe to leave the arms and neck also uncovered. But to uncover the legs about the

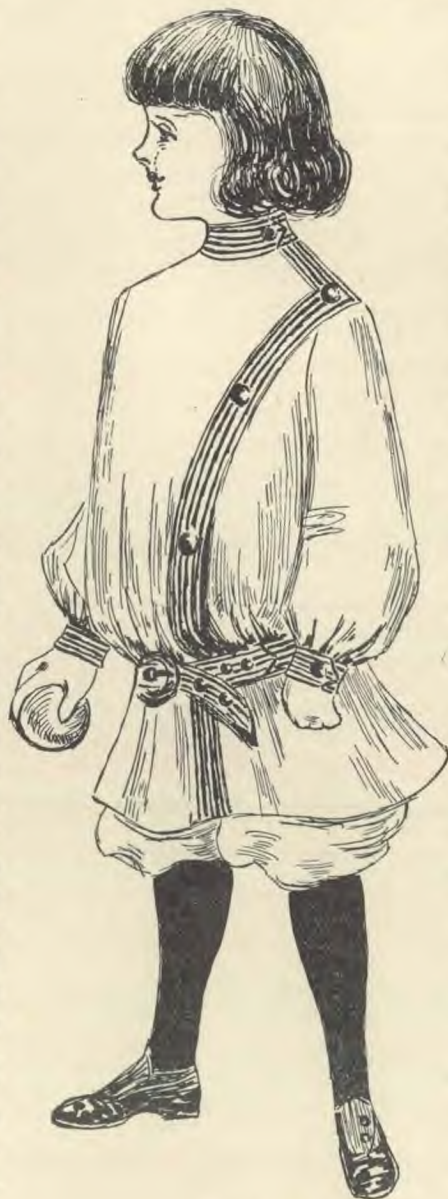


FIG 1.

sensitive knees when it is so cool that the rest of the child is bundled up, even the hands being covered, is not only senseless, but cruel and dangerous.

The illustration in Figure 2 shows an attractive little frock for girls, which, like the boy's suit, may be made appropriate for any occasion and any temperature by varying the material and trimming. The lines are good, and the style conforms to all the requirements of hygiene and comfort. The skirt is attached to the waist under the belt with buttons and buttonholes, an easier method of making and of washing and ironing than when made in one piece. The softly plaited front (which can just as well be gathered if preferred) is becoming to the straight figures of growing girls, and makes it possible to enlarge the dress if growth demands it.

This dress can be made with or without a waist lining. It should be worn over a union suit and an underwaist to which are attached the stockings and one petticoat. This should be the full bloomer order, and

may be made of wool or cotton as the season requires. Girls should have all the freedom in play that their brothers have, and under their short dress skirts muslin drawers and short, open petticoats are not protection enough for either comfort or modesty, while they increase the amount of laundry work quite unnecessarily.

This little frock can be prettily trimmed with Swiss embroideries (which are easily laundered by ironing them when damp upon the wrong side over two or three thicknesses of fine old flannel) if intended for "dressy" occasions, having the body of the gown of any of the easily laundered white wash goods. Pongee makes serviceable summer dresses, as it washes as easily as print, is very strong, and can be ironed more easily than a towel, requiring not even to be dampened, but merely to be pressed over with a hot iron. Instead of the sou-taché-trimmed yoke shown in the illustration, which depicts a blue frock trimmed with white braid, any desired trimming, can be used; but what-



FIG. 2.

ever the selection, if intended for laundering it should be something that can be easily ironed. For hottest weather the neckband may be omitted, and the neck of the dress rounded away a little for greater comfort. The sleeve shown commends itself for school wear and cool days, but for hottest weather a short sleeve is far more sensible.

Perhaps enough has been said to show that sensible dress for children is not so much a matter of addition as it is one of subtraction. So much depends upon getting the right view point, and then in having strength of mind enough to be a law unto oneself instead of being merely one of the sheep that follow their leader, as is the case in "the world of fashion."

CHEERFUL, THOUGH AN INVALID

BY MARY MARTIN MORSE

THE word invalid suggests to many minds a querulous, crotchety, cross-grained, possibly passionate person, who sees everything through doubly dyed blue glasses, and from whom one recoils with a feeling akin to that experienced by touching a cold slimy reptile. An acute illness is a severe strain on the nerves and a usually serene hopeful disposition; but chronic invalidism—that road so like eternity that looking backward or forward one can scarcely see beginning of days or limitation of vision only as bounded by the "life-line"—what shall be said of it! Said Sydney Smith, "I have asthma, gout, and seven other diseases, but with those exceptions, am very well." Said the eminent Dr. Payson, "Now when I am a cripple and not able to move, I am happier than ever I was in my life before or ever expected to be; and if I had believed this, that God came himself to supply all that he removed twenty years ago, I might have been spared much anxiety."

If there is ever a time when one needs the full use of a well-balanced mental organism and a strong will, it is when the natural buoyancy of health

has become overweighted by disease. These characteristics cannot be summoned by a momentary peremptory call, neither do they grow where fancy or caprice have pre-empted the soil. It is as impossible to form a symmetrical character in a day as it would have been to build Rome in that length of time. Character building comes by long years of accretion—often there is attrition. England's land area is said to be diminishing from the insidious encroachment of surrounding waters augmented by extreme elemental changes, so we sometimes see what had appeared a fair character on the surface, sadly honey-combed and depleted by the inroads of disease. "Is there no balm in Gilead?" To some disease comes as an inheritance, to others it is the result of ignorance pertaining to the laws of health,—and accidents often blast the most promising life plants. Whether a house be burned by lightning or as the result of individual carelessness, when it is gone, it is gone. How shall we meet the inevitable? Shall we sit inert, paralyzed, or petrified? shall we allow life's luscious juice of the vine to become vinegar? or permit our own distorted individuality

to mar, as a base metal, the contents of the crucible in the Divine hand? Shall we not rather heed the injunction, "Gird up the loins of your mind, be sober, and hope to the end." We are many times exhorted to "be of good cheer."

Many a home is made wretched because he whom God intended as the *house-band*, holding all in proper position, makes an excuse of not feeling well to render the family a scape-goat for the ebullitions of an undisciplined mind, himself the central universe, making himself such a Jumbo of a bugbear that any show of geniality elicits the remark from his children, "Wonder if father's going to die."

Many a woman makes invalidism responsible for ragged, dirty children, an untidy house, and general wastefulness. There is a limit to physical strength,—alas that we so often are reminded of it,—but consecrated will power can accomplish wonders. Because one is not able to wash the windows each week, is no good reason why the pigs and chickens should be allowed *carte blanche* in the kitchen. If a soil spot gets on the clothing it doesn't help the situation materially to jump into the mud puddle in desperation. If existing conditions are bad enough, why make them worse? Probably few, if any of us, will sweep through stellar spaces on the front seat

of a Pullman palace air-ship. This being at present impracticable, shall we plunge into despondency, and grovel with the lower forms of life? Why not take an elective course, training the mind to higher themes until the smaller unpleasantnesses are eclipsed. The mists of gloom are generated on the lower levels of physical sense.

Teach your mind to soar
Through the etherial blue,
Nearer heaven's door,
Nearer God the True.

Sometimes it takes a powerful magnifying glass to reveal the element of self, but the surgeon's knife is often the only method of release from suffering.

Often the life lights flicker and flit, and amid the gathering gloom we must await the passing of the clouds. If we cannot work, which is a panacea for most ills, let us wait royally as becometh the children of a king. If we do not always have a choice between success and failure, we may choose between ignominious defeat and sublime failure. Let us employ the waiting interim in turning the mind from self, centralizing it upon the Sun of Righteousness. "God is light, and in him is no darkness at all." "In him was life, and the life was the light of men." "Walk as children of the light."

"IT'S ALL DEAD"

BY DAVID PAULSON, M. D.

A PHYSICIAN recently related an incident which had come under her observation showing the aversion a certain little fellow of four entertained for dead chicken. On being seated at a table upon which was an uncarved

chicken he cried out in evident distress, "It's all dead, mama! It must have hurted it," and he could scarcely be persuaded to remain at the table until the dead creature was carved past recognition.

Children are naturally tender and sympathetic, not only toward each other but also solicitous for the welfare of the lower animals. The parents of this child will probably congratulate themselves when his tender nature becomes so calloused that the sight of a dead animal being devoured will seem to him entirely consistent, and will no longer excite his pity.

Many of the boys in the stockyard districts of our large cities, are further advanced in education in this line, for they consider it rare amusement to tor-

ment the live stock before they are unloaded from the stock cars. One method is to poke them with red-hot irons until the animals give vent to the most piteous outcries.

The barbarous custom of college hazing is another evident manifestation of this same spirit of cruelty which when implanted early enough in the child's mind and then carefully fostered and cultivated, will invariably in due time produce a bountiful harvest of undesirable fruits in various shocking manifestations of human cruelty.

EXERCISES FOR THE WAIST MUSCLES AND THE DIGESTIVE ORGANS

BY J. W. HOPKINS

SYSTEMATIC training of the side and front muscles of the trunk more directly affects the state of health than do any other classes of exercise in the Swedish system. These divisions of the day's order are known as Abdominal Movements, and Lateral Trunk Exercises.

Abdominal movements are exercises which cause the muscles of the abdomen to contract and relax. A few good exercises classified according to the strength of the movement are as follows: (a) Lying, head-raising; (b) stretch-lying, alternate knee flexion with leg extension; (c) rest-lying, alternate leg-raising; (d) wing knee standing, trunk flexion backward; (e) wing, foot support sitting, trunk flexion backward; (f) rest lying, 2-knee flexion with 2-leg extension; (g) lying, head-and leg-raising; (h) rest fall foot support sitting, trunk-rotation.

These are described as follows: (a) lying on the back, with the hands placed on the hips, raise the head as far as

possible without raising the shoulders or cramping the chest. Count six while raising the head, and the same while lowering it. Figure 1 illustrates this movement of the head. (b) Lying on the back with the arms stretched over the head, grasping, if possible, the legs of a chair or some other support: 1. Bend the left knee, bringing it well above the abdomen; 2. extend the leg upward, toe pointing upward; 3. lower the leg, keeping the knee straight. Figure 2. (c) Lying on the back with the hands clasped behind the head and the elbows pressed to the floor, raise the legs alternately. (d) With the hands on the hips, kneel. In this position bend backward several times. (e) Sitting, with the hands on the hips, support the feet under the edge of the bed, bureau, or bookcase. Bend backward, then raise the body. (f) Lying on the back with the hands clasped behind the head: 1. Bend both knees as in exercise (b); 2. extend the legs upward, until they are straight; 3. keeping the legs

straight, let them return to position, resting on the floor or bed. (*g*) Lie on the back with the arms at the side. Raise the head and left leg. Count five while raising the head and leg, and the same while lowering them. After the patient is sufficiently strong, both legs may be raised as the head. (*h*) Sit with the hands clasped behind the head, and the feet supported as in (*e*). Bend backward about forty-five degrees; then, holding the body straight, twist alternately to left and right. See Figure 3.

In all abdominal exercises the chest must be lifted and the ribs fixed before the movement is taken. If the chest is thus arched, the compression of the abdomen begins below, and the viscera are moved upward, thus being restored to their natural position. But if the chest is not arched and the ribs fixed, the upper part of the abdomen is flattened and the stomach and bowels are pressed downward.

So it is well to combine all these movements with breathing exercises. For instance, in Exercise (*g*) first take

a deep breath, then raise the legs and lower them again before breathing out. Repeat the exercise, alternating deep breathing with each movement. In Exercise (*d*) take a deep breath before bending backward, and after reaching the reclining position empty the lungs and fill them again before lifting the body.

These abdominal exercises have a direct influence upon the circulation. With each contraction of the muscles of the abdomen the viscera are subjected to strong pressure, this forces the blood out of them and also out of the abdominal cavity into the limbs. When the muscles relax, and the pressure is removed, the reverse takes place, the blood flowing back. So that the tone and strength of the digestive organs, are greatly improved by a course of these progressive gymnastics.

We might say that the digestion is directly controlled by these exercises. Among those who live a sedentary life, sitting at their desks or engaged in other occupations which require little



FIG. 1. EXERCISE (*g*), HEAD AND LEG-RAISING.



FIG. 3. EXERCISE (h). TRUNK ROTATION.

or no vigorous work of the waist muscles, the circulation in the stomach, liver, and intestines is very slow. These organs gradually lose their strength, their muscular tissue becoming flabby and soft. Work is needed for these cases. Regular walks in the open air, fast or slow according to the need of the individual, will accomplish much. These walks should be accompanied by breathing exercises. Breathe in while walking four steps. Breathe out while walking the same. After finding that the lungs are not filled by this length of inspiration, take five steps while inhaling, and five while exhaling, and so increase the length of the breath. These walking and breathing exercises accompanied by the movements described before stimulate the glands of the digestive tract. The secretion of fluids for digestion is increased and hastened. The movement of the food in the alimentary tract is mechanically aided, the food being forced on by the muscular contraction.

Great care should be used in giving such exercises to children. The ribs and sternum of the child are soft, quite readily yielding to pressure, and if abdominal movements of much strength are given, the chest will become depressed. Fortunately, most children need very little of such special work, their digestion being good. The active playful habits of a child also aid his digestion.

Lateral trunk exercises consist of twistings and side bendings of the trunk. The movement may be made hard enough for the strongest man, by moving the arms upward, first clasping the hands behind the head with the elbows pushed back, or the arms may be extended upward, hands clasped, the straight arms pressed back of the ears, and the side bending then taken. This exercise is a powerful stimulant to the liver. Among many Y. M. C. A. directors it is known as the "Liver Squeezer," or "Liver Pill," as it wakes up many torpid livers.



FIG. 2. KNEE-BENDING FOR LEG-EXTENSION UPWARD.

These exercises are best taken at night. The bending sideways should be done before retiring. They should be followed by a breathing exercise taken lying upon the back. Completely fill the lungs, and then as completely empty them. Then, with the lungs yet empty, go through the motions as it were of breathing, but without allowing any air to pass into the lungs. This will cause the ribs to rise, and will pull and lift the stomach and intestines up to their proper positions. This

can be repeated two or three times before taking the breath, and then the exercises may be taken again. Follow with movements (*e*) or (*f*); then take the inspiratory lifting again, to close the work for the night.

This will leave the tissues which support the stomach and intestines, relaxed, and nature will build them up during the night's rest. If these exercises are faithfully and judiciously followed they will yield most gratifying results.

EATING

BY R. B. BUCKHAM

IT is not always the things with which we are in reality most concerned that are accorded our most earnest consideration. What to eat, and what not, and how best to prepare proper food most suitably for nourishment and the promotion of health, are all matters deserving of much more attention than they actually receive. Many things now permitted to monopolize much of our time could well be sacrificed for these.

It is sad to see a man cut off in early or middle life, with the best and

most useful portion of a life work yet uncompleted, but still more so if the calamity has arisen from thoughtless and flagrant neglect of proper precautions in these very matters of diet and the care of health. Self-destruction with a single blow is criminal. Why should unpardonable disregard of the body's needs and capacities pass entirely uncensured? Men's laws may be inconsistent, but nature's are not.

Seldom in these times do we hear of an actual case of death by starvation. The community is horrified when such

in fact does occur. But death from the opposite extreme, eating and drinking to excess, is occurring constantly, and passes without notice, almost as a matter of course. One extreme is as injurious as the other, both leading to one and the same result in the end, though by a different road.

Things have come to a strange pass when the result of one's use of food is to incapacitate the body for the purposes for which it was intended. Man as designed by his Maker was planned to be as lithe and supple and active as the animals are. The most cursory consideration of the mechanism of his physique reveals this to be true. The vast proportions which some assume through transgression of the simple rules of diet and overdevotion to the table are a setting at defiance, a violation of the purposes and designs and will of the Creator. In his use of what was intended to be a blessing, one may blaspheme his God.

In our understanding and use of foods we are passing through a process of evolution, as in many other things. There are still those to this day who maintain that they are under the necessity of living almost wholly upon a meat diet. These are still in the larva stage with relation to this matter of diet. They have evolved from the black and abominable state of cannibalism, feeding upon one another, to the intermediary stage of feeding exclusively upon the lower animals, but not as yet into a thorough understanding of a proper diet of fruits, nuts, and cereals.

The common belief that a meat diet is necessary for the formation of bone and muscle is not easily established. The first comers to these shores tell us that the native inhabitants whom they found here lived thus, and yet

were not of a strong or rugged constitution, or of a powerful or muscular build; but rather, noticeably, the reverse. Hardly would they have compared favorably in this respect with the original South Sea Islanders, who are said to have been of admirable development and physique, and yet who fed quite exclusively upon nuts and fruits. The latter, according to all accounts, were more vigorous than the former.

It cannot be denied that the character of the food consumed determines, to a greater or less extent, the instincts, proclivities, and morals of the individual. This is to be seen too plainly in a number of ways to be doubted or disputed. Alexander Henry, in his history of the Indian tribes of the Northwest, mentions the case of a tribe which lived all winter on vegetable products, its supply of meat having given out, and came out with all its members well and quite unusually fat, and its numbers intact, they *not having been prompted to go to war that spring*.

On the contrary, Darwin, in his account of his travels, relates that while on the plains of South America, his companions, having lived for days solely on meat, not being able to get anything else, on more than one occasion mounted their animals and chased wandering bands of Indians for days at a time in the hope of a brush with them, simply as a relief from the overstimulation of their animal natures. In each of these cases, diet, and diet alone, determined the conduct of these persons, who in the one case conducted themselves commendably, and in the other the reverse.

It is well known to what an extent the spirits of an individual are affected by the condition of the digestive system, all the world being awry or roseate with one, according to whether

he is well or ill in this regard. One's entire outlook upon life is often determined by this one circumstance, and usually the character of the food eaten is the key to the whole situation.

If this matter of what we eat governs so largely the extent of one's usefulness in life, one's motives and tenden-

cies and aims and views, has so important a bearing upon the length of life, and one's capacity for making the best of it, and so largely helps or hinders in the formation of the moral nature, and character, surely it is a topic of more than ordinary consequence, and deserving of more than passing attention.

THE SALMON BEFORE HE IS CANNED

BY EARLE A. ROWELL

THE facts given below, though familiar to nearly any Alaskan, are not generally known, and they are here given not so much for their intrinsic worth as for the light they throw on a subject in which all should be interested.

Imagine yourself on the seashore in Alaska, in the month of September, rambling on for the pleasure of it, and picking up a curious shell now and then. You see ahead a fresh-water stream which is in your path. As you approach, you are surprised to find the whole stream filled, crowded with struggling salmon. If you follow the stream back from the shore a mile or so, you will find it literally packed with salmon all the way, although the water is so shallow that no fish is more than half covered. Your surprise is increased when you approach near enough to touch them with your foot, and find that they pay not the slightest attention to you. They struggle fiercely on up the stream, the females to deposit their eggs, the males to protect the females. All are intent upon that mad suicidal rush up the stream. It is suicidal because not a single salmon out of those hundreds before you ever comes back alive. From the outset they neither eat nor rest, and as you follow them up

stream you soon see the effects of their battle. Their flesh is knocked off against the stones; here you see one striving desperately against his fellows with nothing left of his once powerful tail but the bones, and many of them are broken; the flesh may be falling from his back or torn from his belly, still he fights on until death. If it is a female, you may see the eggs dragging from an ugly gash in her side, one fin is torn off, two more are useless, every effort to propel herself leaves a trail of blood, but she swims on with the rest.

You are sickened by such a sight and conclude that the shallowness of the stream will account for the condition of the fish. So you go to a larger stream thirty feet in width, and eight feet in depth; here you find thousands of salmon lashing the water into foam in their efforts to distance one another. They are swimming packed layer on layer like sardines. Here the conditions of the smaller stream are repeated on a larger scale. The fish are not only torn to pieces by rocks, but destroy one another. If you pick up one that appears whole he will fall to pieces of his own weight. In other words, though still alive, he is literally a storehouse of worms and parasites. You are aghast at your discoveries.

You return thoughtfully to town. Here is an object-lesson that will add weight to your arguments against flesh-eating.

Two weeks pass, and the millions upon millions of salmon that have run up the streams are all dead, and their bodies are washed back into the ocean. Then they are thrown by wind and wave upon the beach, and the stench of these decaying salmon can be detected a mile from the mouth of the stream.

I can affirm that after a man sees thousands of live fish weighing from six to sixteen pounds each, decaying within a stone's throw, he no longer trifles with God's call to diet reform unless he is lost to reason. One view of these salmon, raw and bleeding, worm-eaten and decaying, an eye hanging out, tail broken, fighting onward, onward to death with the fierceness of a man striving for his life—this is enough to haunt a man for life, and with salutary effect.

THE RELATION BETWEEN CORRECT PHYSICAL LIVING AND RIGHT MORAL LIVING

BY GEO. C. TENNEY

THE recognition of this relation is the fundamental consideration in all that pertains to the welfare of either our physical or moral nature. It is not always recognized; for the pugilist and the athlete may never have any perception of the moral side of physical culture. And church history of the past ages is full of the lives of men who have ignored the claims of the physical man to any consideration, and have blindly and wickedly consigned the flesh and all that pertained to it to utter extermination. To accomplish this destruction they have submitted their bodies to the most degrading and cruel treatment in defiance of even decency and the claims of self-respect.

But neither the pugilist on one side, nor the recluse, ascetic, or fakir on the other, come anywhere near representing the truth in the all-important work of true moral and physical culture. Indeed, they have no conception of the sacredness of that cause.

The Scriptures of truth make the relation of good moral and good physical living very plain. The gospel of Christ provides for the full restoration of a fallen race to the perfect image of its Creator, both in moral and physical vigor. The Saviour and his apostles did not fail to place physical health and well-being right alongside moral and spiritual regeneration. Jesus declares that "the life is more than the food, and the body is more than the raiment." This is a hard lesson for people to learn, for naturally one thinks that the taste and richness of the food set before him are the proper standard by which to judge it, while little or no thought is given to its adaptation to the real wants of the system. So also in the matter of dress. It is the outfit rather than the body to be clothed that receives attention. To many people the body is nothing more than a walking dummy on which to display elaborate and expensive clothes.

But every physical habit has a moral element inseparably associated with it. Eating is a moral and spiritual as well as a physical function. We are enjoined by the Bible to "Eat ye that which is good; and let your soul delight itself in fatness." Good food fattens the soul as well as nourishes the body.

But to do so it must be eaten for that purpose. The stomach and other digestive organs perfunctorily appropriate the physical qualities of food. But the soul cannot do so without the recognition of the mind. To obtain moral good from good food the mind needs to be in communication with the Giver of good food. There should be a spirit of hearty acknowledgement of the divine bounty, with unfeigned gratitude. There should be a sense of soul hunger, or a good moral appetite, as well as a physical appetite. There should be nothing on our tables which offends our moral sensibilities. We should be as conscientious in eating as in praying. And it should be remembered that a known physical sin breaks

down moral character as effectually and as rapidly as does moral unrighteousness.

I do not say that we should eat with a vague sense of a curse hanging over us for any disobedience, but with a joyful sense of a pure conscience, void of offense toward God and man. Then will be fulfilled to us that other scripture which says, "The righteous eateth to the satisfying of his soul, but the belly (appetite) of the wicked shall want." It is impossible to satisfy a fleshly lust, but a spiritual demand may be supplied. Eating righteously will satisfy spiritual wants and strengthen moral principles.

And that which may be said of eating is true of every bodily habit. It is the scope of the gospel to bring the physical instincts and functions under the control of the moral and spiritual faculties with which mankind is especially endowed by God. This is not with the purpose of making life irksome or melancholy, but to render it pure and wholesome, happy and free.

ITEMS THAT COUNT

THERE is one important fact that should be indelibly fixed in the mind of every thinking, reasoning being, and that is, that any physical derangement, no matter how slight, leaves its impress on the system, and that the individual can never be exactly the same as before. We know this is contrary to the opinion generally held, for we frequently hear the remark made concerning some one who has recently passed through a slight sickness, "the doctor says he is sound as a bell now!" This is optimism, pure and simple, on the part of the physician, and it does good by establishing

confidence in the mind of the whilom patient; but in reality, it is not so. No disturbance of the normal course of the functions can pass away and leave things exactly as they were. A permanent damage has been inflicted, and although it is not appreciated at the time, Nature is a rigid bookkeeper, and these apparently trifling debts to her are duly entered against the individual, and you may rely upon it that sooner or later the bill will be presented. It is the sum total of these minor injuries that become formidable — the accumulation of these trifling derangements that break down constitutions ultimately. — *Health*.

Nature's Methods in the Sick Room

THE HOME CARE OF FEVER CASES

Convalescence

WHEN the disappearance of fever indicates that convalescence has begun, the greatest care must be used to avoid relapse by overfeeding, too much exercise of mind or body, or the neglect of any necessary precaution. Simply sitting up in bed, talking too long, eating too heartily, or indulgence in food hard to digest may be sufficient to precipitate a relapse, which may delay recovery for days or weeks, or may even jeopardize life.

During convalescence all the general principles of care applicable to the fever state must still be followed, but with diminishing vigor. The same care must be taken respecting ventilation, disinfection, and feeding, but the diet may be made more liberal in variety and amount.

Cold mitten frictions or towel rubbings must be applied twice daily for tonic effects. The bowels must be kept open by a cool enema each morning, if necessary, and such local measures as fomentations, head compresses, wet girdle, and chest compresses, as may be indicated in the particular case. By these means convalescence may be greatly assisted, and may be brought to a more speedy and successful termination in the complete re-establishment of the health.

If there is special heart weakness, or if heart symptoms have been prominent during the attack, and especially if there are frequent attacks of palpitation, a

cold compress or an ice bag should be applied over the heart for half an hour twice daily, the patient lying quietly in bed during the application.

The appetite may be encouraged by an ice bag over the stomach for half an hour before each meal.

A subnormal temperature occurring at a certain hour of the day should be combated by wrapping in warm blankets with hot bags or bottles applied at the appropriate time. The warm packing should not be continued long enough to cause sweating, but only until the patient is thoroughly warm and the temperature normal as shown by the thermometer placed in the mouth. A cold mitten friction may then be applied, using great care to avoid chilling the patient.

The exercise must be increased with great care, adding a few steps each day, never allowing the patient to become exhausted or nervous from excessive mental or physical effort. For a long time the patient should rest in bed an hour or two in the middle of the day, and he should spend as many hours in sleep as possible, not less than nine or ten, until his strength is fully restored. Food is digested during the waking hours, but is most actively assimilated during sleep.

Fat and blood-making foods are needed in as large amounts as can be assimilated. Nut creams prepared from almonds or filberts, sweet fruits,

and dextrinized cereals, are foods especially adapted to this purpose. Cane sugar, greasy and rich foods, and all foods difficult of digestion, while to be avoided at all times, are especially dangerous during the period of convalescence on account of the weak condition of the digestive organs.

The period of convalescence after a prolonged fever is one in which the danger of contracting some serious infection, as tuberculosis of the lungs or malarial infection, is especially great. Many cases of consumption date from an attack of typhoid fever, smallpox, or measles.

The period of convalescence is generally long or short in proportion to the duration and severity of the fever. When the patient has the advantage of hydiatic treatment from the beginning of the attack, convalescence is very greatly shortened, especially when the treatment is continued during convalescence as above outlined.

Falling Hair.

The cause of falling hair is failure of nutrition, and the failure of nutrition of the scalp is perhaps due to general failure of nutrition. Some of you have noticed, for example, that now and then a little ridge or a little white spot occurs on your finger nails. If you will examine these you will see that they appear on all the nails, and that they are at about the same distance; that is, the cross ridges, not the longitudinal. If you have had a fever, for instance, you will probably have noticed the little ridges on the nail. That ridge marks where the fever was. The day that you had the fever the nail stopped growing. The toe nails grow one fourth as fast as the finger nails, and the hair grows at the same rate. During fever, the hair ceases to grow. Every hair

has its normal length in every person. It may be only six inches or a foot or two or three feet long, or it may be long enough to fall upon the floor when the owner is standing erect, and this may be the normal length for these individuals. Now why is it longer in some than in others? Not because the hair grows longer or faster, but because the roots are stronger. The hair continues to grow until its weight becomes sufficiently great to pull it out by the roots. That is the reason the hair falls out. When nutrition fails, the roots become weak and small and feeble, and then the hair will fall out, until by and by simply brushing it, making slight traction upon the hair with a brush, will pull it out by the roots. This is not brushing the hair out, for it would soon fall out anyway because the roots are so feeble.

Now the thing to do is to improve nutrition. It may be that the whole body is weak and the nutrition bad, as in the case of fever or chronic dyspepsia; this would cause baldness by depreciating the whole body.

Another cause is injury to the scalp itself. It may be a local disease. The general bodily health may be good, but there may be a local disease of the scalp. Baldness is generally due, in fact, to dandruff. When one has dandruff of the scalp, in ten to twelve years baldness is pretty sure to appear. It may be sooner, but ten or twelve years will be pretty certain to bring it.

There are two things to be done for falling hair: First build up the body by improving the nutrition of the whole body, so that there will be better nutrition of the skin; then make sure that the skin is healthy. Dandruff is a parasitic disease which gets to the roots of the hair. It is just like a worm eating at the roots of a tree. It might be said

that there is a worm eating at the roots of the hair until the root is injured sufficiently to allow the hair to fall out.

The morning cold bath and general friction of the skin, with plenty of work out of doors, are important means of improving the general nutrition. I have seen a great many Indians in the West, and I have never seen a bald-headed Indian yet. He is not bald-headed for the reason that his skin is in splendid condition. He has a splendidly healthy, vigorous skin, and it is just the same on the top of his head, — the scalp has the same sort of exposure to the air as the rest of his body. Men often wear warm hats that overheat the scalp and thus impair its integrity and health, while ladies certainly never trouble their heads in that way. You rarely see a lady's hat that is very likely to overheat her head. They seldom wear anything on their heads for protection. They simply wear a little something held on with a pin, for the sake of looks, but it is not intended for protection. Consequently, ladies do not suffer from baldness nearly so much as men.

Now one of the very best things to increase the nutrition of the scalp is to dip the hands in very cold water and shampoo it thoroughly. In case of dandruff it is necessary to destroy the parasite that is doing the mischief, and the scalp must be disinfected, and for this the best thing in the world is crude petroleum, one dram to the ounce of alcohol being a good application. That is the best of all remedies, and some of these remedies that we see vaunted in the newspapers are simply a preparation of crude petroleum. Resorcin is a product of coal tar, and is very similar to petroleum in this respect. This may be very advantageously used in a preparation of twenty grains of resorcin to the ounce of alco-

hol, adding five drops of castor oil. The hair should be shampooed at least two or three times a week, and this put on until the scalp is thoroughly wet with it; then rubbed in until the roots of the hair are reached and the parasites destroyed.

Now in case of a bald and shining pate, what can be done? When you take a cross view of it, see if you can see a little bit of a fine down growing there. If you can, there is still hope. But if it is perfectly smooth, there is absolutely no hope, because the very roots of the hair and the follicles have been destroyed.

But it is really rare that we meet such a case as that. Generally there is a very fine down present. In that case there are just as many hairs growing as ever, but they are very soft and thin and short. You can tell a great deal about the condition of the hair by examining the combings. Separate them into long and short hairs, and see which predominate. If there are more short hairs than long, then you are getting worse. The other day a gentleman asked me about baldness, and asked my opinion as to the condition of his hair. I told him to save the combings for me, and the next morning he sent me a whole envelope full. I got someone to count them, and found that there were one hundred and two short and ninety-six long hairs. So the short hairs were six to the good. That shows that the condition of his hair is pretty nearly at an equilibrium, he is not getting worse very fast, but still he is losing a little ground. But it is a bad case, anyway, in which half the hairs are short. In such a case a vigorous remedy must be applied at once, which will disinfect the scalp and destroy the parasites which are growing there, and give the hair a chance to develop.

J. H. K.

Science in the Kitchen

UNFERMENTED BREADS

BY LUCY WINEGAR

ONE of the most important things along the line of hygienic cooking is the making of simple unfermented breads. It is an art to be able to make them without the use of any injurious substances and yet so that they will be wholesome and appetizing. In the first place, select a good flour. The color of good white flour should be light cream, and not a bluish tint. Further, if you take up a tablespoonful of it and attempt to shake some of it off, it should fall in a fine shower, and not in lumps.

Whole-wheat flour is very nutritious and makes good bread, but it is not wise to lay in a very large supply of it at any one time as it is rich and will not keep well. Excellent bread can also be made of forty-per-cent gluten flour, but perhaps no other bread requires so much care in the making as does gluten bread. It is well to remember that the higher the percentage of gluten a flour contains, the greater is the proportion of liquid required in its preparation.

The secret of success in making unfermented breads without soda or baking powder is this: All utensils and materials used must be very cold. Should ice be unobtainable, the utensils may be cooled by placing them in cold water for a few moments; and any dish containing a material to be used in making the bread should be placed in a large dish containing very cold water.

A delicious breakfast food, and one which is quite indispensable in homes where a hot bread is customary at the morning meal, is the whole-wheat or corn-meal puff. The material required for making these puffs is as follows:—

Two-thirds cup milk and one-third cup cream, one large or two small eggs (preferably the latter), one cup whole wheat flour and one-half cup white flour; or one cup white flour and one-half cup corn meal, one-third teaspoonful salt.

Break the eggs, placing the yolks in the milk and setting the whites aside in a cool place. With a batter whip mix the two thoroughly, and then slowly add the flour, beating all the time. After all the flour has been thus worked in, continue the whipping process for ten minutes (unless enough puffs are being made to supply a large number of people, when the batter should be beaten at least twenty minutes), using long, even strokes, in this manner working in as much air as possible and thus insuring the lightness of the puffs.

Now beat the whites of the eggs, fold them into the batter very gently, and quickly turn the whole into *very hot* gem-irons, and bake in a very quick oven. If the pans and oven are not very hot, the puffs cannot be a success. After baking, let the puffs stand at least five minutes before serving, for they are apt to be a little sticky inside immediately upon coming from the oven.

In making crackers, the above recipe may be followed, using, however, a larger proportion of flour. The dough should be kneaded and beaten and re-kneaded until much air is worked into it. If, when pulled, the dough snaps apart, it may be pronounced ready to be rolled out and cut into desired shapes. Perforate, and bake in a slow oven.

A Picnic Dinner.

MENU

Protose Sandwiches, Nut and Date Sandwiches	
Ripe Olives	
Potato Salad	Fresh Tomatoes
Nuttolene Cheese Balls	
Fruit Rolls	Fresh Cherries
Lemonade	

Protose Sandwich Filling.—Rub two slightly rounded tablespoons of nut butter smooth with one-third cup of water, let this cream boil for a moment, remove from the stove and add one-half teaspoonful of salt and two spoonfuls of lemon juice and enough finely minced protose to make a thick paste. Spread between thin slices of buttered bread.

Nut and Date Filling.—Wash and stone one-half pound of good dates, chop fine, and add one-half the quantity of finely chopped English walnut meats and enough lemon juice to make a thick paste. Butter thin slices of graham bread and spread the paste between. Each sandwich should be wrapped in soft white paper.

Potato Salad.—Cut half a dozen cold boiled potatoes into small cubes and add enough finely minced celery for seasoning and mix lightly with a fork. Use a boiled sour salad dressing.

Nuttolene Cheese-Balls.—Press half a pound of nuttolene through a wire

strainer, add salt, enough lemon juice to give it a slight sour taste and a little celery salt or minced celery and form into small balls.

Fruit Rolls.—Sift a pint of flour into a bowl, and into it stir a cupful of thin cold cream, a spoonful at a time. When all the cream has been added, gather all the fragments of dough together and knead thoroughly for ten minutes; then work into it a half cupful of Zante currants which have been well washed, dried, and floured. Roll the dough into a long roll about an inch in diameter, cut this into two-inch lengths, and bake in a moderate oven.

MRS. N. E.

DIET AND CHARACTER

THE plainest man alive may tell ye
The seat of empire is the belly;
From hence are sent out those supplies
Which make us either stout or wise;
The strength of every other member
Is founded on your belly-timber;
The qualms or raptures of your blood
Rise in proportion to your food;
Your stomach makes your fabric roll,
Just as the bias rules the bowl.
That great Achilles might employ
The strength designed to ruin Troy,
He dined on lions' marrow, spread
On toasts of ammunition bread;
But by his mother sent away
Amongst the Thracian girls to play,
Effeminate he sat and quiet;
Strange product of a cheese-cake diet.
Observe the various operations
Of food and drink in several nations:
Was ever Tartar fierce or cruel
Upon the strength of water gruel?
But who shall stand his rage and force,
If first he rides, then eats his horse!
Salads and eggs and lighter fare
Tune the Italian spark's guitar;
And if I take Dan Congreve right,
Pudding and beef make Britons fight.

—Prior.

Some Economical Menus.

The following menus and recipes are taken from a leaflet entitled "For India's Sake." In the introduction the object of the booklet is explained as follows:—

"This little booklet has been prepared by Mrs. E. E. Kellogg and her assistants in the Battle Creek Sanitarium School of Scientific Cookery, to help those who desire to aid the starving natives in India by adopting a Hindu diet and donating the money thus saved by a plain and simple dietary, to our unfortunate fellows in distant India.

"In the several bills of fare presented, great pains has been taken so to adjust the several articles taken at a single meal as to secure healthful combinations, and the right proportion of food elements so that all the tissues, nerves, bones, muscles, and brain shall be properly nourished. Two hundred million of the natives of India are vegetarians. If any feel disposed to complain of the simplicity of the bills of fare proposed, let them remember that the diet of the native Hindu is plainer still, rarely including anything more than rice and dahl (a seed resembling beans or lentils) even in the most prosperous times, and always the same every day in the year."

We give a number of the menus and recipes here believing that their use will prove helpful from a health, as well as from an economical, standpoint.

BREAKFAST.

(For four persons.)

	Amount.	Cost.
Fresh Apples.....		4 cts.
Graham Crisps, requiring.....	1½ lbs. flour	3 "
Oatmeal with Nut Meal, or Browned	½ lb. oatmeal	
Wheat.....	1 or wheat	2½ "
Hazelnuts.....		3 "
Total.....		12½ "
Average for each of four persons.....		3¼ "

RECIPES.

Graham Crisps. — Into ice-cold water sprinkle slowly, beating meanwhile so as to incorporate as much air as possible, enough graham flour to make a dough stiff enough to knead. A tablespoonful of sugar may be added to the water before stirring in the flour, if desired. After kneading thoroughly for ten or fifteen minutes, divide the dough into small portions, roll each as thin as brown paper, prick with a fork, and bake on perforated tins, turning once or twice until both sides are a light, even brown. Break into irregular pieces, and serve.

Oatmeal. — Heat a quart of water to boiling in the inner dish of a double boiler; sift into it one cup of coarse oatmeal and boil rapidly, stirring continuously until it thickens; then place in the outer boiler, the water in which should be boiling, and cook three hours or longer.

Browned Wheat. — Place pearled, cracked, or whole wheat on tins in the oven, and slightly brown. Cook the same as directed for oatmeal, using four parts of water to one and one-half parts pearled wheat or four and one-half parts of water to one of cracked wheat.

For breakfast, these grains should be cooked the day previous. When done, remove the inner dish of the boiler to some cool place where the grain will cool quickly, and leave it there overnight undisturbed.

To heat in the morning, fill the outer boiler with boiling water, place the inner dish containing the grain therein, and steam till thoroughly heated through.

BREAKFAST.

(For four persons.)

	Amount.	Cost.
Corn Bread with Nut Sauce	⅔ loaf	3 cts.
Pea Gravy Toast.....	¼ lb. peanuts (shelled)	1½ "
Bread for Zwieback.....	½ loaf	2 "
Peas and Gravy.....	¼ lb. peas, flour, and 1 cream for gravy	2 "
Total.....		8½ cts.
Average for each of four persons.....		2¼ "

RECIPES.

Pea Gravy for Toast.— Prepare and cook the peas as directed for mashed peas with nuts. When tender, rub through a colander. To each cupful of the sifted peas add one cup of boiling water, with salt to season. Heat to boiling, and thicken with a teaspoonful of flour rubbed smooth in a little cold water. Just before serving, add a tablespoonful of cream or nut meal.

BREAKFAST.

(For four persons.)

	Amount.	Cost.
Boiled Wheat.....	$\frac{1}{2}$ lb.....	1 cts.
Corn Bread.....	1 loaf.....	4 "
Stewed Sweet California Prunes.....	$\frac{1}{2}$ lb.....	4 "
Hazelnuts.....	5 oz.....	3 "

Total..... 12 cts.

Cream may be substituted for the hazelnuts if preferred.

RECIPES.

Boiled Wheat. — Select new wheat with plump kernels; that which is freshly cut and well rubbed from the chaff is best for this purpose. Look it over carefully, wash, and put to cook in five times its measure of cold water. Let it come to a boil, and cook gently until the grains burst open and they can be readily mashed between the thumb and finger. This will require from four to ten hours, according to the age and variety of wheat used. Less time will be required if the grain is soaked overnight. When done, it should be full of a rich, thick liquor. If necessary, add more boiling water, but stir as little as possible.

BREAKFAST.

(For four persons.)

	Amount	Cost.
Browned Corn-meal Mush.....	1 lb. corn meal.....	3 cts.
Split-Peas Puree.....	$\frac{1}{2}$ lb. split peas.....	1 "
Graham Bread.....	$\frac{2}{3}$ loaf.....	3 "
Dried Apple Sauce.....	$\frac{1}{2}$ lb. dried apples.....	2 $\frac{1}{2}$ "
Sugar.....	$\frac{1}{2}$ "	

Total..... 10 cts.

Average for each of four persons..... 2 $\frac{1}{2}$ "

RECIPES.

Browned Mush.— Slice cold corn-meal mush rather thin; dust each slice lightly with toasted graham-bread crumbs, or crumbs prepared from bread which has been made into zwieback, and brown well in a moderate oven. The slices should when done be well heated through, and crisp and brown on the outside. At a little additional expense the slices may be brushed lightly with the yolk of an egg, or with thin cream before dusting with the crumbs.

Split-Pea Purée.— Stew the peas the day previous, slowly and continuously for several hours (from four to six) until perfectly softened and until the water has nearly all evaporated. Rub them through a colander and season with salt. In the morning add if necessary sufficient boiling water to make a thick purée, reheat, and serve hot. A long, slow stewing is particularly essential for the cooking of dried peas.

Ripe olives furnish fat in a good form. They should be soaked twenty-four hours in fresh running water before using. If it is impossible to have running water, change it often. As many as twenty olives thus prepared may be taken at once.

Make butter from milk which has been sterilized. Germs rise with the cream.

Oranges are a most valuable fruit. Orange juice allays thirst, and with few exceptions is well borne by the weakest stomach. It is also a laxative, and if taken at night or before breakfast it will be found most beneficial. — *Ladies' Home Journal.*

The Hundred Year Club

TO LIVE ONE HUNDRED YEARS

THE following is an extract from a lecture by a well-known physician upon this subject:—

"We see people die at an average age of forty-two years. Why is it that the average man dies at forty-two and the exceptional man goes on to live a long life? We are all animals of the same species. Dogs, oxen, rabbits, cats, elephants, and such animals die at practically the same age. But it is not so with the human family.

"Man was formerly the most enduring of all animals. There must be some cause for this terrible shortening of human life. In looking back to old Bible times we find men living to one thousand years. What reason is there why a man should not live as long now as he did five thousand years ago? We are growing weaker and wiser. More weak than wise.

"We find there are many causes which are bringing about a gradual deterioration, or running out, of the race and a steady march towards extinction. We find there has been an increase in insanity amounting to 350 per cent in the last fifty years. At this rate, in 265 years the race would be all lunatics and imbeciles. This is not only true of brain degeneration but also of lung degeneration, and liver and stomach degeneration. We are suffering not only from our own sins but also for the sins of our fathers and mothers and our grandfathers and grandmothers. . . .

"We are destroying ourselves because we do not take pains to cultivate health. We are cultivating our brains

until they are getting too big for the rest of our body. The average boy's head is now bigger than it was fifty years ago. This makes the average mother proud, but it does not amount to anything unless the boy has heels to carry it around—a stomach big enough to furnish it nourishment.

"Joseph Parker, the greatest living orator, takes the greatest care of his health because he wants to preach his very best. He has a bath tub behind his pulpit. He says if he can get into a cold bath just before going into the pulpit he is a match for any audience that can be set before him."

The speaker then turned his attention to proper diet:—

"Anything that is hot when it is cold is not fit for the stomach. Under this head would come pepper, pepper-sauce, mustard, ginger, and such articles. Pepper has six times the power to give a man a gin liver than gin itself. Vinegar is twice as potent a factor in making an alcoholic liver than alcohol itself. Whatever will spoil the stomach will affect the liver.

"One thing more about diet, and this is the miseries of mush. I consider one of the greatest evils, one of the most active mischief-makers in the matter of diet, is the use of mush. Grains are largely composed of starch, and starch requires saliva for its digestion. But when it is improperly cooked in the form of mush it slips down into the stomach without chewing and becoming thoroughly mixed with saliva, therefore it cannot be digested.

"Cereals and grains must be roasted before they are fit to eat. There are more people die from bread bullets taken into the stomach every year than were killed in the Spanish war. This bread cut into slices and baked in the oven, or made into zweiback would be rendered digestible.

"Whoever could imagine that cheese was ever made to eat. I liked oysters until I examined some juice with the microscope. I found it was like a silver mine in Washington and Colorado—there were millions in it. Avoid oysters on the half shell."

Improprieties of dress, bad physicians, improper positions in sitting and standing and the proper amount of exercise were then discussed in turn. In concluding he said:—

"The whole purpose of my talk is to inculcate respect for the body. Why? —Because the body is the best possession we have. All a man hath will he give for his life. The Apostle Paul wrote that our bodies are the temples of the Holy Ghost — our bodies are divine temples.

"There is in every man a divine intelligence, a divine indwelling spirit, and it is our duty to do our best to preserve these temples and to develop our powers instead of allowing them to be trodden underfoot by disease.

"Then we must eat to live and not live to eat. We must exercise and follow all the laws of righteousness with reference to our bodily functions. We must recognize the religion of the body. If we will do all this I am sure most of us here can live one hundred years or more."

One Hundred and Three.

The readers of the Hundred Year Club will be interested to know that Mr. B. S. Phelps, whose portrait ap-

peared in the March number of *GOOD HEALTH*, finished his one hundred and third year on the twenty-fourth of March, in good health. We are also in receipt of a photo of him taken upon that day.

A Long Walk.

The following comes from Traverse City, Mich:—

"Though he is 103 years old, 'Uncle Dan' Whipple walked to Traverse City last week from his home five miles distant, to attend a G. A. R. campfire on the anniversary of Lee's surrender. Mr. Whipple, in his actions, appears to be a man not over sixty years old, his step is springy, and he rises from his chair like a young man. Only his face shows his age. His eyes are still very clear."

Still Saws Wood at Ninety-One.

The Rev. Jacob Chapman, of Exeter, N. H., is the only nonagenarian, and one of the few clergymen in New Hampshire who saw all the wood used in their stoves for cooking and heating purposes. The amount of wood consumed by a family during the long New Hampshire winters is something enormous, yet Mr. Chapman goes out into the woodshed every day and saws almost enough to keep the parlor and bedroom stoves well supplied, as well as to furnish what is needed for the kitchen.

Mr. Chapman celebrated the ninety-first anniversary of his birth this week. Though never robust, Mr. Chapman's physical powers are remarkably well preserved. A day seldom passes in which he fails to cut a little wood, an exercise which he considers very beneficial. In good weather he takes long

walks. His mind is alert and his memory very retentive.

He was born in Tamworth, and in 1827 entered Phillips Exeter Academy, of which he is the oldest living graduate. He was graduated from Dartmouth College in 1885, and from Andover Theological Seminary in 1839. For many years he was a teacher. Since his retirement Mr. Chapman has lived here, devoting himself to genealogical research. He has written a number of family histories, and contributed to secular, genealogical, and religious publications.— *Selected.*

Oldest Living Legislator.

The Hon. David Wark, LL. D., has entered upon the one hundredth year of his age, and he claims the distinction of being the oldest living legislator in the world. He is a member of the Canadian Senate, having been called to a seat in that body at the time of the confederation of all Canada. The senator has been longer in public life than any other legislator of the present day, having spent more than sixty-one years in politics. He entered the New Brunswick Legislature from Kent County in 1842.

Senator Wark is in excellent health. He expected to attend the March meeting of the Senate at Ottawa, although he would have to travel hundreds of miles to do so.

As the father of intercolonial preferential trade in Canada, before confederation, the aged senator gained considerable fame.

Manuel Del Valle, of Menlo Park, a suburb of San Francisco, Cal., claims that he is 157 years of age. He has certificates showing that he was born in Zacatecas, Mexico, on Nov. 24, 1745.



MRS. HARRIET BUTTERFIELD.

Mrs. Harriet Butterfield Littlehale, Tyngsboro, Mass.

Benjamin Butterfield, grandfather of Mrs. Littlehale, was an Englishman by birth, and settled in Charlestown in 1638. Mrs. Littlehale was the fifth of nine children, five girls and four boys. She says that she can recollect when the War of 1812 was declared, and about running home from school with her playmates when they heard that the British soldiers were coming. Of late years the old lady has carried a crutch, but her faculties have been alert. Often she reads without the aid of spectacles. She has twenty-two grandchildren, and each of them has received tokens of her skill in patch work.

THE DEDICATION OF THE NEW MAIN BUILDING OF THE BATTLE CREEK SANITARIUM

BY GEO. C. TENNEY

THE new main building of the Battle Creek Sanitarium was with appropriate ceremonies dedicated to God and humanity on Sunday afternoon, May 31, 1903. The exercises extended through the following evening and day. Full details of this extraordinary occasion will be given in the next number of GOOD HEALTH so no effort will be made to go into them here. That the event was one of no ordinary nature is shown by the universal interest awakened by it throughout the entire country in the minds of leading men and women of all classes. The Michigan State officials lent to the occasion the support of their hearty approval and co-operation. And outside of our State, others in high position took the opportunity to pay their respects to the occasion in honor to its principles and noble work.

A representative of Congress, in the person of the Hon. Washington Gardner, and of the Universities of Wisconsin and Michigan were on the platform, the exercises being under the chairmanship of a member of the State cabinet, the Hon. Perry F. Powers. The city of Battle Creek was represented by its mayor, Hon. F. H. Webb, and other prominent citizens.

Each of these speakers felt called upon to pay a tribute of high appreciation to the widespread influence for good that is flowing out to all mankind from the beneficent principles cherished and wrought out in this institution. These eulogies were not applied so much to individual achievement as to the development and operation of those grand motives which spring directly from the life and teachings of Him who

when on earth "went about doing good, for God was with him." The promoters of this great enterprise are impressed with the truth that the gospel provides for the redemption of the entire man in spirit, soul, and body. Physical and moral redemption are made possible only through the operation of a divine power, and this power comes to men only through the intervention of the Saviour of men. It is Christ that heals the body and the soul. The gospel of health is the gospel of Jesus as truly as that of future blessedness. But to accomplish a man's regeneration, either physically or spiritually, human means and instrumentalities are employed, and all such agencies are equally of divine appointment. The physician who works in harmony with the true principles of healing and health for the good of his fellowmen is a worker together with God as truly as the clergyman, who preaches moral therapeutics.

Accordingly, any praise that may accrue to the work of the Sanitarium is at once assigned by the people who have that work in hand to the One who is acknowledged by them to be the Head of the house, the Author of its principles, the Founder of its work, and the Guardian of the cause.

A great concourse of people attended the service on the beautiful lawn fronting the large building. The day was perfect, and everything tended to the success of the occasion. A praise service was held in the evening in the Tabernacle at which three or four thousand people were present. In this the different churches and pastors participated.

A reunion of old friends and patrons of the institution was held on Monday afternoon, attended with appropriate speeches. On the same evening a grand health banquet was given, at which not less than two thousand people sat down. The repast was such as to direct the minds of the partakers to simpler and better methods in the culinary art. The viands were pure, sweet, wholesome,—in fact everything that was desirable from the esthetic point of view as well as tempting and satisfying to the more corporeal wants.

Altogether, the dedicatory exercises were worthy of the grand occasion they celebrated, for it was universally felt that a new era was being marked in the onward march of a noble system of truth and philanthropy. Hundreds of friends improved the opportunity to speak by lips or letters earnest words of commendation and encouragement to the Sanitarium and its workers. What the future may have in store no one may predict, that does not matter much to him who recognizes the fact that only faithfulness is required of him, and that the results rest with God. But from the past we gauge the future, and thus Hope sees a bright mission, a glorious harvest awaiting this home of sweetness and purity.

Hot Air as a Therapeutic Agent.

Wightman (*New York Med. Jour.*, Aug. 17, 1901) sums up the advantages of hot-air treatment thus:—

Dry heat is a valuable pain reliever, without any of the depressing effects common to drugs.

In connection with constitutional and medicinal treatment, it is a positive curative agent.

It is a stimulant to rapid repair and absorption.

It is one of the most valuable eliminative agents the physician possesses.

Where indicated, it possesses a sedative action on the nervous system obtainable by no other means. — *Modern Medicine.*

Warm-Weather Cookery.

Fresh fruits, vegetables, and greens are easily procured during the summer months. Let these take the place of some of the hardier foods used during the winter and spring. The system is not in need of so much fatty or heat-producing foods during the warm season. Light, cooling, refreshing foods are needed. During the warm weather, the digestive organs are not able to digest the hardy winter meals.

Nature understands well the needs of her children in providing them so liberally with fruits. Fresh fruits are especially suited to form a large part of the diet in summer. Cherries, peaches, apricots, bananas, tomatoes, etc., are perfectly wholesome, and if well ripened may be used freely. Fresh peas, French beans and greens are within the reach of all, and may be prepared in a variety of wholesome ways. It is not advisable to exhaust strength, or overheat the blood by bending over hot kitchen fires during warm weather. Keep cool, and help to keep your family cool.

Cool drinks are better than hot or warm drinks. Refreshing drinks may be made from the small fruits, the grapes, berries, etc. Orange drinks, or lemon drinks, with the addition of some natural homemade fruit juice, is also refreshing.

Evil Effects of Eating Between Meals.

Eating sweets, fruit, nuts, and other things between meals is a frequent source of headaches and general discomfort in summer. Sweets are better

not eaten at all; least of all between meals, when the stomach already has work on its hands. Fruit should form a large part of the morning and evening meals, and taken in this way will only do good. But if eaten at odd times during the day, it may cause digestive disturbances. Children would be far less fretful and troublesome if cured of the habit of eating between meals. Three meals daily afford ample nourishment for anyone, and many would reap real benefit by limiting themselves to two.

What Shall We Drink in Summer?

There are some drinks that we can well do without. Alcoholic liquors of every sort and variety certainly are out of place in the warm summer months, and, for that matter, all seasons of the year.

Even among the so-called temperance drinks there are some which are distinctly injurious. Tea and coffee affect the nerves. Taken in any considerable quantity they will in time produce very serious results, and they cannot possibly do good. The mere fact that it is so difficult to stop the use of tea should be sufficient evidence that it is somewhat akin to tobacco and alcohol.

Ginger ale is a common "temperance drink" which is unfit to introduce into one's stomach. Many of the cheaper bottled lemonades and similiar drinks are of decidedly questionable origin.

What should you drink then? — Pure water is undoubtedly the ideal drink for man and beast. "Water drinking," observes a physician, "provides an internal bath." Evidently it is most effective for cleansing purposes, whether taken externally or internally, if free from extraneous elements.

There are times, however, when it is conventional, if not necessary, to offer something more than water. Home-made lemonade is a very fair substitute. Use the best lemons and a small amount of good sugar, and you have a very healthful and refreshing summer drink. If very cold, it should be sipped slowly. Omitting the sugar altogether makes it more refreshing. In any case the sugar should be used very sparingly. Orangeade is a favorite drink with some.

Fruit for Summer Diet.

Fruits are natural foods, and cannot possibly be productive of harm. When disturbance results, it is not due to the fruit, but its improper combinations with other foods. There are people who fill the stomach with a many-course dinner, finishing up with fruit to counteract the ill effects of the heterogenous mass that preceded it. In such a case, if fruit appears to disagree, it is not to be wondered at. By far the better plan is to make one or two meals of fruits exclusively, and the remainder of the meals of other foods, if it is deemed necessary. The secret of a nutritious diet lies in properly combining foods; but simply pitchforking all sorts of foods into the stomach indiscriminately, cannot help but invite disaster. In its general aspect digestion is a chemical process, and as the chemist avoids the attempted union of incompatibles, so the individual should avoid mixing incongruous substances in his dietary. Fruits are ideal summer foods, combining not only diuretic and laxative qualities, but germicidal ones also, and their liberal use under the foregoing limitations cannot fail to be beneficial in the highest degree.—*Health.*

Evils of Piano Playing.

A French scientist of note maintains that a large number of the nervous maladies from which girls suffer are to be attributed to playing the piano. He shows by statistics that of one thousand girls who study this instrument before the age of twelve no less than six hundred suffer from nervous disorders, while of those who do not begin till later there are only two hundred per one thousand, and only one hundred per one thousand among those who have never worked at it. The violin, he says, is equally injurious. As a remedy he suggests that children should not be permitted to study either instrument before the age of sixteen, at least, and in the case of those possessing delicate constitutions, not till a later age.— *Boston Cultivator*.

An Alphabet of Health.

The following alphabet of health was found in a Pure-Food Café in the West:—

Abstain from fleshly lusts and foods which war against soul and body.

Bring every desire and appetite into subjection unto the laws of God.

Cakes, custards, and rich pastries cannot make good blood.

Don't devil the stomach with divers foods at one meal — Result dyspepsia.

Eat and drink to the glory of God; not to tickle the palate or taste.

Fruits are beneficial eaten alone or with grains, but not with vegetables or flesh meats.

God gave grains, nuts, and fruits to be man's food, and for animals he gave grasses and herbs.

Health is given and kept by the power of God through the observance of laws of nature.

Imitate the monkey instead of the hog in eating. Impure thoughts also detract from health.

Jews outlive Gentiles because they live more after God's law as written by Moses.

Kind words and acts and cheerfulness promote health and happiness.

Less food and drink with better mastication would give good digestion.

Milk makes a bad combination with acid fruits, sugar, vegetables, or flesh meats.

Nuts contain all the nutrients found in flesh foods and should be eaten only at meals.

Overeating and eating between meals overtaxes the digestive organs, and works death.

Pickles, cheese, preserves, and such things injure and clog the liver.

Quick eating is injurious and can't be overcome by eating dry foods without fluids.

Rest assured that many things good by themselves when united produce poisons.

Spices, peppers, vinegar, etc., are not foods, but irritating condiments.

Tea, coffee, tobacco, wine, beer, etc., are hurtful narcotics and stimulants.

Unless God helps us to overcome habit and appetite, how shall we be saved?

Variety we require; but vary the meals thus — vegetables and nuts at one, grains and fruits at another.

Worry, overwork, exposure, uncleanness, wrong eating and drinking, bring disease and death.

X is a cross. So we must bear the cross if we would wear the crown of life.

Yield not to temptation, for yielding is sin; but yield yourselves to God.

Zeal and fortitude, with a purpose

firm, are required to gain the mastery over wrong indulgences.

Unless we are overcomers we cannot eat of the tree of life nor drink of the water of life.

Stable and Conditions.

"The condition and health of a horse," says the *National Builder*, "depend very much upon the kind of stable it is kept in. There are horses which suffer from disease of the eyes, from coughs, from scratches and other skin diseases, all of which are produced by the pungent, foul air in the stables. Farmers and others who have horses will take pains to keep their carriages and harnesses protected from the strong ammoniacal air of the stables, lest the leather may be rotted or the varnish dulled and spotted; and at the same time they will wonder why their horses cough, or have weak eyes or moon-blindness, or suffer from other diseases which, if they would only think for a few minutes, they would readily perceive are due to the foul air the animals are compelled to breathe every night in the year while confined in close, badly ventilated stables. The remedy is very easy. The stable should be kept clean; this will prevent the greater part of the mischief; and it should be well ventilated. The floor should be properly drained, so that the liquid will not remain on it, washed off at least twice a week with plenty of water, and then liberally sprinkled with finely ground gypsum (plaster), which will combine with and destroy the ammonia. A solution of copperas (sulphate of iron) will have the same result. Lastly, the floor should be supplied with absorbent litter, which should be removed when it is soiled. Ventilation should be provided in such a way as to avoid cold

drafts. Small openings, which may be easily closed with a slide, may be made in the outer wall near the floor, and similar ones near the ceiling, or in the roof, though which the foul air can escape; Pure air is of the utmost importance to the well-being of horses."

Why the Body Needs Water.

Someone has asked, "What would be the cause of death of a person who drank no water?" This subject has been studied considerably; animals have been experimented upon, and it is found that without water they lose their power to eliminate the natural poisons; they must have water in order to eliminate them, otherwise the secretions become too dense. Without water, the amount of urea which should be secreted becomes diminished, and so with the other secretions. We need water, not only to dissolve the food and carry it along, but we need it to dissolve and carry out of the system the poisonous and worn-out material of the body, after it has served its purpose. Water forms a circulating medium for carrying substances back and forth in the system, conveying nourishment to the various parts of the body, bringing back the used-up material and carrying it out by way of the excretory ducts.

The amount of water daily required is from two to three pints. In very hot weather a larger amount is needed, as much water is lost by perspiration. If one's diet consists largely of the juices of fruits, the quantity of water may be considerably diminished.

Not what we give, but what we share,
For the gift without the giver is bare.
Who gives himself with his alms feeds three —
Himself, his hungering neighbor, and me.

— Lowell.

EDITORIAL

THE OUT-OF-DOOR LIFE

THE average man seems to have forgotten that the *genus homo* is naturally an out-of-door creature. It is as unnatural for him to spend his life indoors, excluded from the sunshine and contact with fresh air and the elements of the natural world, as for a horse, an antelope, or a gorilla. The natural home of man is the tropics or semitropical region. In such a climate he requires little clothing, and needs a house for convenience rather than for protection. He can find in the forest everything needful for sustaining life.

Civilized man is thoroughly perverted. Nearly all his habits of life are abnormal and tend to the production of disease. The use of tobacco and alcoholic liquors, the use of tea and coffee and other decoctions more or less charged with poisonous substances, excesses in eating, deprivation of fresh air, neglect of the cold bath, errors in clothing, excesses of various sorts, and the altogether artificial life lived by the average civilized human being, are rapidly accelerating the race deterioration which is apparent on every hand, and is filling our asylums with imbeciles and paretics, and our hospitals with incurables, and surrounding us with evidences of race degeneration on every hand. We have drifted so far away from the natural order of life that the most of us have lost sight of it altogether.

This fact is illustrated by an interview recently had by the *New Orleans Times-Democrat* with a man recently returned from the Phillipines, from which we quote as follows:—

"It is a well-known fact that a man out fishing or hunting will get fat on exposure that would infallibly kill him in town. Why this should be so science has failed to explain, but it is nevertheless true, and has been especially noticeable in the experience of our volunteer troops.

I was out myself, so I know what I am talking about. Here in the city I am subject to colds and suffer tortures from dyspepsia. Wet feet or a few square inches of pie will put me in bed with unfailing certainty, and after I enlisted and the first glow of patriotism cooled off, I was filled with apprehensions, and felt positive I would never survive the rigors of camp life. The result was exactly the reverse of what I expected. I got soaking wet, slept on the ground, ate fat bacon, drank 'boot-leg' coffee, and was never sick for a moment. Naturally I thought my old sanitary precautions were all nonsense, and when I returned I began to disregard them. In twenty-four hours I was flat on my back with pleurisy, and I assure you my case was not exceptional. As far as I have been able to learn, everybody else had substantially the same experience, differing only in degree. Of course there was an immense amount of sickness among the troops, occasioned by bad water, 'embalmed beef,' and other causes that could be definitely traced; but I am speaking of the ordinary exposures and hardships incident to any campaign. Why they should be harmless outside of town, and deadly inside corporate limits, is a great mystery. It is one of the things, as Lord Dundreary observes, that no fellow can find out."

The *Dietetic and Hygienic Gazette* quotes the above without comment under the caption, "What a Man Can Thrive upon." Our esteemed contemporary seems to overlook the fact that the so-called exposures to which the gentleman was subjected in his out-of-door life are in no sense dangerous to the natural man, — a savage, for example, — but are really the means by which he is kept in health. We are not made sick by exposure to the sun, wind, or rain. These agents are indeed

health-producing, and are only dangerous to the abnormal man whose vitality is so reduced by evil habits that he is unable to react to the wholesome impressions made by these external stimuli. The out-of-door life has, in fact, such a powerfully vitalizing influence upon the human system that the wood-chopper, the cowboy, or the mountaineer is enabled to ignore, with apparent impunity for a long period of time, most of the ordinary rules of health, although, of course, the reckoning-day finally comes, even for these hardy specimens of the race.

The reason why an unwholesome diet and various other unhygienic digressions are so deadly to the town-dweller, to the man who lives within doors, is because

his fund of vital stamina is lowered by his artificial life to such a degree that it is not able to compensate for the serious deviations from the normal mode of life, so that the body becomes a ready victim to disease. The out-of-door life should be followed either through such well-known ordinary means as sea-bathing, mountain-climbing, boating, horseback-riding, cycling, or through the systematic employment of the outdoor gymnasium. If every professional or business man could be induced to spend a couple of hours in vigorous out-of-door exercise daily, his efficiency for his work would be enormously increased, and business for medical men would be appreciably diminished.

ARE NONFLESH-EATERS DELUDED?

A RECENT issue of the *British Medical Journal*, under the heading, "A Converted Frutarian," comments upon the action of Mr. Hector Waylen, an English "fruitarian," who has recently, with a considerable flourish of trumpets, returned to his flesh pots, after having abstained from flesh-eating for six or eight years.

According to the *British Medical Journal*, Mr. Waylen was a "vegetarian of the strictest kind,—wore sandals, went without a hat, and tried hard to nibble beech-nuts, thinking that by indulging in these eccentricities he was returning to nature." Will the *British Medical Journal* show us in what particular Mr. Waylen was mistaken in thinking that in discarding boots, hats, and flesh meats, he was "returning to nature?" Are not both hats and boots artificial creations? And are there not thousands, yes, millions of human beings who are able to dispense with these luxuries without injury either to heads or heels? Certainly it cannot be a question as to whether Mr. Waylen was returning to nature or not. The question is whether it is worth while or wise to return to nature in the ways in which he at-

tempted to do it. Mr. Waylen must have found it very inconvenient to travel round the world sandalless and hatless, and nibbling at beech-nuts. It would seem to be quite unnecessary either that he should drop so meager a diet as nibbles of beech-nuts or that he should discard so useful and ornamental an article as a hat or such a comfortable convenience as boots, in order to make a commendable reform in the direction of naturalness in diet and other habits of life.

The *Journal* tells us that Mr. Waylen made a number of very interesting discoveries, one of which was the fact that "vegetarians, as a rule, are not a healthy fold. Either they present a wizened and emaciated appearance or there is a tendency to flabbiness. They have poor circulation, and are liable to chills. They suffer from dyspepsia and anemia, bad breath and flatulence proceeding from a foul stomach are noticeable among them. The liver and kidneys are commonly affected, and altogether there is a marked want of vitality."

It would be interesting to ascertain where Mr. Waylen got his statistics. He

certainly must have been unfortunate in having an unusual proportion of invalids among his nonflesh-eating friends. As represented, Mr. Waylen has traveled entirely around the world while abstaining from the use of flesh; but the fact seems to have been quite overlooked that there are a number of very large communities of people who are practically abstainers from flesh meats. Among these are more than thirty millions of Japanese peasants, and several times as many Chinese peasants. There is a special race of Japanese strong men known as "wrestlers" whose ancestors for many generations have abstained from the use of flesh foods.

By a visit to the country districts of Ireland, Mr. Waylen might readily come into contact with multitudes of people, who are the longest lived and most enduring of any portion of the civilized race, with the exception of the Hungarians, and who rarely ever taste meat, their diet consisting almost exclusively of buttermilk, potatoes, and bread. Mr. Waylen is certainly mistaken in supposing that the average vegetarian has a "wizened, or emaciated appearance, or a tendency to flabbiness." We should be glad to have him meet Mr. Karl Mann, of Berlin. There are quite a number of English bicyclists and pedestrians who have made world records for endurance, and who, as seen through the writer's eyes, appear to be enjoying most vigorous health. If it is true that there are to be found many semi-invalids who are nonflesh-eaters, it is only because this class of persons are more likely to give thought

and careful study to the question of eating than are those who still believe themselves to be able "to digest anything," and who do not hesitate to give their stomachs all the business they are able to do.

From the description of Mr. Waylen's case, it is evident that he was a neurasthenic. He probably adopted a too meager diet, and became anemic and exhausted nervously, so that his "life became a dreary crawling dream, and to think or to sleep was a pain." Certainly such effects as these ought not to be charged to a vegetarian regimen. The late Professor Dujardin-Beaumetz, of Paris, recommended the vegetarian regimen as a remedy for just such cases, and he himself adhered to a pretty strict vegetarian regimen for a number of years before his death, and by so doing he no doubt greatly prolonged his life while suffering from a chronic and incurable malady.

Commenting upon Mr. Waylen's experience, the *Journal* remarks: "The practical point is that we have work to do in this world and cannot do it without health, and if we find that animal food is essential to health, we must kill and eat."

With the above idea we are in perfect accord. It is right to kill animals and eat them if they are essential to life and health; but this is the very point at issue. Science, experience, laboratory research, physiological chemistry, bacteriology, and practical experience, all show that it is not necessary that we should "slay to eat."

WHITE MEATS AND DARK MEATS

FOR many years the opinion has prevailed that white meats are more digestible than dark meats, and it has been a custom with physicians to prescribe certain fowls and fish, while forbidding red meats in cases of feeble gastric digestion. Offer and Rosenquist have shown, accord-

ing to the *Belliner Klinische Wokenschrift*, that there is no essential difference between the digestibility and nutritive value of white and dark meats; the amount of extractives or toxic substances found in the two varieties of meats is essentially the same.

ANSWERS TO CORRESPONDENTS

Sweating.—E. B., Oregon: "My little boy, four years old, breaks out into a cold sweat when he goes to bed at night; and when he romps and plays during the day, his head will sweat and his hands and feet be cold and moist. His general health is good and he looks well, but takes cold very easily? What is the trouble, and what shall I do for him?"

Ans.—The child's nutrition is bad. He may be suffering from ricketts, or becoming tuberculous. His vitality is certainly very low. The cold wet-hand rub should be employed twice a day, sun baths fifteen to twenty minutes once or twice a day; out of door life; a simple diet of fruits, grains, and nuts; take care to instruct him to chew his food very thoroughly. He ought to be under the care of a skilled physician at once. If you would take him to a sanitarium for three or four weeks it would probably be of lifelong service to him.

Gastric Catarrh.—Mrs. A. C., Colorado: "What is the cause and treatment of intense burning pain from the lips to the pit of the stomach in an old lady who eats almost nothing but crackers, bread, and milk?"

Ans.—The patient is probably suffering from gastric catarrh and resulting irritation of the mucous membrane.

Catarrh of the Head and Throat.—M. W., Ohio: "Fresh air, even on mild days, irritates the head and throat so that they burn as if from fire. No medicines used in atomizer or vaporizer seem to give relief. What climate would you recommend?"

Ans.—A warm, moist climate. The general resistance of the body should be improved by daily cold baths with friction, and exercise out of doors. Sun baths will also be found healthful. It will be well to apply vaseline or alboline to the nasal passages two or three times a day, using an atomizer specially constructed for the purpose.

Bread—Oil—Fruit—Soap—Onions—Salt.—H. C. D., Iowa: "1. Is unleavened bread shortened with peanut butter as wholesome as the unshortened? 2. Does vegetable oil have the same effect as animal fat when used in shortening or in frying food? 3. Is the food value of peaches, pears, prunes, and apricots impaired by the ordinary process of drying

for shipment? 4. How often should soap be used in taking a full bath? What is the best kind? 5. Are onions a healthful food? If so, what is the best method of preparing them? 6. How soon after food is taken into the stomach does digestion begin? 7. Does fruit juice require digestion in the stomach? 8. Please give suggestion for an easily digested supper for one troubled with indigestion. 9. How long a time should be taken in eating a full-size meal? 10. Does salt retard digestion or hinder in any way if taken in moderation?"

Ans.—1. Yes, provided the peanut butter is properly prepared. Peanuts roasted until brown and bitter are extremely objectionable.

2. Yes.

3. Dried fruit is not quite so desirable as fresh fruit, but if very thoroughly cooked, it is entirely wholesome. There is a certain subtle value in fresh, ripe fruit, which dry fruit and cooked fruit do not possess.

4. Two or three times a week. There is nothing better than good castile soap; the mottled kind is the best.

5. Onions contain a considerable proportion of nutriment. The only objectionable feature is the acrid essential oil. If the onions are cooked in such a way as to remove this oil, they may be rendered wholesome. Roasting is the best method of doing this, as the oil is volatile and is driven off by heat, while the nutritious substances are left behind.

6. At once.

7. No.

8. Fresh ripe fruit, very well masticated.

9. Forty to sixty minutes.

10. It would be difficult to show that a very small amount of salt exercises any appreciable deleterious influence; being taken in so large a quantity as is customary, salt becomes very unwholesome, retarding the digestive process to a marked degree.

Ko-Nut — Spices — Extracts.—E. H., Michigan: "1. Is Ko-Nut a wholesome shortening? 2. Are there any spices that are not injurious? 3. Are extracts of any kind fit to use as seasoning?"

Ans.—1. Ko-Nut is prepared from the coconut oil of commerce, much of which comes from Ceylon. This oil is more or less rancid. The fatty acids which are produced by fermentation are, in the manufacture of Ko-Nut, removed by a chemical process. There is no

evidence that Ko-Nut is more unwholesome than lard, oleomargarine, or other similar fats which have been sterilized so as to destroy any disease germs which they contain; neither could it be shown that it is in any way superior to these fats.

2. No.

3. The pure extract of the vanilla bean is not unwholesome, in any quantity in which it is ordinarily used.

Nuts — Biscuits and Crackers.—C. J. P., Michigan: "1. Are biscuits and crackers made from graham flour with milk, eggs, and a little shortening, perfectly wholesome after they have been made several weeks? 2. Are peanuts easily digestible when dried in the oven without roasting, ground through a mill raw, mixed with water to the consistency of milk, and the whole boiled until it thickens? 3. How long should peanuts be cooked in this way to make them thoroughly digestible? 4. Can there be any harm in eating nuts two years old, if they are not rancid and taste perfectly good?"

Ans.—1. When exposed to the moisture in very hot weather, such bakery products often become rancid, when they are, of course, unfit to eat. Such conditions are indicated by an unpleasant flavor. Products which have undergone this change must be regarded as unwholesome.

2. Yes.

3. One hour.

4. No, if masticated well.

Stammering.—R. P., California: "What can a mother do to prevent a four- or five-year-old child from stammering? The child is thought to have acquired the habit from associating with a person who stammered."

Ans.—Great care must be taken to make the child speak deliberately and slowly. A good plan is to have the child speak in measured time, repeating verses read from a book, repeating sentences which are spoken to the child, the time being indicated by beating or counting.

Inflamed Tonsils.—Mrs. O. M. B., Tennessee: "I am twenty-eight years old and have had enlarged and inflamed tonsils for ten years. 1. Do you think they should be cut out? 2. Is there any danger in the operation?"

Ans.—1. This depends upon the conditions. In a majority of cases, tonsils which are greatly enlarged, may be removed with advantage. 2. No, if a competent surgeon is employed.

Abscesses.—R. H. T., Texas: "Am troubled in cold weather only with small abscesses in the nose, coming on sometimes in two or three hours and discharging a little pus in twelve to twenty-four hours. Sometimes last three or four days. Give cause and remedy if possible."

Ans.—The difficulty is doubtless due to the extension of an existing disease from the nasal cavity into the smaller adjacent cavities. Thorough treatment of the nasal cavity, by a competent specialist is necessary. The daily use of the pocket vaporizer will be helpful.

Pimples.—C. K., North Dakota, wishes to know what treatment should be followed to eradicate pimples which fill with pus, mostly on face, arms, and back. Patient is sixteen years old. Outline diet.

Ans.—Bathe the face with very hot water two or three times a day. Avoid the use of animal fats and flesh foods. Live out of doors, and expose the skin and the whole body to the sun daily. Swimming is particularly beneficial. The daily cold bath and sweating bath two or three times a week. Take pains to chew the food very thoroughly, which means four or five times as long as usual.

Salt — Daily Rubbing — Corn — Sleeping Position — Canker Sores — Deafness.—L. A. B., California: "1. What is the effect on the system of a free use of salt? 2. Will daily rubbing with a flesh brush in a well-aired room take the place of a daily cold bath? 3. What do you think of parched and popped corn as articles of diet? 4. Is lying on the stomach a proper position in sleep? What is the best position? 5. Give cause and cure of canker sores in the mouth. 6. Can deafness caused by catarrh be cured by means of an electric battery? 7. Is there any sure cure?"

Ans.—1. Digestion is impeded, the kidneys are overworked and the whole system is more or less disturbed.

2. Yes, to some degree, but not altogether. The cold bath excites the thermic nerves which are not influenced by the flesh brush.

3. Excellent.

4. Lying upon the right side is the best position.

5. Lowered vital resistance. In many cases there is disordered digestion.

6. No.

7. No.

LITERARY NOTES

Parents, who are looking for a gift book will find every wish gratified in "What a Girl Can Make and Do," by Lina and Adelia B. Beard. The book is the result of the authors' earnest desire to encourage the spirit of resourcefulness and helpfulness, which is becoming so marked a trait in our girls. Within its covers are suggestions for a wide variety of things, useful, instructive, and entertaining, which a girl may make and do with wholesome and genuine pleasure for herself and others. Charles Scribners Sons, New York. Price \$1.60 net.

Artistic Home Ideas is an especially helpful and attractive monthly, and is of interest to those contemplating the building or improving of homes. The June number is filled with a pertinent discussion of things in which every home-maker is interested.

By a notable change in New York Publication circles three prominent monthlies have been united, and will hereafter be published under the title of **The Household-Ledger**. The magazines thus brought together are *The Ledger Monthly* founded by Robert Bonner in 1843, *The Household*, first published in Brattleboro, Vt., in 1868, later in Boston, and still more recently in New York, and *Ev'ry Month*, the first issue of which appeared in 1895.

In its departments the new magazine will be comprehensive, bright, and replete with valuable suggestions. Columns of excellent fiction from pens of eminent writers, with several pages in each issue devoted to new music by prominent composers at once establish *The Household-Ledger* upon a high plane in the home field.

In these days of concentration, nothing could prove more attractive to the reading

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The Best Antiseptic for Both Internal and External Use

ITS exceedingly agreeable properties, and the readiness with which it disinfects offensive lochial discharges, has won for **Listerine** a first place in the lying-in room as a general cleansing, prophylactic or antiseptic agent.

It is an excellent and very effective means of conveying to the innermost recesses and folds of the mucous membranes, that mild and efficient mineral antiseptic, boracic acid, which it holds in perfect solution; and whilst there is no possibility of poisonous effect through the absorption of **Listerine**, its power to neutralize the products of putrefaction (thus preventing septic absorption) has been most satisfactorily determined.

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The Only Perfect Vaginal and Rectal Syringe in the World.

THE BEST SYRINGE invented for making vaginal injections without leaking and soiling the clothing, or necessitating the use of a vessel, and which can also be used for rectal injections, or irrigation and spray effects.

The Syringe is operated by using the ring handle to push or double the thin flexible half of the bulb into the thick, firm part, and to draw it out again. This pumping motion first injects all the fluid into the vagina, then draws it back into the bulb, with all the discharges. Our new adjustable spray tip greatly improves the syringe, affording the opportunity to produce a fine spray or a veritable deluge of water, by simply turning the screw head on end of spray tip.

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Agents are making from \$25 to \$75 per week selling these outfits. Send for FREE booklet, "The Science of the Bath," prices and terms.

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No. 3—Brush, with bath-tub connection, \$3.50.

Allen's Safety Mat, 3 feet square, \$1.50.

Mat holds five gallons.

Easily emptied.

public than the uniting of these three leading publications, which, under a single subscription price, gives the reader the best elements of each.

A new little paper comes to our table this month with the title, **Save the Boys**. It contains eight pages. The type is good and the articles well written. The title shows the editor's purpose in the starting of this journal and we are sure all our readers will join with us in wishing him God-speed in saving the boys. It is a monthly, published at Minneapolis, Minn., by H. F. Phelps.

General John B. Gordon, of the Confederate Army is writing a series of reminiscences in **Scribner's**. The one for June is of more than usual interest. It describes the battle of Antietam and Chancellorsville and gives an estimate of the character of Stonewall Jackson, who met his death at the latter place. The first man to climb the Matterhorn, Edward Whymper, describes the peaks of the Canadian Rockies, which he has lately been climbing. His article is well written and beautifully illustrated. There are several short stories and descriptive and other articles and illustrations on subjects of interest to the nation and world.

Mc Clure's for June is one of the best rounded out and attractive numbers of this magazine ever issued. The leader is a fine appreciation of the three great French artists: Delacroix, Decamps, and Diaz. One enjoys reading art criticism of this kind. It is beautifully illustrated. "My Friend Prospero," is a new serial by Henry Harland, and the first installment shows the author at his best. True first-class articles are, "An Ocean Graveyard," by P. T. McGath, and the "Swimming Hole," by Eugene Wood; the first, a stirring account of some of the wrecks and rescues of the Newfoundland coast, and the second, a paper to be read by the man who has once been a boy. Miss Tarbell has an excellent chapter on the "Standard Oil," and Ray Stannard Baker has one on Peter Cooper Hewitt's three great inventions. The short stories are good, and the poems are fine.

Bad men live that they may eat and drink,
But good men eat and drink that they may live.

— Socrates.

PUBLISHERS' DEPARTMENT

GOOD HEALTH

A Journal of Hygiene

J. H. KELLOGG, M. D., EDITOR

Subscription Price, \$1.00 a year

Single Copies 10 cents : : : :

PUBLISHED MONTHLY BY

GOOD HEALTH PUB. CO.

115 WASHINGTON AVE, N.

BATTLE CREEK, MICHIGAN

A good-health meeting of the St. Louis Vegetarian Society is to be held in Aschenbroedel Hall, 18th and Olive streets, Wednesday evening, July 22. The following interesting program will be rendered:—

1. Two-Step "A Tale of The Bumblebee." (Luders).

The Vegetarian Orchestra.

2. Five-minute talks by

Dr. E. B. Bush.

Mr. J. Herman Beltz.

Mr. Hy. G. Whitney.

Mr. John Samuels.

Mr. Gerhard W. Tinnerman.

3. Selection "Hearts and Flowers" (Tobani).
The Vegetarian Orchestra.

4. Ten-minute talks by

Dr. Thomas E. Allen, M. D., M. C. P. S.

Dr. Geo. W. Hall, M. D.

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Mr. C. J. Zeiting.

5. Grand March from "Aida" (Verdi).

EDGAR G. PERKINS, SECY'.

QUEER REASONING.

THE fundamentals of the woolen underwear theory are stated as follows:—

1. Animal wool is a material provided by nature for the clothing of an animal body;

2. Man, therefore, can be clothed naturally and properly only in animal wool.

The tremendousness of the above reasoning is sublime, and can be supplemented as follows:—

1. Grass is a material provided by nature for the nourishment of an animal body;

2. Man, therefore, can be nourished naturally or properly only by grass! Or, further:—

1. A sheep is the only animal wearing wool on its skin;

Hydrozone



Which yields thirty times its volume of "nascent oxygen" near to the condition of "ozone,"

is daily proving to physicians, in some new way, its wonderful efficacy in stubborn cases of **Eczema, Psoriasis, Salt Rheum, Itch, Barber's Itch, Erysipelas, Ivy Poisoning, Ringworm, Herpes Zoster or Zona, etc. Acne, Pimples on Face** are cleared up and the pores healed by **HYDROZONE** and **GLYCOZONE** in a way that is magical. Try this treatment; results will please you.

Full method of treatment in my book, "The Therapeutical Applications of Hydrozone and Glycozone"; Seventeenth Edition, 332 pages. Sent free to physicians on request.



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use of these belts reduce the size and leave no room for superfluous fat to accumulate.

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for enlarged veins, weak or swollen joints, or where there is tenderness, itching, or burning, are the recognized relief and cure for these ailments.

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One little Germ CAN CAUSE TYPHOID

So Small It

Can't be Seen
On a Needle Point

Millions of people are suffering from diseases caused directly by impure water, in fact nearly all illness is due to this cause.

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The Sanitary Still

Is very simple and easy to operate. Simply fill it with water, put it on the kitchen stove and it will supply you an abundance of pure aerated drinking water. Lasts for years and a child can operate it. Endorsed by thousands of physicians and prominent people as the only reliable still on the market.

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2. Man, therefore, who wears wool on his skin is a sheep.

Apuleius, an old Roman author, says "Wool, the excretion of a sluggish body, taken from sheep, was deemed a profane attire even in the times of Orpheus or Pythagoras; but flax, that cleanest production of the field, is used for the inner clothing of man."

The Dr. Deime! **Linen-mesh Underwear** is a product of the field, not of the sheep.

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AFTER trying for the past five years innumerable therapeutic agents for my lupus, or epithelioma, I was advised by Dr. Cutter, a celebrated microscopist and scientist of New York, to spray the ulcer with the peroxide and afterward apply cotton saturated with the same. I used three different local applications; aristol, Howe's salve, and the peroxide; marked the cotton, and sent the same to him.

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\$2.25 will pay for one year's subscription to **Medical Missionary**, **Good Health**, and a **\$3.50 Holman Bible**, size 5 1-4 by 7 3-4 inches. It is Egyptian Morocco, divinity circuit, round corners, red under gold edges. The type is Bourgeois, 8 Vo. Easy to read. Contains column references, 15 new maps, 4,000 questions and answers on the Bible, concordance of nearly 50,000 references, and a new illustrated Bible dictionary. These are valuable helps.

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will be more popular this summer
than ever. Many have already ar-
ranged their summer tours via the

Chicago, Milwaukee, & St. Paul Railway

and many more are going to do
likewise. Booklets that will help
you to plan your vacation trip have
just been published, and will be sent
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The PASTEUR Water Filter

Absolutely Germ-Proof

Filter
and
Cooler
Type
of
Pasteur
Water
Filters



THE Pasteur Water Filter is recognized by
medical and scientific authorities as being
the only Germ Proof Filter, and is therefore
the only filter that should be used to furnish
sterile water.

The Pasteur Water Filter removes all micro-
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water.

When a person is well, it is not wise to take
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Sterile, non-medicinal water will preserve
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The Pasteur Water Filter will furnish sterile
water.

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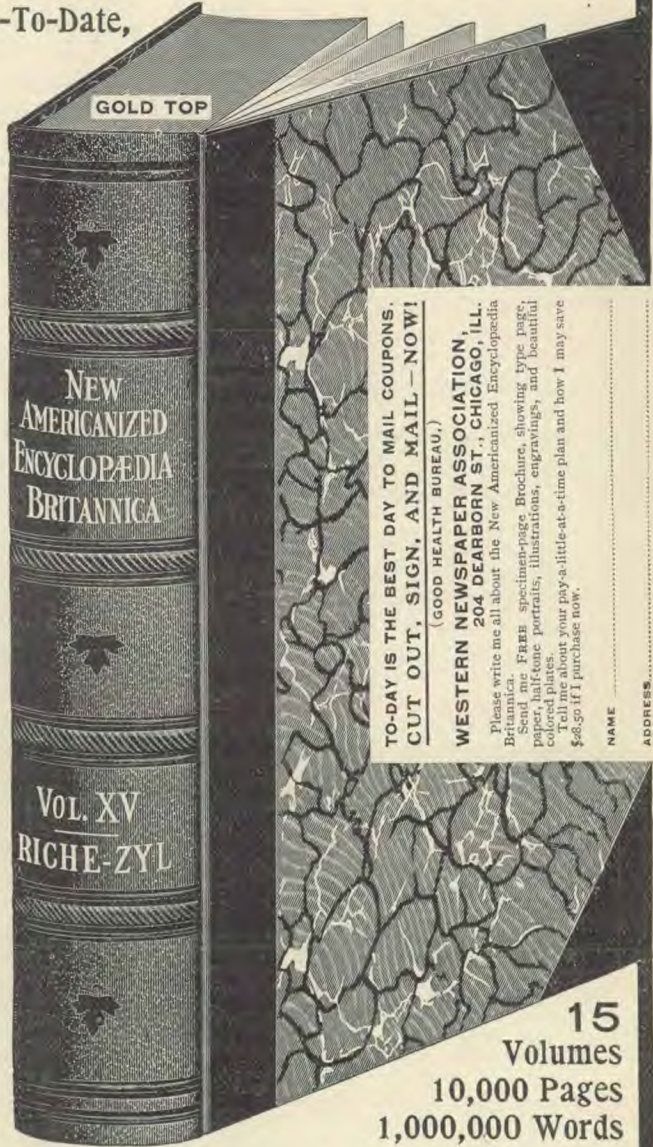
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Are the original line of health foods, the most complete line, and the best. Sanitarium foods include health crackers and biscuit, free from lard, soda, ammonia and all other harmful ingredients; dextrinized flaked cereals; dextrinized granulated cereals; meat substitutes; nut butters; health candies; and several others.

If your stomach has been worn out in the effort to appropriate indigestible and unnatural foods, we can supply you with those which are easily digested, easily assimilated, and which at the same time provide every element required by body and brain.

If your health is apparently sound there is nothing you can eat that is more nourishing, nothing that will enable you to do clearer thinking or a harder day's work than the foods which we manufacture. Have you ever tried them? If not, why not?

IMITATIONS.

The fact that the name Battle Creek is found on a package of food does not prove that it contains a genuine Health Food. Those who would secure the original Sanitarium foods, and not imi-

tations, should look for the name of the manufacturer—THE BATTLE CREEK SANITARIUM FOOD CO., or THE SANITAS NUT FOOD CO., Ltd., on the package.

These two companies are the only ones whose products are used and endorsed by the Battle Creek Sanitarium.

WHY HAVE YOU NEVER TRIED THE ORIGINAL HEALTH FOODS?

Perhaps you are waiting for your grocer to stock our products. Possibly he does carry some of the imitations and you are satisfied with them. Well, just let us say that until you get the genuine Sanitarium foods, and get them direct from the manufacturers, you don't know what the term "health foods" stands for.

IS THE GROCER A NECESSITY?

We've tried selling our foods through the grocer, but the plan hasn't worked. The average grocer is a success handling flour, potatoes, sugar, molasses and canned goods,—stock which requires practically no care and for which there is a universal demand; but if he undertakes to carry prepared foods he often

allows them to remain on his shelves for months, to become stale, and to absorb the taints of surrounding merchandise. SOAP, CODFISH and KEROSENE are all good enough in their place, but their flavors hardly combine well with those of delicate food products. We have replaced thousands of cases of old goods, and thousands of people have concluded that they do not like Sanitarium foods simply because those they buy are stale. There is a sure way to get good foods—fresh foods—buy direct from the manufacturer.

If you write to us and tell us to send you some of our foods it's a simple proposition of...

FROM MANUFACTURER TO USER.

You get the goods fresh, and in the best possible condition. You are not bothered by finding us "just out" of what you order as grocer Green or Gray so often is.

We are always able to furnish just the foods in just the package you wish, and make no substitutions—no attempts to offer you some other Battle Creek food that's "just as good," or "just the same thing under another name." Quite an advantage, isn't it?

By selling our goods direct to the consumer we increase the volume of our business because we give better satisfaction. And by saving the grocer's commission we are able to make our customers the...

PREPAID EXPRESS

Offers which appear on the page below.

Shipment by express means that you will get the goods without any delay after they leave our hands; and there will be...

NO DELAY ON OUR PART.

We acknowledge orders the same day they are received and ship the same day or the next. Your trade means something to us, and you may be sure that you will not be annoyed by "pigeon-holed orders," or, "we regret our delay."

AGENCIES.

In several cities, first-class grocers are carrying full lines of Sanitarium foods. In other cities Sanitarium Food Stores have been established. If you have one of these agencies in your town, patronize it. If you do not know whether we are well represented in your city, write us and we will tell you.

This SPECIAL OFFER

of \$3.62 worth of Sanitarium Foods for only \$2.50 is made to all those who have never bought Sanitarium Foods direct from the manufacturers, or from any of the Sanitarium Food Stores. It is open to those who have been buying from grocers, as in most cases they have never really had a good opportunity to test our products. We make these prices in order to have you try a number of our foods. While the list does not include everything we manufacture, it gives the best idea of Sanitarium foods of any list of equal value which could be made up, therefore **WE CANNOT SUBSTITUTE.**

**WHERE
DO YOU
LIVE?****CLASS 1.**

We prepay express on orders amounting to \$5 to all points in these States.

- | | | |
|-----------------------|--------------------|-------------------|
| 1. Connecticut. | 9. Maryland. | 17. Ohio. |
| 2. Delaware. | 10. Massachusetts. | 18. Pennsylvania. |
| 3. Dist. of Columbia. | 11. Michigan. | 19. Rhode Island. |
| 4. Illinois. | 12. Minnesota. | 20. Vermont. |
| 5. Indiana. | 13. Missouri. | 21. Virginia. |
| 6. Iowa. | 14. New Hampshire. | 22. W. Virginia. |
| 7. Kentucky. | 15. New Jersey. | 23. Wisconsin. |
| 8. Maine. | 16. New York. | |

CLASS 2.

Add to your remittance one-sixth the value of the foods ordered, and we will prepay express charges on \$5 orders to all points in these States and Territories.

- | | | |
|----------------------|------------------|------------------|
| 1. Alabama. | 7. Louisiana. | 13. S. Carolina. |
| 2. Arkansas. | 8. Mississippi. | 14. Oklahoma. |
| 3. Florida. | 9. Nebraska. | 15. Tennessee. |
| 4. Georgia. | 10. N. Dakota. | 16. Texas. |
| 5. Indian Territory. | 11. S. Dakota. | |
| 6. Kansas. | 12. N. Carolina. | |

CLASS 3.

Write us before ordering if you live in these States or Territories or outside the Union.

- | | | |
|----------------|----------------|-----------------|
| 1. Arizona. | 5. Montana. | 9. Utah. |
| 2. California. | 6. Nevada. | 10. Washington. |
| 3. Colorado. | 7. New Mexico. | 11. Wyoming. |
| 4. Idaho. | 8. Oregon. | |

Before sending in your order PLEASE READ the list of States given below. If you live in any of the States in Class 1, send us \$2.50 for a trial order. If you live in any of the States or Territories in Class 2, add 40 cents to help pay the express charges, and send us \$2.90 for the foods. If you live outside of the United States or west of Kansas, please write to us before sending in your order.

(CUT HERE.)

**CUT
OUT THIS
COUPON AND
MAIL IT TO-DAY.**

**Battle Creek Sanitarium Co., Ltd.,
Battle Creek, Mich.**

Gentlemen,—I enclose for the \$3.62 worth of Sanitarium foods listed below. You agree to ship by express, prepaid—

1 pkg. Bromose.....	\$0.25	1 pkg. Breakfast Toast.....	\$0.15
1 bottle Malted Nuts.....	.40	1 pkg. Granola.....	.12
1 jar Meltose.....	.30	1 pkg. Graham Crackers.....	.15
1 can Protose.....	.25	1 pkg. Oatmeal Wafers.....	.15
1 can Nut Butter.....	.25	1 pkg. Whole Wheat Wafers..	.15
1 can Nuttolene.....	.15	1 pkg. W.W. Cream Sticks....	.15
1 pkg. Granose Biscuits.....	.15	1 pkg. Gluten Meal, 20 per cent	.20
1 pkg. Toasted Corn Flakes...	.10	1 pkg. Caramel Cereal.....	.15
1 pkg. Granuto.....	.15	1 can Baked Beans.....	.15
1 box Chocolates.....	.25		

\$3.62

(CUT HERE.)

Name.....

Street.....

Town.....

State.....

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GOOD HEALTH SUMMER WAISTS.



Long Waist.

For Health, Comfort,
Grace, and Economy
the Good Health Adjustable
Waist Outrivals its
Competitors,



Short Waist.

We Are Prepared

To offer at the present time our summer waists in White or Drab Jean, a light-weight twilled material, in sizes 30 to 38 **bust measure** [no odd sizes], for \$1.25.

The waist is **adjustable** and can be made longer or smaller by adjusting the shoulder straps and the oval elastic in either side of the waist. By making the former longer or shorter the length of the skirt may be regulated.

When Ordering Send Bust, Waist, and Hip Measurements.

For descriptive booklet write to

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105 Washington Ave. North,

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The route of the
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The Washing is Done While the Operator Sits by the Side of the Tub, Revolving it by the Handle half way around, to right and left.

CONVINCING TESTIMONY.

\$1,000 will be forfeited to any one proving these letters not genuine.

Burnside, Iowa, April 1, 1903.
My wife is delighted with the Washer we got in January. Would not part with it for \$1,000 if she could not get one like it. The day she formerly dreaded she now enjoys! Does not become tired of the wash and has no backache any more. We therefore both appreciate very much your kindness in sending us the liberal proposition through which we became owners of one of your "1900" Washers.

Yours thankfully,
REV. A. E. GUSTAFSON and Family.

REMEMBER — You take absolutely no risk, incur no expense or obligation whatever. The Washer is sent by us on 30 days' trial. Freight prepaid both ways and positively without any advance or deposit of any kind.

Dennysville, Mo., March 25, 1903.
Find inclosed for full payment for "1900" Washer, for which send me receipt in full. We have tried it for all purposes, and are well satisfied that it will do all that you claim it will. To-day we have done a large wash for a family of ten and had it all done and on the line in just two (2) hours; it used to take me until after dinner the old way. Shall recommend it among my friends whenever a chance occurs.

CHAS. H. DUDLEY.

For catalogue and full particulars of this liberal and absolutely genuine offer, address

"1900" Washer Co.,

303 N. State St., Binghamton, N. Y.

References: FIRST NATIONAL BANK, BINGHAMTON, N. Y.

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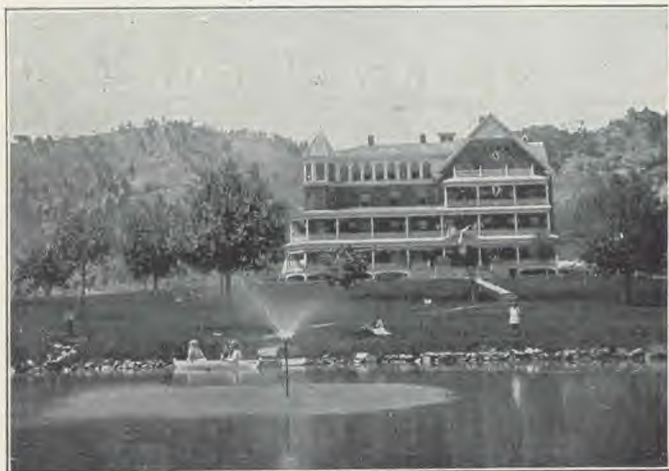
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This magnificent fire-proof structure which has been in process of erection during the past year was dedicated and opened May 31, 1903. There are accommodations in the main building for 350 guests and accommodations in other buildings for 400 more patients. One hundred and seventy-five rooms have private baths. The new building is equipped with five hydraulic elevators, electric lights, a private telephone in each room, and all modern conveniences.

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