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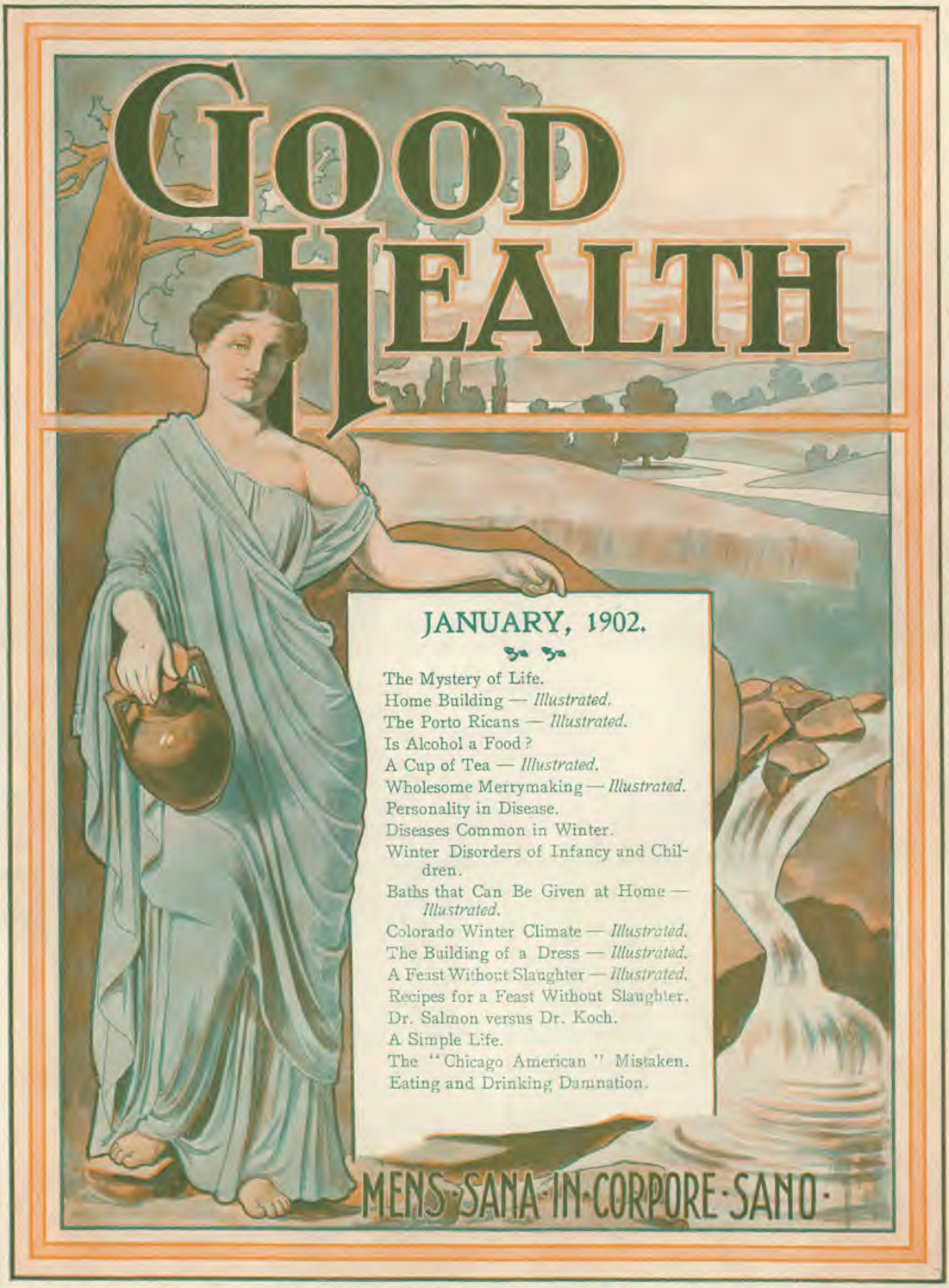

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WIDE-AWAKE

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LEAVING THE HILLS.

GOOD HEALTH

A Journal of Hygiene.

VOL. XXXVII. JANUARY, 1902. NO. 1.

THE MYSTERY OF LIFE.[1]

BY J. H. KELLOGG, M. D.

FOR ages men have sought to solve the mystery of life. Philosophers have speculated, chemists and naturalists have delved deep into the secrets of matter, living and inert, but they have brought back only a report of fathomless depths of mystery, of undiscovered and incomprehensible forces, too subtle for the most delicate balance, intangible, yet mighty in overcoming the forces of the inanimate world, able to build up gigantic structures, such as the giants of the forests and the monarchs of the animal world, and equally active in the tearing asunder of mountain peaks which crumble beneath the action of lichens and mosses, and are split and pulverized by the wedge-like action of pines and other trees.

This wonderful life is active all about us in infinite variety of form. In bird, in insect, in fish, in reptile, and in all the millions of creatures which people earth and sea, we recognize one common life. A kindred force springs in every limb that leaps and moves, throbs in every beating heart, thrills through every nerve, and quivers in every brain. A like evident brotherhood or sisterhood of life exists in the vegetable forms, from the stately cedars of Lebanon's rugged sides to the grasses of the plain, and even the molds and mosses on the ancient wall.

While science stands mute respecting the nature and origin of life, investigation has gone far enough to show that all life is one; that animal life and vegetable life are not merely kindred lives, but are really one and the same.

The manifestations of life are as varied as the different forms and individuals of plant and animal, and parts of animated things. Every leaf, every blade of grass, every flower, every bird, even every insect, as well as every beast or every tree, bears witness to the infinite versatility and inexhaustible resources of the one all-pervading, all-creating, all-sustaining Life.

As we go about plucking flowers and leaves, trampling upon the grass, perhaps crushing under our feet a score of ants, beetles, worms, or other humble creatures, we seldom stop to think of the vast extent of the abounding life above and all about us. Think, for a moment, of the grass, for example, that commonest of plants, but which is more interesting than it appears to be, for the botanists have sorted out five thousand or more different species. What a magnificent carpet the green grass spreads over all the fertile earth in every clime where an unencumbered soil is found! Every blade witnesses to a living, active life, shaping and forming it in the darkness of the soil, pushing it up to the air and the light.

1 From "The Living Temple," by permission of the author.

Estimate the amount of energy required to lift the sap in all the trees and bushes of a thickly wooded forest. An eminent botanist is responsible for the statement that a single corn plant which is approaching maturity, sweats half as much as a man, which would represent evaporation at the rate of one or two ounces of water an hour. Estimate the amount of water lifted from the earth by a square mile of such green plants,— or a thousand square miles. Every spring season is a revelation of creative power, a repetition of the creative work which first carpeted the earth with green, clothed it with all the glories of the rainbow, and stocked the Edenic farm with marvelous birds and beasts, which, joining man, sent forth to greet each rising sun, one grand, melodious, swelling note of praise.

When autumn comes, each tree, each shrub, each tiny plantlet, brings its store of garnered energy in ripened seed, or fruit, or nut,— a little bundle of life gathered from the earth, deftly wrapped and sealed, carefully prepared to serve its purpose in the economy of the world. Think of the energy represented in all the acorns and all the wheat, all the corn, and all the nuts and seeds which ripen in the sunlight of the late summer or autumn days. Each grain of corn planted in the springtime is multiplied to several hundred grains. The farmer may carry his seed corn to the field in a bag upon his shoulder, but horses and wagons are needed to carry it back in the fall.

Whence comes this enormous and never ceasing inexhaustible stream of energy flowing into the world through the medium of the vegetable kingdom? This is a question which philosophy has sought in vain to fathom. But the mystery is not so great as philosophy has asserted. The real mystery is not in the fact, but is the outgrowth of false reasoning, incorrect hypotheses from false premises, — the attempt to make facts conform to human theories, instead of accepting the plain, simple teachings of nature and the Word of God.

True philosophy recognizes no mystery in the phenomena of nature. If there are mysteries, it is only because man has created them. There is a clear, complete, satisfactory explanation of the most subtle, the most marvelous phenomena of nature, namely, an infinite Intelligence working out its purposes. God is the explanation of nature,— God, not outside of nature, but in nature, manifesting himself through and in all the objects, movements, and mechanisms of the physical universe.

Says one, " God may be present by his Spirit, or by his power, but certainly God himself cannot be present everywhere at once." Let us inquire, How can power be separated from the source of power? Where God's Spirit is at work, where God's power is manifested, God himself is actually and truly present. Said an objector, " God made the tree, it is true, just as a shoemaker makes a boot, but the shoemaker is not in the boot; God made the tree, but he is not in the tree. The shoemaker makes the boot, but he is not in the boot simply because he makes it, neither is God in the tree because he makes the tree." The objector evidently overlooked the fact that the process of tree-making in the living tree is never complete so long as the tree is alive. As the tree grows, it does not create itself; the creative power is constantly going forward. The tree puts forth leaves from within,— does the tree create them? Acorns are put forth from within the tree, each of them a little tree, which when planted, may grow into an oak as large as the parent tree. Does

the tree create the acorn? Can a tree make trees? If so, then every plant, every shrub, every insect, is a creator — and man is a creator.

Suppose now we have a boot before us,— not an ordinary boot, but a living boot, and as we look at it we see little boots crowding out at the seams, pushing out at the toes, dropping off at the heels, and leaping out at the top — scores, hundreds, thousands of boots — a swarm of boots continually issuing from our living boot,— should we not be compelled to say, "There is a shoemaker in the boot"? So there is a treemaker in the tree, a flowermaker in the flowers,— a divine Architect who understands every law of proportion, an infinite Artist who possesses a limitless power of expression in color and form; there is, in all the world about us, an infinite, divine, intelligent, though invisible, Presence.

"But," says another, "this thought destroys the personality of God. Do you not believe in a personal, definite God?" — Most certainly. A divine personality is essential to religion. Worship requires some one to love, obey, and trust. A personal conception of God is the very center of the Christian religion. The conception of God as the All-energy, the infinite Power, the all-pervading Presence, is too vast for the human mind to grasp; there must be something more tangible, more restricted, upon which to center the mind in worship. It is for this reason that Christ came to us in the image of God, the second Adam, to show us by his life of love and self-sacrifice the character and the personality of God, and hence it is that we are able to approach God only through Christ.

The apostle says, "We all, with open face, beholding as in a glass the glory of the Lord, are changed into the same image, even as by the Spirit of the Lord." 2 Cor. 3:18. How apt and beautiful is this figure! By holding up a glass a few inches square we may see in it a varied landscape, — mountains, valleys, streams, lakes, forests, rocks, sky, and clouds, covering miles and miles of space, and we may even see the reflection of a star infinitely far away; with a slight change of position the glass gives us a new picture; every change brings a new view. So, in beholding Christ in his miracles, his temptations, his exhortations, his life of self-abnegation, his going about doing good, we may behold the personality and the power of God.

From the earliest ages the thought has existed in the human mind, that man is not a product of the earth, as some modern philosophers would have us believe, but that men are the sons of God. The early traditions of the Greeks and the Romans, as well as of other nations, have also recognized the fact that man is the offspring of creative power, that he is the son of God, and bound by a kinship to his Progenitor,— made in the image of God. The image has become debased by sin, disease, and degeneracy; yet, even in its worst estate, it still represents something of those divine attributes which lift the human race so immeasurably above the highest representatives of the animal kingdom.

King William I of Germany once visited a German country school, and while addressing the children, held up a stone, and asked the question, "To what kingdom does this belong?" "To the mineral kingdom, sir," a bright boy at once responded. Holding up a flower, the king asked, "And to what kingdom does this belong?" "To the vegetable kingdom, sir," replied another pupil. Then, pointing to himself, the king inquired, "And to what kingdom do I belong?" There was silence. The loyal lads held

their noble king in too great respect to classify him with horses, cows, dogs, and other beasts, and for a moment there was no response. Then a thoughtful boy arose, and with a grave and reverent air replied, "To God's kingdom, sir." The boy was right; the scientists are wrong. Man cannot be classed with lions, tigers, apes, kangaroos, jackals, and other "beasts of the field." He is a creation by himself, a son of God, and born a king. It is a glorious thing for him to know this. Said Paul, "God is not far from every one of us." Said Moses, "He is thy life;" and David says, "He is the strength of my life." Let us accept this as a literal, physiological fact, as a scientific truth attested by facts which cannot be gainsaid, as well as by the Word of God.

Scientific men have ceased the attempt to prove man to be a mere product of physical forces, but recognize in his existence and in every function of his body, the presence of an infinite Intelligence, working, controlling, creating, for man's good.

Job asked the question, "What is man?" The atheist answers, "A body." Certain religious thinkers have answered, "A body possessed of a soul." A large number of theologians would answer, "A soul possessing a body." A certain class who call themselves Christian Scientists would say that man is only an idea, a picture. The Bible answers, "Man is dust, animated by a divine life." This life is withdrawn and the spirit returns to God who gave it, the body returns to dust from which it was made, and man is naught.

HOME BUILDING.

BY DWIGHT HEALD PERKINS,
Architect, Chicago.

IT is an axiom that in the effect of environment upon life and character no factor is more powerful than the home. The manner in which the house shall be furnished in order that it may become a home, and that it may minister to the best in life, is a subject worthy of much thought and study.

It is a principle in mechanics easily understood that only so much power as is put into a machine can be taken out of it. An engine gives back the power that is in the steam in another form, one which it is possible to apply to our needs.

The steam power from the boiler is never greater than the latent pent-up power in the coal put into the furnaces under the boiler.

In the same manner our homes will give back to us just what we put into them. If our lives are dominated by the artistic, sensible, and fitting, in short, by the art of living well as our ideal, our houses will express this, and will in turn give the same elements back to our lives and to the lives of those around us, and will influence to an incalculable degree the lives of those who follow us. If we are sincere, our house by its straightforward and direct qualities will silently and constantly teach sincerity. If we are poetic, if we are willing to receive the benefits of the esthetic, our houses will reflect these elements in their graceful outlines, their modestly decorated surfaces, their beautiful materials. To the same extent will vulgarity or ignorance in us perpetuate itself and extend its influence through the irremovable house, — an influence that can be destroyed only by fire, flood, or disaster in some form.

Does not this fill us with a realization of the responsibilities of house building and home making? Let us make a dis-

tinction between them. House building is the simple construction of four walls and a roof with interior divisions, in such a manner that the inmates may be protected from the elements, and that the ordinary activities necessary to feed, shelter, and clothe may be carried on. Home making is all these, plus all that makes life individual and distinctive,—plus cheerful companionship, generous hospitality, and endearing associations, which make for character, and act against all the unfortunate influences encountered in the outside world.

Now, how shall we make our homes conform to this ideal? First, by making ourselves conform to it, and then by realizing that no other person or past generations of persons can solve our problems for us. We must have the courage to think out our problems and our conditions of family life, and we must state them clearly and truly. How many pitfalls we tumble into because we do not fully and clearly realize our problem, and therefore do not meet conditions in a straightforward manner. We think we want a multitude of things that we do not need at all. We fail to realize how many things we can do without to our advantage in every way. The result is a cluttered up mess of *things*, if we are able to gratify our tastes, or else frustration and imitation if we have limited means.

Having stated our problem, the next step is to study the materials at hand for its solution. Here again we cannot rest upon the works of our forefathers, for our conditions are not what theirs were. All the mechanical inventions and new substances and processes give us new opportunities and equal responsibilities. It is for us to discern the nature of material, both natural and manufactured, and of the processes by which it is prepared for our use, so that we may use it consistently and to its highest advantage, for it is always much better and more beautiful to use a material in accordance with its nature than to use it in imitation both servile and futile of another material.

Our problem stated, and the material chosen and studied, we next proceed to design our building, first arranging the rooms so that all practical conditions are complied with, so that privacy and community life may be enjoyed, and so that we may take advantage of external features of landscape. Then, and not till then, shall we study the exterior design, unless, as is sometimes the case, we see that exterior in imagination as we compose the plan. My strongest plea is that you allow that exterior to be the natural outgrowth of the plan. It only leads to difficulties and failure to try anything else, for only when freedom of growth, logical sequence from cause to effect, from interior to exterior, is permitted, will the result be beautiful.

Designing the building is not all. The surroundings, the grounds, the adjoining buildings, the gardens, the approaches, —all are integral parts of the whole, and should be considered from the beginning.

You may have asked yourself before this, "Where does the architect come in?" He comes in at the beginning, is with you through it all, and if relations are harmonious, he probably stays with you for the rest of your natural lives. "Very well, if the architect is to be with us so long, why should we bother about such things as those just mentioned? Are they not technical matters for him?" No. They are matters of *principle*, and are of general concern. The people who aspire to home making must comprehend them, and — if I may be permitted — they must concern themselves less with technique than they are apt to do.

The public should state its requirements, and must be able to understand the work of the architect, so that it can tell whether those requirements are being met or not, and whether the use of materials is consistent or not. At least, it must be capable of understanding the explanation of the architect when he so demonstrates. By all means leave technical matters to him. They are numerous, and cannot be handled without such special training and experience as he is able to place at your service. I have not yet touched upon technical matters at all.

Some of you have probably thought with dismay already that if these independent principles are to be followed out, we shall have no more fine old colonial houses, no more Swiss chalets, no more Queen Anne or Romanesque, not even a good old English half-timber house. That is precisely what I do mean. Their day was a fine one, but it is not our day. And furthermore (and this is hard even for architects to understand) we cannot reproduce them if we would. They are sure to be anachronisms if we try, for our conditions are different, and lead to a different result.

But this we can do: We can work in the noble spirit of our predecessors. We can be to our times what they were to theirs. We can do exactly what they would do if they were here and working to-day. One of our greatest misfortunes is our mechanical facility for superficial imitation. Our forefathers gained by their limitations, and the result is the simple, unpretentious work which we admire. They solved a problem in a direct and simple way, and this resulted in good work. When we divide cause and effect, and instead of working according to our conditions, seek to bring our conditions to a certain effect by force or stratagem, we defeat our own ends.

The law of cause and effect, logical sequence, is as essential in architecture as elsewhere; and when we attempt to twist and subvert and force effects, we work our own undoing in matters of honest design.

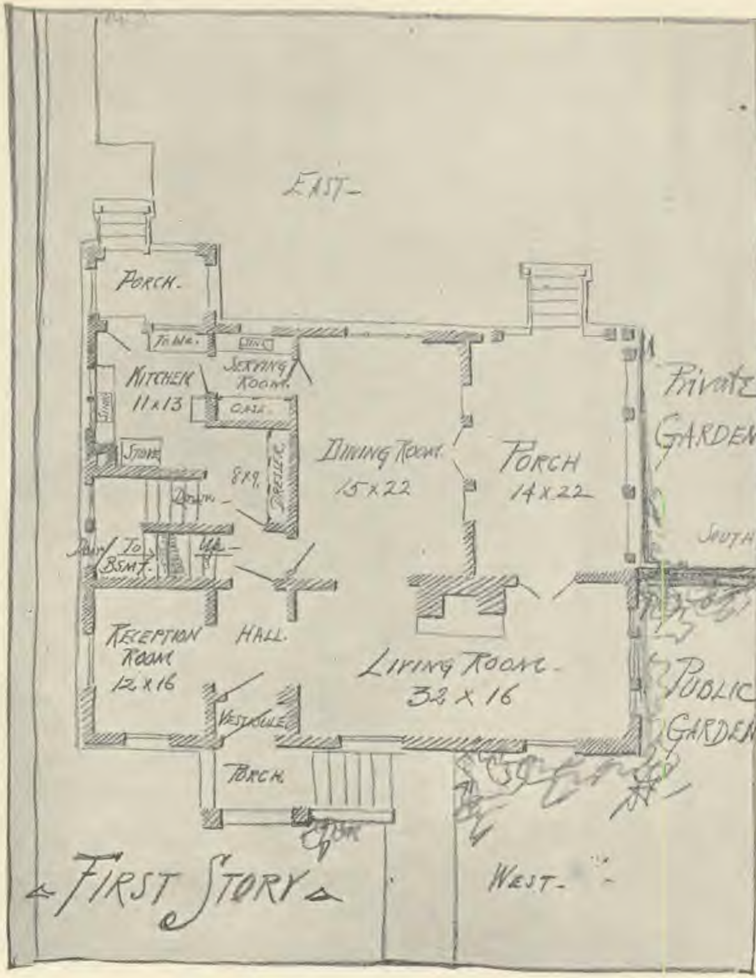
If your son chose for himself a literary career, you would educate him in the history of peoples and the work of the great authors. Then you would put him in contact with the life of to-day, its beauties and its blemishes, and say, "Write of these things as they appear to you. Use your power to enhance one and remove the other." You would not say to him, "Shakespeare and Emerson were great writers. Go now and write exactly as they did."

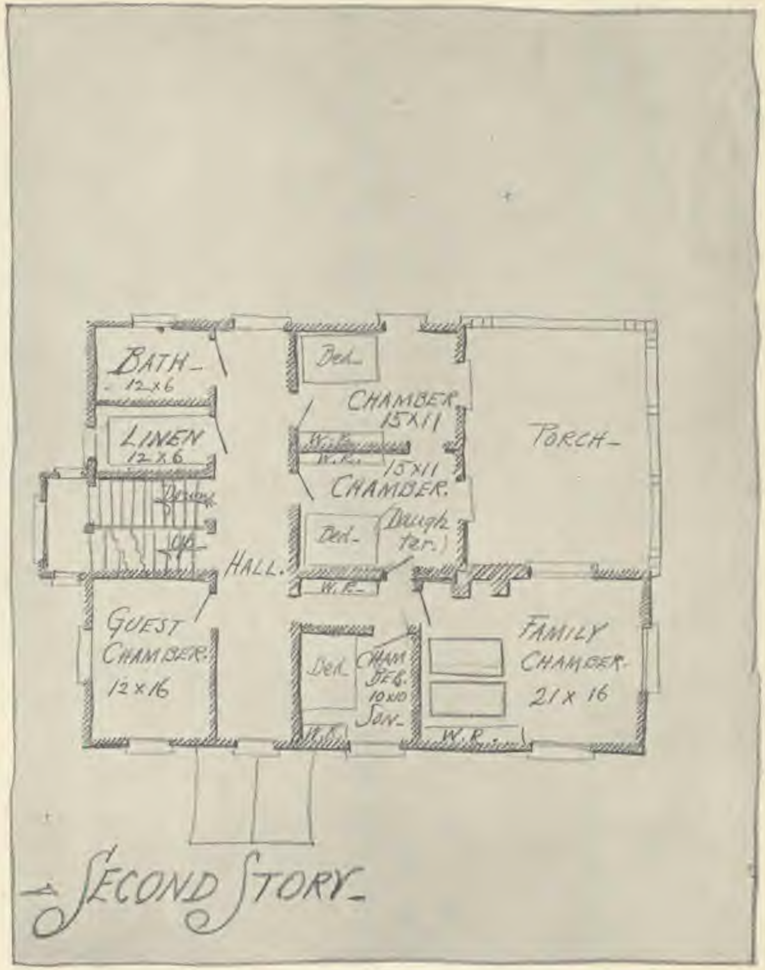
And in the same manner, if he chose to be a painter, you would educate him in the same history of peoples, and show him how they had expressed themselves in art. You would show him every noble painting ever produced, and then, as before, you would make him conscious of the life around him, and tell him to do his share of the world's work with his brush, by means of his own eyes and mind. You would not say, "The best thing you can do is to copy Raphael or Innes." We readily appreciate the idea of individual responsibility in writing or in painting. It is a matter of constant surprise to me that we fail to do this in regard to architecture.

Architects will do their possible best only when such an understanding and appreciation of their work exists in the minds of the public as exists in regard to the other arts.

Let us now go back to the beginning, repeat our statements in regard to principles, and seek for an application in a possible problem.

First, we will do it ourselves. This does not mean that we are going to devise a new science of building, but that we are going to make an individual ap-


EAST-
PORCH-
KITCHEN
11 x 13
SERVING ROOM
DINING ROOM
15 x 22
PORCH
14 x 22
Private
GARDEN
SOUTH
RECEPTION ROOM
12 x 16
HALL.
LIVING ROOM-
32 x 16
VESTIBULE
PUBLIC
GARDEN
PORCH
WEST-
FIRST STORY


BATH-
12 x 6
LINEN
12 x 6
CHAMBER
15 x 11
15 x 11
CHAMBER
(Daughter.)
PORCH-
HALL.
GUEST
CHAMBER
12 x 16
FAMILY
CHAMBER
21 x 16
W. R.
SECOND STORY

plication of the science of building. I would not assume to originate a new multiplication table, but I will make new and original applications of that table every day of my life.

Second, we will proceed to state our problem, taking a concrete case by which to demonstrate these principles. The lot upon which we are to build is a 75-foot, west front, interior piece of ground, 200 feet deep. The most desirable outlook is toward the rear or east, as there is a lake in that direction. The neighbor on the south has already built close to his north line to preserve his south sunshine. For similar reasons, the north neighbor has built on the north side of his lot, leaving space adjacent to our north line.

Our family consists of father, mother, one son, one daughter, the grandmother, and in addition two servants and generally a guest.

The horse and buggy will either be housed in a co-operative stable or will be replaced by an automobile stored in the basement.

The house must have a large living-room, which will be to the house what the heart is to the body; the usual dining-room and kitchen; an entrance vestibule and reception room; five bedrooms; two bathrooms, one being in the basement; laundry; basement and attic storage; and space for the heating apparatus. We will eliminate the usual front stair, which is frequently unnecessarily paraded as an architectural "set piece." Instead we will put it behind doors, where it is out of sight though just as accessible, and where it will partake more of the private nature of the second story, and serve as a back staircase as well.

We have omitted the usual kitchen pantry, placing pantry fixtures around the kitchen walls, thus putting everything within reach. Our kitchen is large enough to hold them and small enough to avoid making unnecessary steps. It is cross ventilated, and is arranged as scientifically as a ship's kitchen or a chemist's laboratory.

We have also omitted the isolated dining room, as arranged, and when not in use as a dining room, it becomes a sort of sitting room for evening use. We have dispensed altogether with the conventional parlor, and have substituted a very small reception room suitable for the ceremonious caller or the business agent.

In the second story we have abandoned bedroom closets. Believing in the great chemical purifier, sunlight, we have dispensed with dark closets, substituting wardrobes of a special design in their stead.

The second story hall is open to light and air, both east and west, providing constant cross currents of air.

The porches are arranged, (1) to shelter the incomer, the entrance porch being very small; and (2) to form a private outdoor family sitting-room, being an extension of both the living-room and the dining-room, and giving the valuable east view of the lake, and all without the inconvenience of being a passageway, as most front porches are, and of being too public; (3) to make a still more private airing place, as is done by the second story extension, and all without casting any room entirely in shadow.

The case which we have chosen is an average one. The house will cost between $4,000 and $5,000, depending upon local conditions.

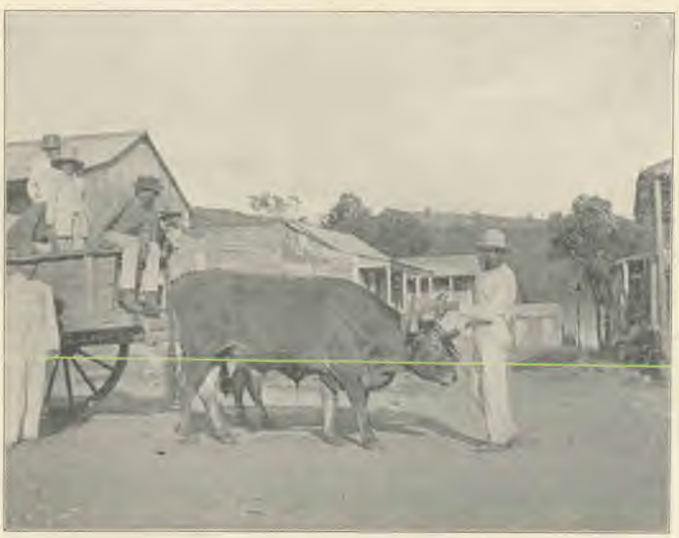
The principles which we have endeavored to follow apply equally to cheaper and to more expensive houses. The exterior is only one of many which might be designed to fit the interior, but it is one which conforms to the plan and carries out the ideas assumed at the beginning.

In conclusion, the house which we have shown, if built and equipped with a heating system which would supply large volumes of fresh warm air, would enable people to live in it and retain good health if they have it in the beginning, or to acquire it easily if all other circumstances are conducive to that end.

THE PORTO RICANS.

BY MRS. W. H. HOWE.

THE Porto Rican sings his national hymn, "Borinquen," with seemingly more patriotism than we sing our national hymns. "Borinquen," meaning "Land of Flowers," is the name given to the island by its early Indian settlers. The song translated is: —



PORTO RICAN OX CART.

"This is the island Borinquen,
The land where I was born;
It is a flower garden
Of great splendor,
With the sky as our canopy,
And the waves at our feet.
When Columbus came to this island, he exclaimed, full of great admiration,
'Oh! Oh! Oh! this is the land I have been looking for,
This is the island Borinquen:
Of the ocean and the sun.'"

This fervency of patriotism seems partly due to the vague idea Porto Ricans have of larger and grander countries. Only a few have ever crossed their own island, which is but eighty-four miles long. Transportation is poor, done by oxen and ponies, there being only one hundred and fifty-nine miles of railway; and that runs merely along the coast, none extending into the interior. There are very few good roads.

Agriculture is the principal, almost the sole, occupation. Modern farming implements have lately been introduced, but with little success, as the people are content to move along in the old slow way.

Wages usually paid for labor are twenty-five cents a day for men and fifteen cents for women; this is usually spent for "that which is not bread."

The island is overcrowded with the poor and indolent. Thousands of such are now emigrating to Hawaii, where they are to work on the sugar plantations, receiving better employment and higher wages. This emigration is meeting with great opposition from the Porto Rican planters, who will in the future be forced to pay better wages. This is thought to be one of the greatest benefits that could

TAKING SUGAR TO MARKET.

come to the island of Porto Rico. On the other hand, Hawaii will be benefited as well, for the Portoriquenians are giving better satisfaction than the Japanese laborers.

Of all the population of Porto Rico, more than two thirds have no trade and not even a gainful occupation. But American "push" is arousing many a Porto Rican, and bringing out good qualities which have long been dormant, enabling him to compete with his American brother.

Illiteracy abounds, only about fourteen per cent of the people being able to read and write; but it is a striking fact that those who can write take great pride in their penmanship, and their writing looks like lithographic script.

Of the dense population of nine hundred and fifty-four thousand, at least two hundred thousand are illegitimate; more than two thirds of the people living together as husband and wife are not married. The priests of the Catholic Church have charged from twenty-five to fifty dollars as a marriage fee, and thirty dollars more if the contracting parties were cousins. These excessive fees have kept many of the poorer class from a lawful marriage.

The rich planters, merchants, officials, and property owners are the very few who make up the upper class. They have good, well-kept homes, dress after the Paris fashions, and have servants outnumbering the members of the family. The poor and uneducated constitute by far the greater population. It is by this class that the streets are thronged,—an indolent, half-clothed, filthy, begging, sporting race.

The idea of making the home attract-

PORTO RICANS ABOUT TO LEAVE FOR HAWAII, CHEERING FOR THE U. S.

ive has never dawned upon these people. Their houses are like temporary summer buildings. They are content with perfectly bare floors and walls, a stiff row of chairs about the room, and a plant in each corner. There is nothing homelike or attractive. No wonder the young men loiter about the gambling rooms and rum houses, while the women promenade the streets in the evenings. They marvel at the comfort and beauty Americans put into their homes. Whatever house decorations they have are kept locked up with their other belongings. A little boy upon being offered a picture to hang upon the wall, exclaimed, "No, give me something else, for if I should put that on the wall, somebody would come into my house and take it."

PORTO RICANS EN ROUTE FOR HAWAII.

The typical Porto Rican lady knows only how to make laces, dance, and adorn her body with attractive dresses. She will not put on her own shoes, or carry the least parcel on the street. She seldom enters a store, but has the merchant send to her home great baskets of goods, from which she chooses. These venders often carry goods for eight or ten miles in baskets on their heads.

In an old, dilapidated, almost barren house lives another type of Porto Rican woman. She, too, dresses beautifully, and though the walls of her house are covered with spider webs and shine with grease, it does not concern her. She is in great need of hearing the gospel of cleanliness.

ONE OF THE FINEST HOMES IN PONCE.

Although there are some handsome women, they lack expression. This is because they are so shut off from the world, and because they care very little to read and to develop the intellect.

A number of ladies

left the government normal school this summer, upon the mere discovery that they were expected to sit and listen to

HOMES OF PLANTATION LABORERS ON THE HILLSIDE.

the lectures, that this was necessary before they could receive their certificates to teach.

At the present time a good position is open to every young man and woman on the island who will make a little preparation to teach. The Commissioner of Education is begging and pleading with the young people of the island to prepare for that work, but few respond.

Americans say the Porto Rican motto is, "Never do to-day what you can put off until to-morrow." The Spanish word *mañana*, meaning to-morrow, is one of the first words remembered by a newcomer, for that word is constantly used, although with little meaning. The Porto Ricans readily make a promise, but are slow to fulfil it, always saying, "mañana."

One seldom sees the swarthy Porto Rican that we read about. As a rule the people are thin and emaciated. They are very nervous, and extremely excitable. No doubt this is due to the constant drain on their nervous system, caused by the universal use of alcohol, tobacco, strong coffee, highly stimulating foods, and late hours in gambling and dancing. They, like the Germans, pride themselves on being able to drink more than the American without getting drunk. While this may be true, they are saturated with alcoholic poisons most of the time. This makes it unsafe for ladies to go on the streets alone, or to mingle in the society of men, without a chaperon. All Porto Rican ladies drink, and most of them smoke.

A great deal of filth and disease accompanies the manufacture of cigars. I have seen men sitting on the floor stripping tobacco leaves from the stem, and adding the saliva from their own filthy mouths. Yet these cigars are highly prized.

A COMFORTABLE PORTO RICAN HOME IN GUANICA.

These people have many superstitions that were prevalent in our country about one hundred years ago. They will not allow a breath of fresh air to enter the sickroom, and they shut up their houses at night like a box. They say the moonlight is very injurious to the eyes when sleeping, and that it will make one grow weak and pale.

From a noted Spanish painting.

TYPICAL PORTO RICAN SCENE AT A WAKE FOR A DEAD CHILD.

They think that to eat fruit in the morning, or more than one kind at a time, is sure to make one sick.

For every ailment they will paste a leaf on the affected part. The face will sometimes have half a dozen leaves on it.

Even with a raging fever, not a drop of water is to touch the body of the sick. Water is thought to be extremely harmful to a wound or sore.

One of their old remedies is to tie on the painful part a piece of chicken that has been kept in a closed can of rum and water until it has begun to decay.

Many times pigs and goats live in the house with the people, sometimes in the second story of a building. The horses are kept under the house or near the back door.

Two large men may sometimes be seen riding one poor little pony that can hardly travel. The saddle often rubs great sores on the animal's back, but that does not prevent its being worked.

The poor wrap the bodies of their dead in coffee sacking, tie it to a pole, and have two gravediggers carry it to a Catholic cemetery, which is often many miles away, over rough mountain trails.

They think that when a child dies, it goes immediately to God, so the friends gather in to congratulate the mother. The body of the child is placed on a little table strewn with flowers. The friends make merry with music, dancing, eating, and drinking.

UNIFORMED SCHOOL CHILDREN WAITING TO GREET THE COMMISSIONERS OF EDUCATION. YAHU, P. R.

The progress of Porto Rico is slow. Missionaries are toiling steadily, knowing that they may work twenty years or longer without seeing any great change in the people.

Considering what the environment of these people is and has been, we have reason to believe that in the future, under better conditions, they will outgrow their present habits and superstitions. They are not much inclined to be hostile, but are tender-hearted and sympathetic.

IS ALCOHOL A FOOD?

BY WINFIELD SCOTT HALL, PH. D., M. D.,

Professor of Physiology, Northwestern University Medical School, Chicago.

IN answering the question which stands at the head of this article, it will be necessary, first, to consider what food is, and second, to consider what alcohol is, and its influence upon the organism; then we shall be in a position to say, once for all, whether or not alcohol is a food. One of the earlier definitions of a food is that given by Hammarsten, Professor of Physiological Chemistry in Upsala University, Sweden. He defines food as any substance which does not injure the body, and which may be built up into body material for growth or repair. A somewhat later definition is that of H. Newell Martin, Professor of Biology in the Johns Hopkins University. Professor Martin gave the following conditions which a food must satisfy: First, it must build up new tissue or repair old tissue; second, through its oxidation it must supply the energy which the body requires; third, neither the food itself nor any of its products within the body can be injurious to the system, otherwise the substance is not a food, but a poison. These definitions clearly exclude alcohol from food substances.

More recent definitions are those of Professors Woodbury and Egbert, of the Medico-Chirurgical College of Philadelphia, and Professor Howell, of Johns Hopkins University. Without giving every definition in detail, we may mention the points in which they all agree; namely, that food materials must be assimilated into the living cells of the body, and through their oxidation furnish the energy for the various activities of the body. Now, inasmuch as no one contends that alcohol is assimilated into the living cells of the body and becomes a part of the substance of the tissues, it follows that alcohol is just as clearly excluded by the definitions of these men as by those given by the others.

If any one will give the matter a little consideration, he will be convinced that mother nature herself has given a very clear definition of a food. Every human child is provided by nature with a food for its first year of life. This food is milk. The food that nature intends the young of the human family to eat is thus clearly pointed out. Nature provides a similar food for the young of all mammalian animals. Nature provides food also for young birds. Before they are hatched they are nourished by the substances contained within the egg. Eggs and milk, then, are nature's foods for young birds and young mammals. If milk and eggs are analyzed chemically, we find that both contain a nitrogenous substance (egg albumen or milk casein), and a carbonaceous substance represented in the egg by oil, which is contained in the yolk, and in milk by the cream and the milk sugar. Both eggs and milk contain also mineral solutions which are

placed there to build up the bones of the young growing animal. Both of these foods are absorbed and digested by the animal. They are assimilated into the living substance, and lead to the growth and repair of the tissues of the young animal. When these tissues are oxidized, they liberate the energy which the animal uses in its activities.

If we were to make a chemical analysis of corn, barley, wheat, oats, rice, or any of the cereals, we should find that they contain exactly the same substances that we find in milk and eggs, differing only in the proportions of these substances. If milk and eggs are natural food, then the cereals should be natural foods. If we think for a moment, we shall see that they are nature's foods for the young cereal plant: wheat, corn, oats, or rice. When these foods are taken into the system, they undergo the same changes as those described above for the milk and eggs, and serve the same purpose in the body. They should, then, be included among natural foods. If the hen eats corn, a part of the substance which she eats builds up egg material, and a part builds up the tissues of her own body. If the body of the hen is analyzed chemically, we find the same substances that we find in eggs, differing only in the proportions, and in the fact that the flesh of the animal contains uric acid and other leucomaines or other waste substances which result from the normal activities of the animal. It has been shown that in eggs, these waste substances are not found until after the process of incubation has begun.

At some time in man's history he added to his dietary the products of the chase; and not being satisfied with the eggs of the bird or the milk of the cow, he began to eat the birds themselves and the flesh of cattle.

All the foods previously mentioned are fairly uniform in their composition, and all produce the same results within the body. All of them conform perfectly to the conditions imposed by all the definitions given. But other definitions have been given for food.

W. O. Atwater, Professor of Chemistry in Wesleyan University, Connecticut, defines a food as "any substance that builds up body substance or liberates energy through its oxidation." According to this definition, all the substances previously enumerated would be foods, but we must add to this list all those substances which are oxidized in the body, because all such substances yield energy when they are oxidized. Alcohol is oxidized in the body and yields energy, and it would therefore, according to this definition, be a food. Morphine, mushroom poison, and the various bacteriological poisons, also phosphorus, are oxidized in the body. All of these substances, being oxidized in the body, yield energy to it. They must, therefore, according to Atwater's definition, be called foods, but they are universally classified in medical works as poisons; so we see how weak the foundation is on which Atwater has erected his argument in favor of alcohol as a food.

Professor Atwater and some others have shown that where alcohol is given in small quantities and for a short time, there is a slight gain in the carbonaceous substance of the body. This is urged as a very strong argument in favor of alcohol's being a food. In this connection it must not be forgotten that the administration of morphine or phosphorus would have a similar effect upon the system. The case is simply this: That while alcohol given in small doses acts as a poison, one of the effects of the poison is to cause not only fatty degeneration of the tissues, but also the accumulation of fat in the body. This

is very noticeable in those who use the malt liquors freely as beverages. There are other very important considerations which Professor Atwater and his followers persistently ignore; namely, the effect of alcohol upon the nervous system. Alcohol is said to act as a narcotic poison to the central nervous system. No true food could have such an action. This shows another of the weaknesses of Professor Atwater's position.

If alcohol is a carbonaceous substance which is readily oxidized within the body, why is it that it cannot be a food? Is there anything in the nature of alcohol which debars it from being a food product? A few words regarding the nature of alcohol will reveal at once its true relations to life.

Alcohol is one of the substances formed by the yeast plant. This plant is a live organism, conforming in many respects to the low forms of animal life. It lives upon sugar. It eats sugar, and this becomes decomposed into alcohol and carbonic acid gas. The yeast plant throws alcohol and carbonic acid gas out of its body, or excretes it, in order that it be not poisoned by retaining the excretion. In a similar way the human body excretes urea and carbonic acid gas in order that the body be not poisoned by the retained excretion. A substance which would poison the yeast plant if retained will poison any of the higher plants or animals. This is in accordance with one of the laws of life; namely, that a substance which poisons one form of living organism will poison any living organism of higher rank. This reveals to us the reason why it is that alcohol is a poison to all forms of animal life, and it also reveals why it cannot, in the nature of the case, serve as a food. That it possesses some qualities in common with food cannot be gainsaid. The fish possesses some qualities in common with the bird, yet we do not say that it is "to a certain extent" a bird, nor do we say that it is a bird "in limited quantities."

We can therefore answer the question at the head of this article by the decided statement, *Alcohol is not a food.*

GIVE me, Lord, eyes to behold the truth;
A seeing sense that knows the eternal right;
A heart with pity filled, and gentlest ruth;
A manly faith that makes all darkness light.
Give me power to labor for mankind;
Make me mouth of such as cannot speak;
Eyes let me be to groping men and blind;
A conscience to the base, and to the weak
Let me be hands and feet.

—*Theodore Parker.*

A CUP OF TEA.

BY

MARY HENRY ROSSITER

There's no harm in a cup of tea?
Suppose we see.
Just study up
What's in the cup—
You'll wiser be.

There's falsehood in a cup of tea
Alas for thee!
The self same cup
That cheereth up,
Deceiveth thee.

There's poison in a cup of tea
Beware, prithee!
For every cup
That drinkest up
Doth weaken thee.

You can't resist that cup of tea
That cup so wee—
That little cup
That steameth up
With breakfast tea?

You must resist the cup of tea
Come, stronger be!
My dear, give up
The siren cup
That foileth thee.

WHOLESOME MERRYMAKING.

BY MRS. E. E. KELLOGG.

NATURAL, inviolate childhood is becoming each year more rare. The spirit of rush and hurry which characterizes this age has invaded even the realm of childhood. Not content to follow nature's plan of development, parents endeavor to stimulate and push the child in mental growth, and are often thoughtless enough or unwise enough to allow him to imitate his elders in ways and practices that make him physically dissipated before he has reached his teens. The period of childhood is the time for gaining and storing mental and physical energy for future needs. The effect of trying to force nature in the culture of the child is similar to that obtained in the cultivation of hothouse roses and grapes,— something to charm the eye, may be, but lacking the flavor and sweetness which characterizes the naturally ripened product.

Every period of life has its own peculiar claims and needs. What is lost to the child cannot be made up to him in later years, since with each advancing stage of life new demands arise. If we study the childhood of the strong characters who have done the most to move the world for good, we find most often a simple life in humble homes or early years spent in close communion with nature herself.

To follow nature and assist her should be the parents' watchword. Keep the children young at heart as long as possible. Let the pure joys of childhood satisfy as long as they will. Particularly let the child's social life be guarded against the innovation of artificial ways and customs. Too often in these days a social function for the little ones means a formal entertainment with late hours, unhealthful indulgence of appetite, and fashionable dress after the style of their elders. Such occasions are not always the most wholesome sort of amusement for grown folks, and for children they are certainly productive of much harm. Parents do not always realize how deleterious such gatherings are because the child, stimulated by the excitement, appears bright and seemingly no worse for the indulgence. But as Helen Hunt Jackson says, " This is the worst thing, this is the most fatal thing in all our mismanagements and perversions of the physical life of our children. Their beautiful elasticity and strength rebound instantly to an apparently uninjured fullness; and so we go on, undermining, undermining, at point after point, until suddenly some day there comes a tragedy, a catastrophe, for which we are as unprepared as if we had been working to avert instead of to hasten it.

" Every hour that a child sleeps is just so much investment of physical capital for years to come. Every hour after dark that a child is awake is just so much capital withdrawn. Every hour that a child lives a quiet, tranquil, joyous life of such sort as kittens live on hearths, squirrels in sunshine, is just so much investment in strength and steadiness and growth of the nervous system. Every hour that a child lives a life of excited brain working, either in a schoolroom or in a ballroom, is just so much taken away from the reserved force which enables nerves to triumph through the sorrows, through the labors, through the diseases, of later

life. Every mouthful of wholesome food that a child eats, at seasonable hours, may be said to tell on every moment of his whole life, no matter how long it may be. Victor Hugo, the benevolent exile, found out that to be well fed once in seven days at one meal has been enough to transform the apparent health of all the poor children in Guernsey. Who shall say that to take, once in seven days, or even once in thirty days, an unwholesome supper of chicken salad and champagne may not leave as lasting effects on the constitution of a child?

"If nature would only 'execute' her 'sentences against evil works' more 'speedily,' evil works would not so thrive. The law of continuity is the hardest one for average men and women to comprehend,— or, at any rate, to obey. Seedtime and harvest in gardens and fields they have learned to understand and profit by. When we learn, also, that in the precious lives of these little ones we cannot reap what we do not sow, and we must reap all that we do sow, and that the emptiness or the richness of the harvest is not so much for us as for them, one of the first among the many things which we shall reform will be 'children's parties.'"

Yet children have a right to entertainment. A holiday outing, a birthday fête, means much to them, and forms a waymark on life's pathway long to be remembered. Make the special days bright with simple, unalloyed pleasures. It

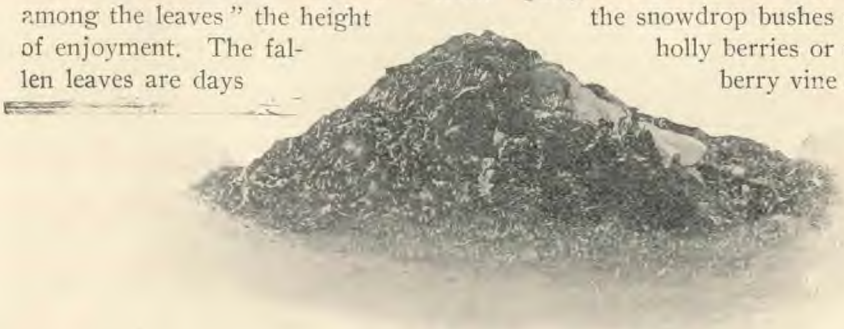
takes but little to bring happiness to the natural, artless child.

"We always celebrate the children's birthdays," said a mother whose family includes seven young hopefuls in ages ranging from five to fourteen, "and as they are well scattered throughout the year, we have fallen into the custom of making such pleasures accord with the season. For the twins, whose birthday comes in sunny May, there is a 'wild flower hunt,' the little ones and their friends going in carriages, on horseback, or on wheels to a woods some miles distant, for the afternoon, to gather spring blossoms in nature's own garden. Rarely do children enjoy a pastime with more zest than these do this. Even for those of older growth, who act as chaperons, it is a fascinating occasion."

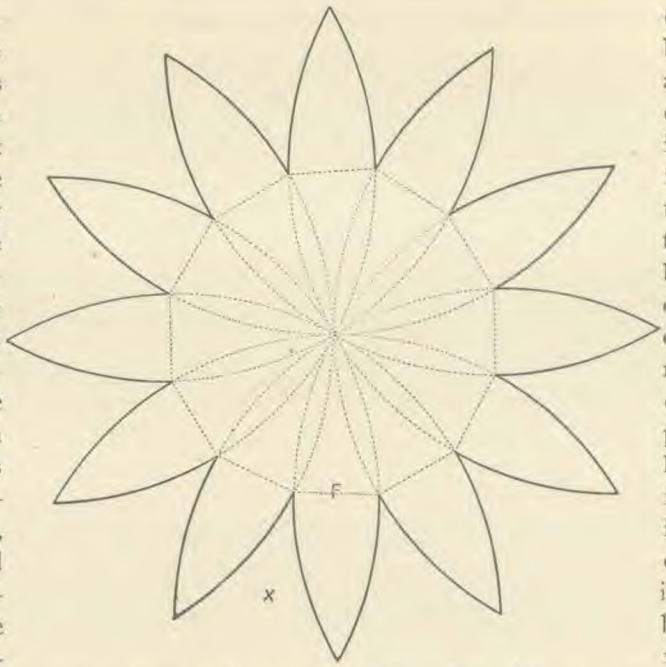
For the daughter whose natal day is the closing one of June, a picnic at the lakeside, with boating, wading, and kindred pleasures, or a rose luncheon upon the home lawn is in order.

October's children find a "frolic among the leaves" the height of enjoyment. The fallen leaves are days before raked into piles like haycocks, and on the festal day the children, decked with garlands and sashes of bright-colored leaves, play joyously among them. Imagination lends enchantment, and the piles of leaves serve for Indian wigwams, South Sea Island huts, or even Esquimau houses, in which the children visit with their little Indian brothers and sisters, the "little brown baby," or perhaps "Agoonack." From the yellow and scarlet maple leaves, using portions of the stem for pins, they manufacture hats, aprons, handbags, and other useful (?) articles, and have "a sale" or a "dress parade," and then a romping game of "hide and go seek" behind and under the piles of leaves. As the sun sinks low behind the western horizon, several piles are quickly raked together, and that joy to a childish heart, a bonfire, finishes the happy day.

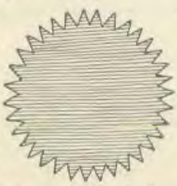
The little maiden whose birthday comes in bleak December upon her tenth anniversary may have a "snowdrop party." For such a fête, clusters from the snowdrop bushes mingled with holly berries or the wild one-berry vine make charm-



ing decorations. The snowdrop is round, so the plan is to let roundness be the prevailing scheme of the entertainment. The invitations sent to the little guests are written on round cards or kindergarten circles, and inclosed in circular envelopes made after the accompanying diagram, and sealed either with a wax seal or the gummed parquetry used in the kindergarten. Any child accustomed to the use of compass and scissors may easily make them by describing a circle of the requisite size, then laying this off in six equal parts; divide each of these in half, and draw with the compass a series of arcs from each of these points to the center. Cut out the

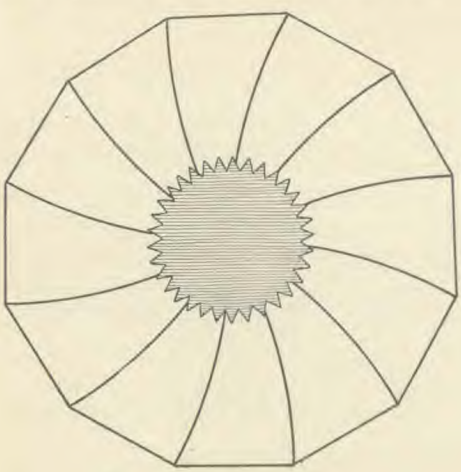


crossed spaces between the arcs, and fold on the lines F in the drawing. From this as a pattern any number of envelopes may be cut from rather heavy cartridge paper. If our little maiden is at all poetically inclined, the invitation can be made to read something after this fashion:—



Lena Maud Grey desires in this way
To you her regards to pay.
This note she sends, to invite you to spend
The half of the day,
From three until seven, December eleven
With her; and to say,
Please bring something round, made, purchased, or found,
With which to play.

It is one of the delights of entertaining natural, unspoiled children that it requires no great effort or elaborate methods to give them pleasure.



If refreshments are a part of the program, serve them early, and of course on round tables, preferably low ones, as daintily decorated and appointed as desired. The viands should be simple in character and round in form. The following is a suitable menu: —

Nut Sandwiches
Protose Balls, or Rolls (See GOOD HEALTH, October, 1900)
Crisps with Meltose Cream
Marguerites Tartlets
Surprise Walnuts
Popcorn Balls Oranges Apples
Malaga Grapes

Directions for the preparation of most of these articles have appeared in recent numbers of this magazine. The nut sandwiches, made from whole-wheat bread, cut round after filling, may be filled with nut butter prepared as for the table, mixed with an equal bulk of chopped ripe olives or with nuttolene seasoned with salt, lemon juice, and chopped parsley, and the dish garnished with sprigs of green.

The meltose cream, prepared by beating

or stirring meltose until nearly as white as cream, and then flavoring with a drop or two of rose water, orange, or vanilla, is to be served in salad cups accompanied with cream or nut crisps. Children enjoy anything individual much more than portions of some large article, so the tartlets and marguerites (simple sponge cake cut in rounds, lightly frosted and ornamented with roasted almonds to form the petals of a daisy with a lump of

bright-colored jelly for the center) are their delight. The surprise walnuts are made by filling the emptied shells of large walnuts with stuffed dates or meltose caramels, and tying the halves prettily together again with baby ribbon in color matching the other decorations of the table. If several small round tables are

obtainable, the foods may be daintily arranged upon them, and served from them to the children.

Balls will undoubtedly be among the round things brought by the guests to play with, and some plan should be arranged for a game, indoors or out, with this favorite of playthings. Grace hoops to toss, toy money, and a soap-bubble outfit are other round things which will afford enjoyment. One of the special pleasures for such an occasion is a hunt for marbles. Previously to the arrival of the little guests, a number of marbles as varied in color and design as are obtainable, are hidden about the room, waiting for the merry, bright eyes of the children to spy out their hiding places. Pretty round bags of silk or chamois skin tied with ribbons are furnished the guests; each is permitted to keep hers with as many marbles as she finds as a souvenir of the occasion.

If time permits, there are many pretty circle games for the children to play, and when tired of active amusements, a "guessing game" will afford enjoyment and instruction. If the children are old enough, they may each take a turn at describing something round, without naming it, which the others are to guess from the description. If one is fortunate enough to be a good story-teller, or has among her friends one whom

she can secure thus to interest the children, nothing can give them more happiness, as the twilight deepens, than to sit around the fire and in the stored-up sunshine of its cheerful blaze to listen to stories of round things common in nature, as for example, that about The Vapor Family, so beautifully told in "Cat-tails and Other Tales;" of the story of a wonderful house, made without hands, so skillfully fashioned, so daintily lined, in which one day there was found something blue and round.

In this and similar diversions time passes merrily, the hour for departure comes only too quickly, and the little guests return to their homes, bearing with them not the ill effects of nerve stimulation and indigestion to make life's to-morrows miserable, but the memory of wholesome joys to lend fragrance all along the pathway of their future.

PERSONALITY IN DISEASE.

BY DUDLEY FULTON, M. D.

THE most important factor in combating disease is by long odds the personal element. The character of the disease, comparatively, counts for little, the personality for much.

Two individuals with apparently the same stock of health, are attacked by the same disease. The one recovers, the other succumbs. It is the inherent vitality which determines.

It is impossible to estimate this capacity accurately, but it is often of more import than the nature of the disease.

It is not always the medicine that cures or the disease that kills. The killing or the curing depends as much upon the personality that is taken into the fray. This personality is not entirely the product of the individual's efforts or of his environment; it is more than both or either. The question of inheritance comes into play. It is of equal power.

Every one lugs around, in a modified form, the vices and virtues of two parents, four grandparents, and many great-great grandparents. He is the fruit of a large family tree. Strong, also weak, tendencies predominate in families. The laws of compensation and of harvest are inviolable. Like begets like.

The Jukes family tended toward criminality. The Rothschilds are by inheritance, as much as by training, financiers. Consumption runs rampant through several generations of a family until enough health is accumulated or until sufficient healthy blood is introduced by marriages to check the tendency.

The production of cures in the insanities is largely a question of inheritance. Given two cases of simple mania, one with a clean family history, the other's, tainted,— recovery awaits the former; a relapse, the latter.

Every man is on probation to check, by right living, the weak tendencies of his nature and of his family, so far as possible, and to strengthen and re-enforce the strong inclinations.

Cultivating the good that is in him, letting it out, allowing it to expand, develop, and bring forth fruit, constitutes right living. One owes it to the world to defeat that which is bad, to show the superiority of right over wrong, of happiness over gloom, of living over dying. This is every man's business. In his work and in his play and in his sick hours, this personality counts for much, and is of decided therapeutic value.

The determination to live, to enjoy, to be well, steadies the pulse, increases the strength, vigor, and vitality. Joyful news is one of the best of all tonics, and mental complacency, a good conscience, and hope are the most soothing hypnotics.

A friend has within the past three years shaken himself free from a most obstinate and usually incurable disease. In our opinion the all-important and the most telling therapeutic factor at work in this case was a rare love and a rare happiness, together with a "never-die" determination to live and to be well.

Drooping and dying of trifling ailments, because of adverse conditions and circumstances, is more common than the "other half" imagine. The many are exposed to consumption, the few are infected. What is it in these that renders them susceptible? It is usually a pre-existing ill health or ill spirits — probably the latter as often as the former. Bad humor coats the tongue as readily as bad food. Worry, the fidgets, and a chronic case of "the blues" may be more dangerous to health than germs and microbes. For an invalid, the worst of all habits is the sick habit. Many invalids would be well within a week's time, were it not that they are so deeply addicted to the habit of staying sick.

The courage with which an individual meets and faces a serious illness is often the deciding factor. If he droops and is faint hearted, he yields to the disease. If he is strong and hopeful, he conquers.

The firmly uttered words of even a very sick man, "I will live," "I will have health," "I will not die," are usually prophetic.

The physiological effects of faith as contrasted with the pathological effects of despair are seen most sharply in the sick-room.

DISEASES COMMON IN WINTER.

BY GEORGE THOMASON, M. D.

IN considering the leading factors in the causation of disease, the season of the year is always to be noted as occupying a prominent place. For example, it is during the heated term of summer, particularly July and August, that the mortality rate, especially of our larger cities, presents the most appalling figures, and the disorders are largely connected with the digestive tract. Statistics clearly indicate the greatest prevalence of, and the highest mortality from, typhoid fever to be during the months of August, September, and October; and cases of malaria are also much more frequent during these months than at any other season. During the months of low temperature, affections of the respiratory tract are more numerous, due probably both to atmospheric conditions and to the evil effects of overcrowding in poorly ventilated apartments. As examples of this latter class, may be mentioned colds, pneumonia, pleurisy, and diphtheria, suggestions for the treatment of which may be found either in the special midwinter number of this journal of a year ago or in the present issue. In addition we would name influenza, tonsillitis, and bronchitis, the leading symptoms and the treatment of which we desire to outline briefly in this article.

Influenza as an epidemic sweeps with marked rapidity through all countries of the world which have a winter season. In this as in other germ diseases, the

vital fires must be burning low to permit the germ which has gained access to the body to multiply and elaborate sufficient toxins to give rise to the disease.

The symptoms are by no means sufficiently constant to permit of accurate description, but as a rule they develop quite abruptly. The patient usually experiences a marked chill followed by a rapid rise of temperature, the thermometer registering anywhere from 102° to 105° after a very few hours.

There is intense headache, with severe pain in the back and limbs, sneezing, coughing, and great physical depression and weakness, usually out of proportion to the intensity of other symptoms. In the treatment of this condition, if vigorous and thoroughgoing measures are promptly employed, the intensity of the symptoms may be greatly mitigated and their duration shortened. With the appearance of chill, the patient should be immediately given an application such as will cause free circulation of blood through the skin, as a full hot immersion bath (100°–105°) for from six to ten minutes; a hot pack, by wrapping the patient in a blanket wrung from water at from 140°–150°, covered with additional dry blankets well tucked in at the shoulders and feet, and continued from fifteen to thirty minutes, or until the tendency to chill is past. Great care should be taken during either of the above procedures to keep the head thoroughly cooled by the application of a bag filled with bits of ice or a towel frequently wrung from very cold water.

In many cases the chill may be successfully combated by a hot foot bath combined with the application of fomentations or flannels wrung from very hot water applied the full length of the spine, continued fifteen minutes, renewing every three or four minutes. The drinking of hot lemonade, or hot water alone or acidulated with other fruit juices, is of advantage. A dash of cold water over the body, or cold friction concluded by drying, should follow the hot application, and the patient should be placed in bed.

FIG. 1. COLD MITTEN FRICTION.

The headache will generally be controlled by a cold compress or an ice-bag applied to the head almost continuously. High temperature, when present, may be successfully dealt with by the prolonged neutral bath, which consists of immersion in water at a temperature of from 92° to 97°, and continuing from thirty minutes to an hour or more as may be necessary. The patient may be made comfortable by having a blanket or air cushion upon which to lie in the bath. Cold mitten friction or a cold towel rub (Figs. 1 and 2) should be given at the conclusion of the hot bath. In any case such applications should be made at least twice daily for their tonic effects, especially in cases in which there is marked depression.

When cough is present, as is the case when the disease is chiefly located in the respiratory organs, it may be relieved by the sipping of very hot water, the frequent inhalation of steam, and the application of fomentations from eight to ten minutes,

followed by the chest compress, which consists of from four to six thicknesses of cheese cloth eight or ten inches wide wrung from cold water and applied in the form of a roller bandage around the chest, under the arms, and over each shoulder, covered with a flannel applied in a similar manner. Renew the application every four hours. In cases in which the stomach and intestines are principally affected, fomentations for fifteen minutes should be applied, followed by the moist girdle, consisting of the same materials as mentioned for the chest compress, and applied about the abdomen in such a manner as to cover the whole abdominal surface.

In some instances the disease particularly affects the joints, which cases demand the daily hot blanket pack for thirty

FIG. 2. COLD TOWEL RUB.

or forty minutes, the hot immersion bath for ten or fifteen minutes, or fomentations to the affected joints fifteen or twenty minutes every four hours, with a heating compress applied in the interval. consisting of from four to six thicknesses of cheese cloth or a towel wrung quite dry from cold water, covered with three or four layers of flannel. In cases in which the heart is affected, an ice-bag or a compress frequently wrung from very cold water should be placed over the heart for a half hour every two or three hours.

The diet is a matter of the greatest importance, and may well consist largely of fruit both fresh and stewed. Other simple and easily digested foods may be given the patient, such as very thoroughly cooked rice, gluten gruel, plain custard, well-toasted bread, buttermilk, malted nuts, and malt honey. The patient should be given water to drink very freely, at least from four to six pints daily. This greatly aids in flushing the tissues and in the elimination of poisons from the skin, kidneys, and bowels. A copious enema should also be administered at least once daily, to cleanse the bowel.

Acute bronchitis may follow as the result of exposure during sudden changes of the weather. It is most likely to occur from exposure in cold and damp weather after confinement in superheated, poorly ventilated apartments. Bronchitis is also a frequent accompaniment of other diseases, such as typhoid fever, whooping-cough, Bright's disease, diabetes.

The disease usually manifests itself by pain, cough, difficult breathing, slight rise of temperature, and loss of appetite. The pain can be relieved by fomentations for fifteen minutes over the chest, repeated every three or four hours. During the interval a roller chest compress, as before described, should be worn. This will also assist greatly in relieving the cough, especially when combined with the sipping of very hot water and the inhalation of steam.

In the evening, just before retiring, the patient should have a hot immersion bath at 100° to 104° for from six to ten min-

utes, then continued as a neutral bath (92°–95°) for thirty or forty minutes. In the morning a cold friction, as before described, should be given. The patient should drink copiously of water.

Tonsillitis is an exceedingly common disorder, affecting mostly children and young adults. Many persons suffer repeated attacks every winter. In this condition the temperature usually runs higher than in either of the other conditions mentioned, often reaching 104° to 105°, especially in children. Headache and pain in the bones is in most cases quite severe. The throat is red and swollen, and there is usually intense pain in swallowing. The disease is uniformly of short duration, running its course in three or four days. The patient will, of course, be confined to bed. The temperature may be successfully combated by the neutral bath, or by cold mitten friction. It will be of service, and also gratifying to the patient, to precede the cold treatment by a short hot bath. This may be repeated twice daily.

A very hot gargle should be used at least once every hour. An excellent antiseptic solution for this purpose consists of a dram of carbolic acid to an ounce of listerine, using a teaspoonful to a half glass of hot water. Inhalation of steam ten or fifteen minutes every hour also affords relief. Very hot fomentations should be applied to the throat for ten or fifteen minutes every one or two hours, while a cold compress covered with flannel and changed every twenty or thirty minutes should be worn during the interval for the first day or two, after which it may be changed at intervals of an hour or two. If the inflammation is very intense, an ice-bag should be applied in place of the cold compress. The head should be kept cool while the fomentations are applied to the throat. Bits of ice in the mouth are frequently very gratifying to the patient.

The diet both in this condition and in acute bronchitis should be restricted as suggested for influenza.

The suppurative form of tonsillitis, or so-called quinsy, usually requires that the tonsil be lanced.

The efficiency of the methods above suggested for successfully meeting the conditions named, has been demonstrated many times; when carefully followed, they are sure to bring the most prompt relief.

WINTER DISORDERS OF INFANCY AND CHILDHOOD.

BY KATE LINDSAY, M. D.

DURING the heated season, when food and drink spoil so quickly from fermentation due to the action of microbes, disorders of the digestive tract abound. Cholera infantum, dysentery, inflammatory diarrhea, swell the bills of infantile mortality. In the tenement-house districts of the larger cities, where filth abounds and sanitary science and practice are unknown, often as high as eighty per cent of the children under one year old die during the summer.

In winter, when the cold arrests the activity and growth of the hot-weather germs that live in and spoil the food and drink of the children, the mortality from digestive disorders is much reduced; but disorders and death from pulmonary diseases are largely increased. This is because the gaseous food, of which we use such quantities, is much more foul and contains more air-borne germs than in the summer, when all the doors and windows are open, and the air is for the most

part outdoor air, and hence is more free from dirt and disease germs. With the advent of cold weather, doors and windows are shut tight, and the end and aim of every one is to create a summer temperature inside his habitation, no matter what kind of air contamination may result from the want of ventilation. So thoroughly is the outside air shut out and the inside air shut in, that contamination of the inside atmosphere is noticeable at once by any one coming in from outdoors.

It is in just such unclean air that the germs of colds, which cause nasal catarrh, tonsillitis, pharyngitis, inflammation of the middle ear, bronchitis, etc., multiply. These disorders, contracted in infancy, often result in acute catarrh, followed by chronic nasal catarrh, which is the most frequent cause of mouth breathing. This disordered condition of the nose is often passed over as an affection of so little account that it requires no care or treatment either to prevent the infection or to cure the disorder after it has once gained a hold upon the nasal mucous surfaces. Yet habitual mouth breathing, due to inability to inhale and exhale through the nasal passages, often results in serious diseases of the throat, bronchial tubes, ears, and glands of the neck, as well as the more serious infection of the lung cells and tissues with pneumonia and tubercular germs. The stoppage of the nasal passages and the consequent mouth breathing are accountable for much mental backwardness and feeble-mindedness in children. Often immediate mental improvement follows the opening of the nasal canals, and the ability to breathe with the mouth shut.

Besides the increase of diseases caused by what is commonly called "taking cold," there is always a great increase of certain air-borne infectious diseases, such as grip, diphtheria, measles, whooping-cough, scarlet fever, and smallpox, in winter. All these disease germs flourish and become decidedly more infectious wherever there is crowding and bad ventilation. In summer the grip, measles, diphtheria, and whooping-cough lose much of their infectiousness, and the epidemics lessen in number and severity as soon as the children can get out-of-door air, and are not crowded together in badly ventilated schoolrooms and tenements during so many hours of the day.

In the eighteenth century and in the first half of the nineteenth, the summer months were considered the special months of danger to children. At the close of the nineteenth and the beginning of the twentieth century it would seem as if winter were soon to be as dangerous to the health of both young and adults as summer. Men are learning more effectually how to overheat their dwellings, and how to exclude all fresh air.

As we have already stated, many disease germs flourish and become dangerously infectious only in stagnant foul air contaminated by organic matter and irritating dust. But besides the disease germs there must be soil in the body for their proper reception and growth. There is no air filter like the mucous membrane of the human nose. When it is in a healthy condition, it not only filters out all filth from the ingoing air, but also secretes an antiseptic fluid which destroys all disease germs before they pass farther than its very front entrance, near the external openings into the nostrils. Therefore to protect the throat, ears, bronchial tubes, and lungs from infection with disease germs, every effort should be made to keep the nasal passages open and their mucous lining free from disease. It may seem a small thing when the infant of a few hours begins to sneeze, but it is an evidence of infection

and irritation, which, should it go on unchecked, may threaten the dawning life. Children have died from what is known as the snuffles. Care should be taken in every such case to keep the nose clean, and free from dried mucus, which often so completely blocks up the nasal passages that the little one cannot nurse, and sometimes dies of starvation. The passages of the nose, then, should not only be kept open, but the surfaces of the mucous lining should be kept whole. The younger the patient, the more important is it to keep this useful portion of the air passages normal.

A cold in the head, or more properly speaking, an acute nasal catarrh, that in a healthy adult might be a comparatively trifling ailment, in the infant may be the starting point of a fatal disorder. An ordinary cold on the lungs, or acute bronchitis, is not considered a serious disorder in the average healthy patient in adult life; in infancy, capillary bronchitis and catarrhal pneumonia are the most common causes of death from pulmonary disease. It is from this complication that most of the deaths from whooping-cough, measles, scarlet fever, and grip occur.

Whenever an infant shows signs of nasal infection by sneezing, and the stopping of its nostrils, search should be made for the cause of the infection. It is inhaling infected air from some source; or one part of the body is unduly heated, while another is underclothed. Often the infant breathes bad air while it sleeps in bed with two grown persons. They may put the little one in the middle, where the bedclothes, in order to reach their shoulders, far above the baby's head, must cover its face, and shut out all but the very foulest of air,— impure not only from the natural exhalations from the skin of the baby's adult bedfellows, but often contaminated with the noxious fumes of tobacco and deadly disease germs. Sometimes young children are put to bed in close rooms heated with dry, hot furnace air, two or three children in a bed, and that in a seven-by-nine room with doors and windows closely shut, and neither an inlet for pure air nor an outlet for impure air. What wonder that children under such conditions contract colds easily, and suffer from nasal catarrh, throat ailments, bronchitis, and kindred disorders, and finally become victims of the great white plague, tuberculosis? Human beings are endowed with great powers of adaptability, but there is a limit to the endurance of human respiratory organs, and the best will yield at last to continual infection and irritation from bad air.

The respiratory organs, besides direct inhalations of irritants and poisons from the air, are often injured by poisons generated by fermenting food in the alimentary canal. One has only to eat raw onions to comprehend how quickly food matter from the stomach reaches the lungs, and is perceptible in the breath. So poisons generated there reach the network of capillaries surrounding the bronchial tubes and air cells, and often cause bronchial catarrh and cough. In fact, a child suffering from indigestion soon develops a cough and bronchitis which lasts as long as the indigestion continues; sometimes it becomes chronic. The same nerve which regulates the functions of the digestive organs also furnishes nerve energy to the respiratory apparatus, and irritation is often caused by sympathy, or reflex action.

Infectious air-borne disorders are more prevalent in winter than in summer, and are also more deadly, because of the crowding together of children as well as adults indoors. The schoolhouses are always much fuller in winter than in summer. One child going into the overheated, badly ventilated schoolroom, with

a sore throat and slight hoarseness, may carry there the germs of true croup, diphtheria, or some other disorder which will infect the whole school. The child may cough, and expectorate on the floor, use the same drinking cup, pencils, penknife, books, and playthings as its mates, kiss and fondle its special friends and favorites, and cough out particles of germ-laden mucus which will fill the air with infection, until every pupil will return home at night taking with him or her the disease germs thus gathered, and soon an epidemic begins to appear. The air in every home is more close and foul with human exhalations in winter than in summer; and the school-infected child sleeps and holds close intercourse with its brothers and sisters at home, until they all come down with measles, tonsillitis, diphtheria, or some other infectious malady.

It would save many young lives were every home provided with a room for sickness, where the ailing child could be treated until it was determined what disorder he had, and whether it was infectious or not. The patient would gain by the rest and quiet, and the other children would thus escape infection. A child with fever and sore throat should never be put to bed with any other child, nor even in the same room with others. All these acute winter disorders, even common colds, are more or less contagious, and it is best to keep the sick and the well apart.

Overheating and the extreme dryness of indoor air often debilitate and weaken the resisting powers of the skin and mucous surfaces. Going suddenly from an inside temperature of nearly eighty degrees above zero to twenty or thirty below that mark, chills these surfaces, and checks their functions, producing internal congestions and morbid secretions of internal mucous surfaces, and furnishing favorable soil for the propagation of disease germs. After the sudden chill from cold and dampness, there often comes an attack of bronchitis or pneumonia. Knowing the causes of winter diseases and death among children, it is important to lessen this sickness by the practical application of sound hygienic principles to the children and their cold-weather environment.

In the home, care should be taken to have the inside air as pure as the outside air. All sources of air infection should be excluded. Children should be taught from infancy not to expectorate on the floor, and the adults of the family should set them a good example. In all diseases of the breathing organs the expectoration is more or less infected, and when dried into dust, finds its way into the room air, to be inhaled by every one. The mother and children suffer most, as they spend the most time in the indoor air. Carpets in the nursery or on any floor are potent sources of indoor-air infection. They hold foul matter brought in from the outside on the feet, and especially on the long, trailing skirts of the ladies of the household. Many children die from supposed hereditary consumption who are really infected by the germs expectorated by their tubercular relatives. The consumptive and the non-consumptive can live safely under the same roof and in the same room, provided the air they both breathe is clean. Long skirts in the house as well as out of doors keep the room full of dust, and house dust is always more or less infective. The aim should be to keep the air as free from it as possible.

What is true of the home is also true of the schoolroom, the church, the lecture room, or any other place where human beings assemble. Have as little dust as possible, and do not stir what is unavoidable. If we could drop our shoes

as the people of the East do their sandals, outside the door, and take a footbath before we enter our dwellings, the air inside would be much cleaner than it is. And certainly, should ladies dispense with trailing skirts, many microbes would never find their way into the home air. Think of one of these filthy garments, full of street dirt, hung up in a wardrobe to infect the air day after day in a bedroom where some member of the family sleeps.

Painted or waxed floors, with rugs frequently shaken and aired out of doors, would greatly lessen respiratory diseases. The air should not be overheated, and children, even infants, should be taken outdoors daily. Keep them warm and dry when giving them their daily constitutional, but do not cover up their faces so as to smother them. Children have been suffocated by overcovering, even outdoors. Accustom the skin to changes of temperature by cold bathing, both in cold water and cold air. Strip off daily once or twice, and take a cold sponge, spray, or full bath, or even a brisk rub in the air of a cool, well-ventilated room. Clean air and water are good for the skin as well as for the respiratory surfaces. Keep up nutrition by proper food and outdoor exercise. Cut off sources of infection from both the outside and the inside.

Good digestion insures good nutrition and the needed healthful functional resistance of each organ to repel and destroy disease contagion. It is always best, when any member of the family shows signs of invasion of the respiratory organs by infection, to stop eating at once, and rest for twenty-four hours. Nature needs time to throw off the foul matter and destroy the germs that have infected the body. A warm bath may be taken, if the patient can stay in bed and keep up the activity of the skin; otherwise a cold bath and warming the surface by friction is better. Many a common cold has been made much worse by taking a hot bath, and then, while still perspiring, going out into the open air. What is wanted is to produce skin activity and elimination. Should there be a full, stuffy feeling in the chest, sore throat, or any hoarseness suggestive of croup, a mild laxative, as a dose of castor oil or some mild saline, with nothing for supper but hot water, will often result in such a change of symptoms as will prevent an attack of severe illness.

Sickness means germs and germ poisons in the body. Nature will expel as well as repel them, when given a fair chance. This is favored by resting all the bodily organs. Be sure that the patient has pure air to breathe, and is not overheated.

Fasting and the rest cure are also good should the case prove to be the grip, measles, croup, or any other serious form of disorder. The disease will run its course, but the symptoms will not be so severe, nor are there likely to be so many complications.

Fortunately, true croup is an uncommon disease, but catarrhal croup is rather common in children between one and five years. For this disorder, the fast, the warm bath, and a cold compress usually bring relief at once. If the stomach and bowels are loaded, an enema and emetic or a stomach wash will help very much. When the throat is sore, a nasal douche of normal saline solution often gives relief,—that is, a pint of boiled warm water with a teaspoonful of salt in it.

To increase lung capacity, the child should be taught to inhale properly. There is nothing better for lung ventilation than a brisk run in the open air several times a day. Should the tonsils be

come chronically enlarged, or the nostrils closed by swelling of the inside lining membrane, no time should be lost in consulting a specialist, and having these important respiratory passages opened so that normal breathing may be unimpeded. A running ear, too, should never be neglected. It may produce fatal inflammation of the membranes of the brain. At least it will injure the hearing.

To avoid winter diseases, then, keep the surface circulation active, the digestion vigorous, breathe pure air, do not overheat the atmosphere you live in. Keep the inside air as nearly like the outside as possible. Take daily exercise in the open air; use the cold bath daily; and do not neglect the first symptoms of any pulmonary ailment, be it of the nose, throat, ears, bronchial tubes, or lungs. Keep out as much dust as possible, and do not infect rooms either by expectorating or by carrying germs on the person or clothing. Remember also that the first five years of life are the years of greatest mortality from pulmonary disorders. Therefore, especially should mothers protect small children from infection. Bronchitis or throat disease contracted at this period, even if they do not prove fatal at once, may lay the foundation for life-long chronic disorders, or lead to a fatal tubercular infection a few years later. Normal bodily health and vigor, good food, pure fresh air, and out-of-door exercise, are the sure cure and also the preventive of winter disorders in children.

BATHS THAT CAN BE GIVEN AT HOME.[1]

BY J. H. KELLOGG, M. D.

THE modes in which water may be applied to the human body therapeutically are almost infinite in form and variety. It is proposed in this article to describe a few procedures that are easily employed in the home.

The Shower Bath.

In this form of bath the water is projected through a perforated disc, falling upon the patient in a number of fine streams. When the disc is placed above the patient, the procedure is termed the rain or shower douche; when held in the hand or fixed beneath a seat, it is termed a spray. In the rain douche the size of the openings is usually somewhat larger than in the movable hand spray; the disc is also larger, and the apertures more numerous.

In the majority of cases in which the cold rain douche, or shower, is employed, a preliminary heating should be applied. When required, the rain douche at 100° to 104° is applied for from one to three minutes before the cold application.

The *cool* shower (75° to 65°) is an excellent training measure for persons who are so sensitive as to prohibit the employment of water at a lower temperature; also for gradual cooling after a sweating bath.

The effect of the *hot* shower is likewise powerfully exciting, causing intense cerebral congestion, and first slowing, then quickening, of the heart, which continues for some time after the bath. The duration of the hot shower should be from one-half minute to two minutes; temperature, 100° to 112°.

The *neutral* shower (92° to 97°) causes immediate contraction of the cerebral vessels, and produces a general calm in the storm of nerve reflexes continually

1 Selected from "Rational Hydrotherapy."

playing between the periphery and the brain and cord. The usual duration of the neutral shower bath is from three to five minutes.

The rain douche has the disadvantage of being far less perfectly controllable than the horizontal jet or the spray, which may be regulated to a nicety during administration by one skilled in their use. The cold shower is practically a fixed procedure, and hence is not adapted to feeble persons. The neutral and graduated rain douche have a much more general application than the cold or hot douche in this form. However, the rain douche is an exceedingly useful measure at all temperatures.

The cold shower may be used with advantage as a tonic measure for anemics who are fairly strong, also in obesity when the heart is not seriously involved, and with the chlorotic and plethoric. It should be preceded by some appropriate heating procedure, as a heating pack, the dry pack, or a sweating process of short duration.

The short cold rain douche (60° to 70°, for 5 to 30 seconds) is to be employed in cases in which moderate stimulation is required, with little withdrawal of heat, as in anemia and chlorosis with emaciation, and in neurasthenia and dyspepsia. When considerable heat elimination is required, the douche is prolonged to one or two minutes. This procedure is especially useful in phlegmatic neurasthenics, sedentary persons in whom the general metabolic activity is diminished, in obesity, and in all cases in which after a long sweating process a gradual and very thorough cooling is necessary to prevent continued perspiration.

While the cold shower bath, perhaps, offers some disadvantages over the jet or spray douche, the warm or neutral shower presents distinct advantages. As a hygienic measure, it offers a most agreeable and rapid method of cleansing the whole surface of the body.

The neutral rain douche (93° to 96°) is one of the most effective measures which can be employed for the relief of insomnia due to irritability of the cerebrospinal nervous system, cerebral congestion, and general nervous excitability. The application should be made with little force, special attention being given to the legs and back.

"Rational Hydrotherapy," by permission.
RAIN DOUCHE.

The action of the neutral douche is quicker than that of the neutral immersion bath, and in some cases its application may be preferred. A neutral rain douche of from three to five minutes'

duration often produces the same quieting effect obtainable from a neutral immersion bath of from forty to sixty minutes. The neutral rain douche may be used in cases in which patients complain of the necessary length of the full bath. The latter, however, is preferable for many cases requiring the sedative effect of a neutral temperature, owing to the recumbent position, which permits the patient to fall asleep in the bath.

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HORIZONTAL RAIN DOUCHE OR SPRAY.

The neutral rain bath may be used to great advantage in cases of mania with cerebral congestion. Care should be taken to protect the head by a thick, cold compress after a previous thorough cooling. This method is of course applicable only to cases in which the patient may be readily controlled.

The hot shower serves a useful purpose as a ready and convenient means of heating the skin in preparation for a cold jet or spray. The duration may be from one-half minute to two minutes when used for this purpose, or long enough to heat the skin and cause the patient to long for the refreshing effect of the cold douche or spray. Care must be taken to protect the head by a rubber cap or a thick towel well saturated with ice-water, and the hot water must not be allowed to fall directly upon the head.

The Horizontal Rain Douche or Spray.

In this form of douche the water issues from a perforated head in a considerable number of small streams. The diameter of the head is commonly about three inches, and the size of the perforations one millimeter.

The rain douche is applied by means of a nozzle not unlike that of a garden hose, attached to a piece of rubber tubing two or three feet in length, so as to permit free movement.

In administering the rain douche water may be employed at any temperature applicable to therapeutic purposes.

The head must be very thoroughly cooled before applying the douche, and should be protected by a cold towel around the head or neck or both.

The spray is to be used in cases in which the mechanical effects of the douche are required as a means of en-

couraging circulatory reaction, and yet the horizontal jet is for some reason regarded as too severe.

The hot spray is especially indicated in the treatment of neuralgia with hyperesthesia of the overlying skin, swollen, painful rheumatic joints, spinal neuralgia, and spinal irritation with hyperesthesia; at neutral temperature, with little pressure, for the relief of the lightning pains of locomotor ataxia; very hot in alternation with very cold water, for producing powerful revulsive or derivative effects, as an application to the feet and legs for the relief of asthma, for the Scotch douche, and in cases in which the douche is indicated, but the horizontal jet douche is found too exciting.

The spray has the advantage over the vertical rain douche in that it is very readily adjustable to all parts of the body. It does not affect disproportionately the upper part of the body, and especially the chest, as does the vertical douche. It may be made a very exciting procedure, although at its maximum of intensity it is much less exciting than is the full horizontal jet.

The neutral spray is an excellent measure for insomnia. For this purpose it should be continued for four or five minutes at moderate pressure (ten to fifteen pounds), special attention being given to the back and legs.

The Immersion Bath.

The full bath is administered in an ordinary bath tub, which may be of wood, copper, zinc, porcelain, or enameled iron; or a bath tub may be improvised in a number of ways. Portable tubs convenient for dwellings not provided with plumbing may be easily constructed. The first requisite is a frame of wood resembling in shape the top of an ordinary bath tub. To this support, rubber sheeting is attached in such a way that when the ends of the frame are placed on chairs or other supports, the sagging sheeting just touches the floor. Water may be conducted into the tub by means of a rubber hose attached to the water faucet. Well-oiled or painted ducking may be used in place of the rubber sheeting.

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IMPROVISED IMMERSION BATH.

From "Rational Hydrotherapy," by permission.

SPONGE BATH.

Perhaps, on the whole, the cheapest way, when it is necessary to improvise a tub, is to make one of ordinary lumber — whitewood, basswood, or pine boards, an inch and a half thick, and planed smooth on both sides. The tub should be about six feet in length, two feet in width, and a foot and a half in depth. The cracks may be caulked with oakum. Such a tub can be made by a good carpenter in a few hours, and if kept well painted inside, may be used for a long time. When necessary for use for a fever case, the tub may be placed near the bed, and filled with water. The temperature of the water may be regulated by adding either hot or cold as needed. The prolonged cold bath will require the addition of ice or very cold water. The temperature of the hot bath, that is, a bath above the temperature of the body, may be readily maintained by the addition, from time to time, of jugs or bottles filled with boiling water, which does away with the necessity of so much dipping out and in of water. The patient's head while in the bath should be supported by an air pillow, or other suitable means.

The different forms of the full or immersion bath have several times been described in GOOD HEALTH, notably in the January number, 1900, to which the reader is referred for "The Cold Full Bath," "The Graduated Bath," "The Tepid Bath," "The Hot Immersion Bath."

The Sponge or Towel Bath.

This is a general hydriatic measure consisting of an application of water to the surface by means of a wet sponge or towel.

The requisites are: a basin of water at the proper temperature; a large bath-sponge or coarse towel; Turkish towels; and a foot tub if the patient is able to stand erect.

From "Rational Hydrotherapy," by permission.

SPONGE BATH IN BED.

The foot tub should contain water at a temperature of from 104° to 110°. With the patient standing in the foot bath, bend-

ing forward, his head, face, and neck are thoroughly and repeatedly drenched with cold water (50°) by means of a saturated sponge or towel. The attendant then applies the saturated sponge (60° to 70°; average 65°) first across the chest and abdomen, then the back, the arms, and the legs. The sponge should be applied with moderate pressure, and should be rewet as often as emptied of water. The whole surface of the body should be gone over very rapidly.

The sponging being completed, a dry sheet is thrown about the patient, who steps out of the foot bath, and holds his feet in alternation over the foot bath, each two or three seconds, while cold water is poured over them. The patient is quickly rubbed dry, assisting himself as much as possible in the rubbing so as to encourage reaction by exercise. After the bath the patient should take moderate exercise, or if unable to do so, dry friction should be applied.

The patient whose strength is at least moderately good may administer this bath to himself by means of a towel, following as nearly as possible the order just indicated as regards the application. The application to the back may be easily made by grasping the towel by its ends, throwing it over the shoulder, and making a seesaw movement.

To a patient who is unable to stand, this bath may be administered in bed. Care should be taken that the feet are not cold, and that the whole surface of the body is warm. The application, when the patient is reclining, is made in essentially the same manner as when in the standing position. A rubber blanket must be placed beneath him on the bed, and so arranged that the surplus water may run away into some proper receptacle, to prevent wetting of the bedclothing. The rubber sheet should be covered by a Turkish sheet, which for simple sponging with a well-wrung sponge may be sufficient. The patient having been undressed and covered in the bed, the attendant begins the application by first sponging the face and neck, then the following parts in succession: One arm, the other arm, the chest and abdomen, the front side of the legs, the back, the back side of the legs. No portion of the body should be exposed to the air except the portion under treatment, and this should be covered as quickly as possible after drying. From three to five seconds, not more, should be employed in the sponging of each part, the same length of time in rubbing the parts with the hands, and five or ten seconds in the drying and rubbing of each part.

The temperature of the bath and its duration depend upon the effect sought. If the desired effect is the reduction of temperature and the stimulation of vital resistance, water at a temperature of 60° or 70° should be employed, and a basin of water should be placed near the bedside so that as much water as possible may be lifted in the towel or sponge and applied to the patient. Each part should be sponged and rubbed thoroughly so as to induce good reaction; after the whole surface has been gone over, the application may be repeated as many times as is necessary to secure the effect desired. When employed for tonic effects, the amount of water should be small, the temperature low (50° to 35°), and the rubbing and spatting vigorous.

The whole body should be kept warmly covered, except the part being rubbed, in all cases other than those in which reduction of temperature is the object sought, and even in these cases so much exposure should not be allowed as to prevent reaction by the disturbing effects of evaporation.

The patient, if feeble and with defective circulation, should be prepared for

the bath by an accumulation of heat in the skin in any convenient manner, as by the dry pack; that is, wrapping with warm blankets, with a hot bag to the spine and feet; by a hot-water bath; by hot-water drinking; or by a fomentation over the abdomen.

This bath is an excellent one for self-application when the patient is able to administer the treatment to himself at home. It may be employed every morning, on rising, with advantage. As the patient becomes accustomed to the application of cold water, more vigorous measures, such as a cold friction bath or cold immersion, may be employed.

From "Rational Hydrotherapy," by permission.

THE SALT GLOW.

Hot sponging is sometimes advantageous in fever as a means of reflexly lessening the tendency to heat production; the water employed should be very hot (130° to 140°), and the application should be very rapidly made.

The Salt Glow.

In this procedure, salt of medium fineness and slightly moistened is applied to the surface of the body with friction movements, the amount of pressure being adjusted to the patient's sensation. With very thin-skinned persons, abrasion and irritation of the skin may be easily produced. Persons of dark complexion, whose skins are usually thick, bear more vigorous applications than blondes.

The patient prepares for the treatment by lying down upon a slab or bed covered with a sheet, having previously been divested of his clothing. The sheet is drawn over the patient to prevent chilling. One part after another is then exposed and rubbed with the moistened salt, two or three pounds of which should be conveniently at hand in a basin.

After the application, the salt which adheres to the surface is removed by the cold shower or spray. The patient is quickly dried and rubbed in the usual manner. It will be noticed that the skin is hard, and almost as smooth as marble after this application. In cases of feeble patients, a dash of hot water or a warm shower should be given just before the final cold application.

The salt glow produces to an intense degree the circulatory stimulation of the brine bath, the sea-water bath, the effervescing bath, and the saline sponge.

The salt glow is a tonic measure of high value, and also produces valuable derivative effects; it is especially valuable for feeble patients whose heat-making powers are small, and in whom thermic reaction does not readily occur, or if it does, the cold bath still has the effect to exhaust the patient and produce loss of heat. The salt glow is valuable in cases in which the skin is very inactive, a condition commonly found present in chronic indigestion. It may be usefully employed in cases of Bright's disease, and in diabetes, where the conditions demand an increase of skin activity, but contraindicate every form of the cold bath.

The salt glow must be avoided in eczema and most other forms of skin disease, but must not in any case be used so frequently as to produce cutaneous irritation. This measure is rarely of use in any form of acute disease.

COLORADO WINTER CLIMATE.

BY FRANCIS MC LELLAN.

THE climate of Colorado is ideal during the winter months. It is good all the year round; but during the cold season, from the first of October until spring, it truly outdoes itself. We know that this statement of fact is contrary to the idea of many people who live in the lower altitudes, and especially of those who live in the eastern part of our country. They think that Colorado is situated away up on the backbone of the continent, and that this high altitude makes it cool and invigorating during the summer season, but that when the winter months set in, it is visited by bleak winds and heavy snowfalls, and that the resident fully pays, in the winter, for all the benefit he receives during the summer. As a matter of fact, the very reverse is true. The winters are mild, and the snowfall, except it be in the extreme altitudes, is comparatively light, the fall of snow being so distributed, particularly in such valleys as the one in which Boulder is situated, as not to exceed more than several inches at a time, and the snow lasts only a day or two, very seldom for more than a week.

Boulder is a fair sample of many other sections having a similar altitude and climate, such as Denver, Cañon City, Grand Junction, Montrose, Glenwood Springs, Gunnison, and other places. Never have we seen in Boulder what would be considered in the East sufficient snow for sleighing. None of the townspeople or neighboring ranchers, to our knowledge, possess such a thing as a sleigh or cutter. Occasionally, during a little flurry of snow, one sees some of the boys and girls out on sleds where the snow has blown in and drifted on the hillside, or where the ice has formed on the sidewalks; but such a thing as several days of consecutive sleighing is practically unknown.

The days, as a rule, are bright and beautiful. The sun shines with a brilliancy and radiance known in the East only during the summer. There are occasional showers of rain or snow, but these are of short duration, lasting only a few hours, when the clouds disappear, the sun shines forth, and the golden sunshine again floods mountain and valley. In places protected from the wind, the thermometer often registers as high as eighty and ninety degrees, and in the shade one can sit for hours without fire or artificial heat. We have seen the thermometer on the porch of our cottage on the twenty-fifth day of February register one hundred and twenty degrees. Ordinary walking during many of the winter days will produce quite as profuse perspiration as do the warm days of summer in the East.

The rainfall in many places in Colorado is very slight indeed. The soil is porous, consequently the small amount of water which falls is taken up rapidly. Hence the moisture produced by rain and snow quickly disappears, and the roads and streets become dry and dusty as in summer.

During the winter months especially, the very atmosphere seems charged with

THE COLORADO SANITARIUM, BOULDER, COLO.

electricity. Often the slightest contact with iron bedsteads and other metals will produce distinct electric shocks. This is a source of wonder and amusement to many coming here for the first time. This highly charged atmosphere is a wonderful tonic to those suffering from chronic diseases.

The conditions which we have stated, serve to make Colorado an ideal climate. The ordinary invalid, as well as the person in normal health, can get about out of doors day after day during the entire year. He can enjoy to the fullest, nature's great germ destroyer — sunshine — in its most glorious radiance and life-giving power. Picnic parties and excursions, horseback and carriage riding, may be indulged in twelve months in the year. Hence, while our Eastern neighbors are shivering in the biting blasts of an Eastern blizzard, or hovering over crackling fires in order to keep from freezing, the resident of the Centennial State may take his usual daily outing with as much ease and pleasure as during the preceding summer months. The weather-bureau reports for Colorado show three hundred and forty sunshiny days in the year. We know of no other section of country in the United States of which this record can be reported.

All classes of invalids do well in Colorado. Not alone does the one suffering from tubercular trouble find here a refuge and an asylum, but the highly tonic effect of the climate is equally advantageous to the nervous dyspeptic and the tired business man. There is an exhilaration in the atmosphere which awakens to new life dormant energies. A ride or walk in the mountain air sends the blood tingling afresh to every extremity of the body. Digestion is promoted, assimilation is in-

creased, and the whole being responds to the new influences co-operating for its restoration. One finds upon coming to Colorado that his powers of digestion are greatly stimulated. Articles of food which perhaps in a lower altitude he was compelled to discard entirely, he can partake of here with impunity. Nor is this effect temporary in its character. This climate is not like a whip to the tired horse, or a strong cup of tea to overworked nerves. The effects are permanent, and can be carried by the recipient away from Colorado, back to his home, there to be enjoyed.

We have traveled extensively through Colorado, having visited nearly every section, especially those places offering special advantages to health seekers. We have found Boulder County the best suited to the general needs of the health seeker. Boulder is a quiet, restful little town of seven thousand people, located thirty miles from Denver, the capital city. It possesses an altitude of five thousand three hundred feet, just the right height above the sea level for the ordinary mortal seeking health. The town itself nestles at the foot of a spur of the Rocky Mountain system, and is crowded up against the foothills on the west, so that a walk of ten minutes from the center of the town brings one into the wildest solitude; while stretching away to the east and north lies a beautiful rolling plateau, dotted here and there with fruitful vineyards and neat farmhouses. The landscape is decked with pleasant groves of trees and artificial or spring lakes, while the sparkling waters of numerous irrigating ditches wind their sinuous way from ranch to ranch, carrying the purest snow water of the mountains as a tribute to the thirsty but fruitful plains.

Here, unusual advantages are offered in an educational way. Boulder is the

CORNER OF SANITARIUM GROUNDS.
Colorado Chautauqua and State University in Distance.

seat of the State University, one of the best institutions in the West. Here also is located the Colorado Sanitarium, an institution affiliating with the Battle Creek Sanitarium, and an enterprise which has contributed in no small degree to the popularity of Boulder. One of the finest Chautauqua schools in the country is held at Boulder every summer.

One thing which makes Boulder an ideal place of residence is the fact that manufacturing establishments have been excluded from the city, so that the residents are not subject to the smoke from factories and furnaces. The air is pure and uncontaminated. Boulder possesses virgin soil in that it has not been in the past a Mecca for the thousands of invalids who have gone to Colorado. This one feature, taken in all its bearings, is an important consideration. But while we ourselves are partial to Boulder, we have friends living both east and west of the range which divides the State, and some even upon the summit, and all are perhaps equally pleased with their location and with the inducements their particular locality presents. In view of these considerations and these features, in the statement of which we have endeavored to use due conservatism, we are sure that our friends will agree in the proposition that Colorado possesses an ideal winter climate, particularly for those whose physical condition makes it necessary for them to surround themselves with the best possible advantages for the recovery of health.

THE BUILDING OF A DRESS.

BY ANNE E. TABOR.

TIMES have changed since sensible women wore, unquestioningly, the garments dictated by Madame Grundy. There is now a great demand for dress that is first healthful and then artistic. Dressmakers and designers are beginning to pay some attention to women who ask to have their clothes made comfortable as well as stylish. There was a time when the leading dressmakers themselves positively refused to fit a woman without a corset. Now, many of them not only accept without dismay the uncorseted form, but even ask, "Do you wish to have your dress made hygienically?"

There are also fewer women, to-day, who scout the idea of a hygienic dress. They hesitate to declare that they do *not* want their dresses "made hygienically." Hence there has come to be a constant demand for hygienic as well as artistic skill. Some of the results of this demand may be seen in shorter skirts, shirt waists, looser bands, less boning, straight-front corsets, and a variety of corset waists. A new garment of any merit finds immediate welcome, and is given an opportunity to prove its worth.

The waist shown in the accompanying illustration has a number of distinct advantages. It was cut by an entirely new method of measurements, and is made to fit the exact proportions of the natural form. In the construction of this waist the principle is recognized that the front of the body from the chest down over the abdomen demands room for expansion. With every full inspiration the medium form expands about four inches. So, in order to produce a perfectly shapely garment, the front of it must be made to measure at least four inches more than the back, at the waist line, in front of the under-arm seam. Another advantage of this waist is that the adjustable lacing is placed under the arm, along the line that the best dressmakers follow in taking up seams. Another adjustable feature is the shoulder strap, which can be changed to make the bust fit more or less closely, and to lengthen or shorten the waist.

This waist may end at the waist line or cover the hips, according to the figure and the preference of the wearer. The stout woman with full, round hips should always wear the shorter waist, and should take the greatest care, in buttoning on her skirts, to fasten them so as to leave no extra fullness or thickness around the hips.

A dress fitted over this waist, and cut and made upon the same principles of careful adaptation to the figure instead of conformity to an arbitrary standard, cannot fail to fit and to make the form more graceful. The woman whose waist is thus correctly fashioned can lift her arms above her head with perfect ease, with no strain whatever upon either the under-arm forms or the sleeve.

The same rules should be observed in designing the skirt. If the lines of the skirt are made to follow the line of the limb instead of being cut with reference solely to the lines of a pattern, the skirt will hang with surprising grace, and will

so adjust itself to the wearer's movements in walking that it will really seem a proper and natural garment instead of a vexatious necessity required by custom. A skirt so made will fall in graceful folds, no matter what the attitude of the body.

A FEAST WITHOUT SLAUGHTER.

BY A GUEST.

THE most remarkable banquet ever served without the shedding of innocent blood, was undoubtedly the Thanksgiving dinner given by the Battle Creek Sanitarium and its branches all over the world, Thanksgiving Day, Nov. 28, 1901, to thousands of representative people in hundreds of different places. At the original Sanitarium in Battle Creek, Mich., more than eleven hundred guests sat down together under one roof at a bloodless feast. The regular Sanitarium family of patients, doctors, nurses, and other workers numbered more than a thousand more who sat down at a second table, spread an hour later; making more than two thousand in all. The various branch Sanitariums, nearly thirty in number, served a similar dinner to invited guests. Besides this, in more than five hundred different cities, towns, and villages the same menu was prepared, and enjoyed by smaller groups of people who are devoted to the same great principles that animated the donors of the larger banquets. This magnificent Sanitarium anniversary dinner, celebrated at one and the same time in hundreds of different places in the United States and other countries, was in honor of the thirty-fifth anniversary of the greatest movement ever known, having for its purpose a radical reform in eating, drinking, dress, and physical habits.

Beginning in the humblest way, this work has grown until it has become world-wide in scope, and is represented by many thousands of disciples and friends scattered through all civilized lands, as well as by missions and missionaries in heathen countries.

We have not space for a complete report of this dinner, but wish to give what room we can to so significant an event,— significant as showing the progress that has been and is being made in the spreading and the popularizing of principles that are so vital to health and to happiness.

The dinner given in the gymnasium and the dining room of the Battle Creek Sanitarium is representative of all the other dinners. We show you pictures of the banquet hall before the feast began, and a flash-light photograph of the scene in the gymnasium during the toast. But one important feature of the feast you cannot see — the turkey; not a corpse roasted and stuffed, but a live turkey, fat and happy, occupying the place of honor on a platform. Over the turkey's head hangs a placard, "A Thankful Turkey." That he was a thankful turkey he gave occasional evidence by gobbling his own sumptuous dinner of corn, and flapping his wings lustily when the audience cheered heartily at some apt hit by a speaker, evidently sharing the enthusiasm of the occasion. It is safe to say that no turkey ever enjoyed a Thanksgiving dinner more, and probably no Thanksgiving turkey was ever so much appreciated.

The menu of this inaugural and prophetic twentieth century dinner was as follows: —

MENU.

"Some hae meat, and canna eat,
And some wad eat that want it;
But we hae meat and we can eat,
And sae the Lord be thankit."

— Burns.

Vegetable Oyster Soup
with Toasted Wheat Flakes
Nut Roast
Nuttolene Fricassee Cranberry Sauce
Baked Sweet Potatoes
Escalloped Potatoes
Hubbard Squash
Kornlet Rice with Meltose
Macaroni Baked with Granola
Sliced Protose Celery
Split and Toasted Granose Biscuit
Graham Bread White Bread
Caramel-Cereal Malted Nuts
Grape Nectar
Oranges Apples Bananas
Malaga Grapes
Pumpkin Pie Gold Cake
Bromose Mixed Nuts

Elsewhere in this number you will find recipes for the principal dishes of this menu.

Following the repast, an hour was spent in listening to responses to appropriate toasts by various speakers, and a brief sketch of the rise and progress of the Battle Creek idea by the toastmaster, Dr. Kellogg, who, with eight or ten others, represented all now left in the city of those who were present at the dedication of the institution thirty-five years ago.

In opening the program, Dr. Kellogg said: —

"I am sure this is the very first Thanksgiving dinner we have ever attended, where turkey was served, at which the turkey felt just as well after the dinner as he did before, having had just as good a time as any of the rest of us."

Prof. Percy T. Magan was then introduced, and spoke to the toast, "The Conventional Turkey." He said in substance: —

"I read in the paper that the Battle Creek Sanitarium was to have a great feast; that instead of feeding the people turkey, they were going to give them turkey feed. If we have been enjoying

THE SANITARIUM DINING ROOM BEFORE THE FEAST.

THE GYMNASIUM BEFORE THE FEAST.

'turkey feed,' the Battle Creek turkeys are to be congratulated.

"We have forgotten in these days the position of the turkey in olden times. Our Puritan forefathers were far more thankful for a good crop of corn than for this modern 'conventional turkey.' It was only when they were hard pressed for food, when the corn crop, the crop of turkey feed, had failed, that they went to the woods for turkey and cranberries. The first and the true idea of Thanksgiving, then, is not to eat turkey, which is corn second-hand, but to eat the corn itself, first-hand; in other words, to eat what the turkey eats instead of eating the turkey. So, instead of departing from the original idea of Thanksgiving, we are to-day really coming back to it, by having our 'conventional turkey' served alive.

"This nation is famous for doing everything wrong end to. We celebrate Labor day by doing nothing — so we celebrate Thanksgiving day by murdering turkeys.

"I am very glad for the growing number of people that represent true ideas of health culture. The more I travel over the country, and the more people I meet, the more I find that the world is coming to believe that there is something good in healthful living. My friends, as we go about from place to place let us spread these principles."

Hon. W. C. Gage followed, and toasted the sentiment —

"Still let us for his golden corn send up our thanks to God."

"I have watched the career of this institution for thirty-five years, some of the time in very close relation to it, and I am rejoiced, as you doubtless are rejoiced to-day, at its great success.

"It has been said that ingratitude is the gravest of human crimes, and I am

A DIFFERENT VIEW OF THE GYMNASIUM.

quite sure that all present indorse this idea. None of us, however, could be charged with ingratitude to-day; our hearts are all grateful for this generous entertainment, and especially for the kind Providence that has done so much for 'the Battle Creek idea.'

"Thirty-five years ago there was planted on this ground the seed which germinated and brought forth this magnificent institution and these glorious principles.

"The saying is that you must go away from home to get the news. In my travels through the various States, I rarely stop at a place where the Battle Creek idea is not well known. I sometimes hear that Battle Creek is the town where they cure people by starving them. We know to-day how much truth there is in this statement. We know how likely we are to be starved on foods like those of which we have just partaken. This golden corn, this harvest of these thirty-five years, I suppose, represents the success of the Battle Creek idea, which you all know something about, which you have at least heard something about, and I trust know about practically in your own lives.

"I might mention one case in particular among the many with which I have come in contact in my travels: I met a gentleman in a hotel at Mackinaw Island. He was a dyspeptic — a typical Battle Creek patient. He could not eat anything that did not distress him; he would always leave the table hungry. He asked me if it would do him any good to come to Battle Creek. I told him that if he would come to Battle Creek and do as he was told, I could almost guarantee that it would do him a great deal of good. He started for Battle Creek the next day, down the lake, in a driving rain. The next I knew he

had reached the place, and had written back to his wife asking her to come too. I suppose he wanted her to share his misery. One evening, a little later, as I was sitting in front of my house, after returning from Mackinaw, this gentleman and his wife passed by. He recognized me, came up and sat down on my veranda. I asked him: —

"'How do you like Battle Creek?'

"He said: 'Battle Creek is the finest place in the world.'

"'How do you like the Sanitarium?'

"'It is the most wonderful thing in the world.'

"'Do you like the diet? Are they starving you?'

"'No, I eat too much — that is my greatest temptation.'

"He staid several weeks, and went home desperately in love with Battle Creek.

"If we who live here would have a little more love for these principles, and allow them to find a larger place in our hearts, we could be of great help in assisting to spread them in the world.

"I congratulate the workers in this institution; I congratulate Dr. Kellogg; I congratulate you as visitors to this place; and I believe we shall henceforth appreciate the principles more, and have them more thoroughly incorporated into our lives."

Response by the toastmaster, Dr. Kellogg: —

"I feel that I am to be congratulated because I had the good sense to lay hold of a good thing, and to stick to it. This is the only thing I need to be congratulated upon. I am proud of the truth which this institution represents; I am proud of its principles. I always was proud of them. There was a time when they were trampled underfoot and scorned, but that day has largely passed."

Dr. A. J. Reed responded to the toast —

"All the inhabitants of earth and air,
Be listed on the glutton's bill of fare."

"Principles, like paths, determine the course of man. The glutton travels in a principle broad enough to take in all the inhabitants of earth and air — a principle which has arrayed on one side, lust, and on the other side, misery, death, and destruction. His pathway is so broad that he can jump over the finest sensibilities which are the glory of humanity, and can take the sacred life of his fellow-creatures in order to satisfy an insatiable thirst and a morbid desire for stimulants. He eats to distend the walls of his stomach, to tickle his appetite, and he leaves behind a stain upon his conscience; while there are hung upon the walls of his memory pictures of distressed faces, looking up to him in pity and fright, instead of pictures of waving fields of grain and loaded boughs of fruits — pictures of peace and prosperity, of happiness, and of a conscience undisturbed.

"When I was a boy, I thought there existed in the world a certain channel which experience had taught men was the right channel through which to guide the barque of life and health; that there were occasionally a few people in the world, like Chinamen, who indulged in horseflesh, but that the great mass of mankind kept themselves within safe limits. I remember very well, when visiting a foreign country, seeing the lagoons, where animals with strange shapes would peer out from behind coral reefs, and look at you in wonder and amazement. I said, 'Surely, none can ever think of taking the lives of these horrible creatures to satisfy appetite.' Deep down in the waters of the lagoon could be seen fish having faces almost human, the devilfish and the octopus, oysters, shellfish, reaching out, feeding on the slime beneath. There was a

peculiar eel that lived among the coral reefs, which would dart his head out from the reef, and show himself to be a most hideous and unpleasant-looking animal. I was completely surprised, on going a little farther, to find human beings trying to capture these creatures; the devilfish for luxury; these creeping and crawling things of the lagoon to eat because they gave flavor. These same people did not hesitate — when occasion seemed to demand, and they found a brother, a human being, a little weaker — to take even his life, and to use him to satiate appetite. We call that cannibalism. I suppose we could dignify it by the term butchering; but it seems to me, after such a feast as we have enjoyed to-day with a clear conscience, we can certainly go to our homes with happiness and joy; we can look all our fellow-creatures in the face, and know that they will regard us with looks of kindness and gratitude only; and that we ourselves shall become more noble, from an ethical standpoint, at least, for the consciousness of having done that which is right. I know of no principle of ethics that holds out any hope for the glutton. Neither science nor reason holds out any promise to the glutton; his path is a path of shipwreck, disaster, disease. His path is broad, and leads to destruction."

Dr. J. F. Morse responded to "A Feast of Reason."

He said in part: —

"When God created mankind, he created him with a fellow-feeling for every created thing. I know that some teachers of pedagogy tell us that our feeling of sympathy with the birds that fly is simply a remembrance of the time when we were like them; that our feeling of delight and sympathy with the fish when they swim through the cool waters of the pool is simply a reminder of the past. I do not believe this, but I do believe that when God created the intelligences of the world, he gave to all a fellow-feeling. I believe that one ought always to preserve this holy feeling. I never saw a hunter who had no feeling of regret when looking into the eyes of the beast he had slain. This feeling makes possible the feast of reason, the flow of soul."

Mr. H. E. Osborne responded to "High living and high thinking."

"I think, ladies and gentlemen, that your experience has been something like mine: you have found yourselves at times just reaching for high living, but not quite able to grasp it. At times you have been able to catch glimpses of high ideas, such ideas as have been stimulated by the fellowship we have enjoyed here to-day.

"The present situation reminds me of what is sometimes termed the 'irony of fate.' You have witnessed the spectacle of unmarried ladies trying to teach young mothers how to train their children; of bachelors making an earnest effort to teach their unmarried brethren the interesting science of domestic economy. Perhaps this is why I was chosen to make a few remarks about high living, since my life for the most part has been somewhat along the sub-basement plan. But it may be that we who have lived in the basement have a tendency to ideals. We would like to get up into your 'sky-parlor.' So it may be that I can suggest a helpful thought.

"It is unreasonable to suppose that men who live in crowded and wicked sections of our great cities, whose dietary, whose surroundings and privileges, are the very worst, could be capable of very high thinking. In that fact we have an object lesson, teaching the great truth that right living is essential to high

THE GYMNASIUM DURING THE TOASTS.

thoughts, to noble aspirations, and to good purposes. When our methods of life are right, we can hope to think better; and thinking better, we can hope to become better. It is a most encouraging thought that right living and high thinking, if you please, are the first steps in the attainment of an ideal character, because as we live we think, and if we live high, then we can hope to think high; and finally, perchance, we can come into that happy place which was suggested by a remark of Kepler one day, when, after having viewed the planets through his telescope, he said to a friend, 'I have been thinking this morning the earliest thoughts of God over again.' If we can teach ourselves high thinking; model our thoughts after him who has declared that his thoughts are as high above our thoughts as heaven is higher than the earth, then it may be that we may hope yet to attain to the likeness of his own blessed image."

At the conclusion of the toasts Dr. Kellogg said: —

"I wish to bring before your minds the things which have made this institution great. Instead of having one doctor and one patient, and not one single nurse, as when the institution started thirty-five years ago, there are now one hundred and twenty doctors, more than one hundred medical students, seven hundred trained nurses, and fifteen hundred people in other places — almost twenty-five hundred people altogether who are carrying on this work. Instead of a little wooden building here in the rear, there are sixty institutions; twenty-seven sanitariums and branches — sixty institutions in all, scattered through thirteen different countries in the world. There are thirteen food companies manufacturing food, and the present prospect is that all the citizens of Battle Creek will soon be engaged in this same business. There never was a time when health foods were so popular as now.

"My friends, we may congratulate ourselves upon the success of the Sanitarium idea. We have something here that is great; it is one of the greatest things on the face of the earth, and that is the principles, the ideas, which underlie this work.

"One reason we asked you to come here to dinner was because we wanted to show you how easy it is to get over Thanksgiving day without killing anything. We want to get you into our 'sky-parlor,' hoping that when we get you in, we can shut the door and keep you in. Here are one thousand persons who have come to dine with us. We would like to shut the door, and keep all these people in the 'sky-parlor.'

"Think a moment,— look at the grand work that is being carried forward all over the world, not by force of human power, not by force of keen, capable organization, but comparatively without organization, against prejudice, against all the natural tendencies of men. This work has prospered and grown to its present great proportions, and, my friends, why is it? It is because God is in it — because it is truth, and truth is mighty. Is it not worth while to stand beside such mighty truth, that has such power? Is it not safe to set our feet upon it, to lay hold of it, and to go with it? Is it not a thing we can stand by, and stand for, and be witnesses for, ensamples of? After such a demonstration as we have had in the experience of the last thirty-five years, we can say we know that God is in this work. The time has come when we should appreciate it, and show our appreciation of it by our loyalty to, and by our consistent representation of, these principles in our daily lives."

RECIPES FOR A FEAST WITHOUT SLAUGHTER.

Vegetable Oyster Soup.— Cook the oysters in boiling water until tender, after washing and scraping. When nearly done, season with salt, and allow them to cook until the water is nearly gone. Drain and press through a fine sieve. Thin to the proper consistency with cream, and add a little nut butter if desired. Serve with dry toasted wheat flakes instead of crackers.

Nuttolene Fricassee.— With a fork shave one-half pound of nuttolene into thin slices. Prepare a corn sauce by adding to one-half pint of corn pulp two well-beaten eggs, one pint of water or rich milk, and salt to taste. Arrange the nuttolene loosely in the bottom of an oiled baking dish, and stew it in a small amount of water until it is tender, which will take about one-half hour. Pour over it the corn sauce. Bake until the corn thickens to the consistency of custard, and serve hot in side dishes.

Nut Roast.— Mix together one cupful of peas pulp, bean pulp, and one cupful of finely chopped nuts. (English walnuts are good.) Season with sage and salt. Make a dressing from four slices of zwieback, by pouring over it boiling water, and then covering. Let it stand a few minutes, then with a fork break it up, and pour over it one-half cupful of cream, and season to taste with sage, salt, and a bit of grated onion. Line an oiled baking dish with one half of the first mixture, put the dressing in, then cover with the remainder of the mixture with the nut in it. Pour over the top half a cup of rich cream, and bake for one hour and a half. Serve in slices with cranberry sauce, and garnish with a sprig of green.

Grape Nectar.— To one quart of unfermented grape wine add the juice from one pint of strawberries, and two lemons. Sweeten to taste. Serve cold.

Malted Nuts.— Carefully dissolve two tablespoonfuls of malted nuts with a little warm water, and gradually stir in one cupful of boiling water. Some might prefer adding a pinch of salt. This will serve one person.

Protose Salad.— Over half a pound of protose, cut into small cubes, pour a mayonnaise dressing, made by stirring into the yolk of one egg, a drop at a time, about one-half cupful of peanut or olive oil or melted butter. Add salt before commencing to stir, and, as it thickens, thin with lemon juice.

Gold Cake.— Beat the yolks of three eggs until very stiff, with the juice and grated rind of half a lemon. Fold this into the whites, beaten to a stiff froth after having added a pinch of salt, and when moderately stiff, add one-half tablespoonful of lemon juice. Carefully fold in one-half cupful of pastry flour and one-half cupful of dates. The dates should be washed, stoned, and cut into small pieces, and dredged with flour. Bake thirty minutes in a moderate oven. Frost with the following icing: —

Malt Honey Icing.— Boil one-half pint of malt honey until it threads, then pour slowly over the stiffly beaten white of one egg, to which a pinch of salt and one-half tablespoonful of lemon juice have been added. Beat until slightly cool; then spread on the cake.

Kornlet.— Put one can of corn through the colander, and season with salt to taste, and cream or nut butter if desired. Heat thoroughly and serve.

EDITORIAL.

DR. SALMON VERSUS DR. KOCH.

DR. SALMON, the eminent physician and scientist who is at the head of the "Bureau of Animal Industry of the Department of Agriculture," presented before the American Medical Association, at its last meeting, a paper in which he took strong issue with Dr. Koch's theory in relation to the communicability of animal tuberculosis to human beings. He showed that tuberculosis increases in children in direct relation to its increase in cows. At the present time, two or three in every hundred of all the cows in the United States are sick with tuberculosis, yet giving milk and infecting the dairy supplies of our cities and towns to an enormous extent, for one cow often contaminates the milk of a hundred or more by admixture of the milk in transportation. In some herds, seventy-five per cent of the cows have been found affected. In some parts of Europe the disease has extended until half of all the cows in the country are diseased, and the same state of things is rapidly coming about in this country, now existing in some parts of New England. The only safety in the use of milk is in first cooking it, unless the cow producing it has been carefully examined by a competent veterinarian, and it is known to be healthy.

The Doctor showed that hogs are each year becoming more and more subject to tuberculosis, as well as other maladies. He also called attention to the fact that in spite of municipal and government inspection service, vast quantities of diseased animals are annually consumed as food. More than thirty thousand slaughtered animals are condemned each year for hog cholera alone; but a much larger number of animals, less intensely affected with this disease, are allowed to pass by the inspectors, only those organs actually giving gross evidence of disease being rejected. The same is true of many other infectious and inflammatory diseases. Thus a large part of the meat eaten is actually more or less diseased.

Trichinæ are increasing among hogs. As Dr. Salmon shows, no inspection can possibly protect against this terrible parasite, for the reason that it may not be present in the part examined, while swarming in some other part.

In the light of Dr. Salmon's revelations, and no man living is better prepared to speak on the subject, we are compelled to look upon every great dairy as a cow hospital, from which disease is dispensed to the community at so much per quart; and every slaughterhouse or butcher shop as a morgue, in which the corpses of living beings, killed by violence and disease, are laid out to be divided into human meat and cat's or dog's meat, between the kitchen oven or the frying pan and the big kettle of the soap maker, or the rendering establishment; and every packing house, a big undertaker's establishment, where men whom the famous old biographer, Plutarch, would call "layers out of corpses," pack away into decorated coffins of various shapes and sizes, the reeking and disease-tainted bodies of the slain, not, alas, for cremation, nor for decent burial or other sanitary disposal, nor even to supply the insatiable maw of the scavenger tribes,— the hawks, buzzards, wolves, hogs, hyenas, rats, and worms,— but to be served up to the lord of creation, to be spread out with all the hideous suggestiveness of the dissecting room and the boneyard or the cemetery, to be entombed in the catacombs of human stomachs.

How long will men continue to "taint their bodies with a food profane," to quote an old poet, whom modern orthodoxy would denounce as a heathen, but whose philosophy

and practice, in eating, at least, were more in harmony with the divine order than the philosophy and practice that prevail at present, even in the most highly civilized and Christian communities in the world.

THE SIMPLE LIFE.

COUNT TOLSTOI, the Russian nobleman whose literary genius has attracted the notice of the world, has for many years bent the whole force of his great abilities to the task of holding up before his fellowmen the beauty of simplicity and naturalness, and has himself set an example of consistency in living up to the precepts which he has so earnestly advocated — a thing rarely met with, even among the most exemplary public teachers. Although possessed of wealth sufficient to enable him to lead a life of ease and luxury, to live in splendor, surrounded by lackeys ever ready to minister to every desire, he chooses to live rather in the most simple manner possible, wearing shoes of his own making, clad in the plainest of garments, eating the simplest of food, avoiding every luxury and artificial need, and leading a life of the most abstemious sobriety and temperance. Recognizing the unnaturalness of slaughter and the eating of animal flesh, he uses no butchered animal foods of any sort, and confines himself almost exclusively to fruits and nuts, with a moderate allowance of milk and eggs.

Emerson, Alcott, and others of the sages of Concord caught the same thought more than half a century ago, and sought to start an exodus out of the Egypt of civilized perversity toward the Palestine of natural simplicity, natural diet, natural dress, and a simple order of life.

The rejuvenating power of the natural life is recognized by all the world. It is this recognition which every summer leads such multitudes away from the centers of civilization and artificiality to the seashore, where the most marvelous, one might almost say miraculous, change is wrought in a few weeks' time, bringing back the roses to pale cheeks, the luster to dull eyes, and health and vigor to enfeebled frames,— the result of the vitalizing influence of tonic baths, the vivifying sunshine, and the natural out-of-door life. If such great results are secured by so short an experience of natural living, what might be expected of the habitual following of such a life, at least in its essential principles?

It is for the living of such a life that this journal works and pleads.

THE "CHICAGO AMERICAN" MISTAKEN.

THE editor of the *Chicago American* says a great number of good things about diet and other subjects, but, for once, he has fallen into error. In an editorial entitled, "Vegetarianism and Insanity," the *American* intimates that a certain Mr. Sterner, a medical student at Harvard, became a lunatic because he was a vegetarian. It is no doubt true that Mr. Sterner became insane, and it is reported that he was a vegetarian; but to say that he became insane *because* he was a vegetarian, is certainly not justified by the evidence. If the disuse of flesh foods will render a man insane, certainly we should find lunacy extremely prevalent among those who have adopted a nonflesh dietary. The writer is acquainted with many thousands of vegetarians, and it is certainly not any exaggeration to say that insanity is not more common among them than among other classes of people. According to the late census returns, there are nearly eighteen thousand lunatics in every million inhabitants in the United States, which would be at the rate of nearly two per cent.

After having been a strict vegetarian for thirty-five years, and having made the acquaintance of many thousands of persons who have discarded flesh eating, the writer is compelled to say that he has never yet seen a single lunatic who, prior to his becoming insane, had for any considerable time adhered to a nonflesh dietary. If Sterner became insane for lack of flesh food, it is reasonable to suppose that a liberal supply of meat would quickly restore him to health. We have waited to see whether any such evidence was forthcoming, but thus far it has not appeared, or at least our attention has not been called to any evidence of this sort.

The general testimony of those who have the care of the insane in State and private institutions has been that the use of flesh food increases the excitability of insane patients; that it often gives rise to insomnia, convulsions, and to various conditions which aggravate the mental disturbance.

Our editor well remarks, "There is something repulsive in eating huge pieces of meat, and murdering our fellow-animals to obtain them, but, constituted as we are at present, meat eating is an absolute necessity, especially when hard mental effort is required." Meat eating certainly is repulsive, and we are glad to be able to demonstrate that it is not an absolute necessity, either when hard mental effort is required, or at any other time, except in the absence of food of every other sort. Sir Isaac Newton demonstrated that the most severe mental effort can be performed without meat eating, by living on bread and water when demonstrating the principles of Calculus, the new mathematical method which he perfected in application to the revolutions of the moon. The average meat-eating American would be quite unable to cope with the East Indian pundit in capacity for mental activity.

But the error to which we especially call attention is embodied in the following statement by the *American:* "Do not follow the example of Tolstoi; he made himself ill for lack of meat, and then gave up vegetarianism." The writer recently received a letter from Leo Tolstoi, Jr., son of the famous author, himself well known in literary circles, in which he said: —

"My father continues to be vegetarian, but with eggs and milk."

From the foregoing, it is evident that Tolstoi has not renounced vegetarianism, and has no idea of doing so. We are glad to learn from a more recent letter that this noble champion of human rights and of simple and natural modes of life, is in better health, notwithstanding the persecutions to which he has been subjected. There is no evidence whatever that his illness has been in any way due to the lack of flesh food. Of course it is easily possible for a person to deprive himself of the elements necessary to sustain an active, vigorous life; but this may be equally true when one is subsisting upon a flesh dietary as when the bill of fare is wholly exclusive of flesh foods of every description. Doubtless many persons have suffered greatly from discarding meat without supplying its place by other substances rich in nitrogen, such as nuts, eggs, peas, beans, or lentils. But the unhappy results which follow such neglect must be attributed to ignorance or carelessness rather than to the discarding of an unnatural and unwholesome diet for one which is both natural and wholesome.

EATING AND DRINKING DAMNATION.

THE apostle Paul speaks of people who "eat and drink damnation" (1 Cor. 11: 29). Whatever may have been the application intended by the great apostle, certain it is that thousands of men and women are daily eating and drinking destruction to mind, soul, and body. Many a mother spreads upon her table the viands which stimulate into activity, in the bodies of her children. appetites and tendencies which,

when fully developed, end in drunkenness, debauchery, and crime. Wrong eating certainly lays the foundation for nearly all the ills to which human flesh is heir, physically, mentally, and morally. Most diseases may be traced to the stomach. Much of the ill temper, despondency, and even insanity is the outgrowth of malnutrition, the beginnings of which may be fairly traced to disordered digestion. Diet reform is steadily pressing its way to the front as the only real foundation for all substantial and enduring reforms. Every reform that does not include diet reform must sooner or later collapse. Tobacco using, the opium habit, various drug habits, and cognate vices have their foundation in disorders which originate in flesh meats, pickles, condiments, spices, and rich dishes which appear at every meal upon the table of the average American citizen. True temperance reform must begin at the dinner table.

A Modern Arcadia.

Probably few Americans have visited the island of Tagula, a small bit of land forming a part of the Dutch Archipelago, and located about one thousand miles north of Australia. Those who have visited this interesting little corner of the globe, report the location there of a veritable modern Arcadia, founded in 1890, by Rev. James Newland, a Methodist minister from Ohio, who, something more than eleven years ago, left this country with a company of seventy others who had determined to find some spot on the globe where they could establish natural conditions of life, especially in relation to diet. Every person composing this company was thoroughly persuaded of the unnaturalness and harmfulness of a flesh dietary, and was anxious to escape from contact with the unnatural dietetic practices which prevail in almost every civilized community.

Hawaii was first visited. From this point, excursions were made in various directions, until finally the island of Tagula was selected, and here this happy community is thriving, finding an easy support by the cultivation of indigo, yams, cocoanuts, breadfruit, and plantain. A few have tired of the monotony of their island home, and have returned to this country; but the great majority are quite content with their isolation, finding ample compensation in the climatic conditions which favor a simple and natural life, and in the opportunity to rear their children where they are safe from the contaminating influences of a perverted civilization.

It scarcely requires a prophet to predict that the time is not far distant when many thousands will be longing for a similar opportunity. The world is awaking to a realization of the awful perversions and enormities which have somehow been grafted upon our modern civilization.

ANSWERS TO CORRESPONDENTS.

Indigestion.—J. W. M., Ohio, 77 years old, asks for advice. He is troubled with constipation, coated tongue, sour stomach, disturbed sleep, bad dreams, irrational appetite, frequent and painful micturition. He is a lawyer.

Ans. — This patient requires treatment at a sanitarium; the case is too serious to be successfully treated at home. However, the following suggestions may be helpful. For the constipation, granose, protose, malt honey confectionery, bromose, toasted wheat flakes, and an abundance of fruit. This diet will also clear the tongue, and probably relieve the sour stomach. The disturbance of sleep may be due to digestive disorders; a fomentation over the stomach, followed by a moist abdominal bandage at night, will help relieve the constipation, and aid in securing sleep. The patient should eat twice a day, — at 8 o'clock A. M. and 3 P. M.; nothing should be taken after the second meal. For painful micturition, a neutral bath or warm bath at 92° to 100° may be taken once or twice daily for fifteen or twenty minutes. The patient should drink freely, but not at mealtimes. There may possibly be an enlarged prostate, or some other local affection. The case requires careful investigation by a skilled physician. The patient should place himself under treatment for several months at a thoroughly equipped and ration-

ally conducted sanitarium. Meats, mustard, pepper, and condiments of all sorts should be especially avoided. The patient should dress warmly, and avoid chilling; he should take special care to keep the feet warm.

Obesity — Sour Bread. — N. B., Iowa, wishes to know (1) the cause of obesity, and how it may be reduced; (2) how to prevent bread from souring. She has tried many recipes, and fails every time.

Ans. — 1. Obesity is generally due to excessive eating or deficient exercise. The body is like a locomotive with its tender: if more coal is put on at the stations than the locomotive consumes in pulling the train from one station to another, the result will by and by be, that the tender will be heaped high with coal; then the coal will be piled up in the mail coach, and the smoking car, and the passenger coaches, and after a while even the sleeping cars will be invaded with coal, and the passengers discommoded; and the train may, after a while, be so weighted down with coal that the locomotive would be unable to pull it. The analogy, as applied to the human body, is almost perfect. The body is a machine; it consumes food as the locomotive consumes fuel. If more food is taken in daily than is consumed for heating the body, and in the performance of muscular work in bodily activities, the result will be an accumulation of food material in the form of fat. It is evident, then, that the remedy must be found in lessening the amount of food to the actual necessities of the body, especially avoiding foods which promote the development of fat, and increasing the consumption of food-material by work. Four fifths of the food taken is used for heating the body; one fifth of this food is used in work. It is evident, then, that it is important, not only to increase the amount of work done, but to increase the amount of heat produced. The heat production can be increased only by exposing the body to cold. Cold water and cold air extract heat from the body, and increase the rate at which the tissues are consumed, as this consumption of tissue is the source of heat; hence the great value of cold baths. When used for the purpose of reducing fat, cold baths should be prolonged. It is impossible to prolong a bath very greatly when the temperature is too low, hence the temperature must be moderate, as 70° to 75°. This temperature may be prolonged for ten to fifteen minutes, provided the patient is vigorously rubbed during the bath. The wet-sheet pack is an excellent means of reducing flesh. The sheet should be applied quite wet, at a temperature of 60°; and the patient should remain in the pack until vigorous perspiration is induced; after that he should take the wet-sheet rub, the shallow bath, or the cold shower bath, at a temperature of from 60° to 65°, from one to three minutes. The purpose of the shallow bath and the wet-hand rub is to serve as a tonic to overcome the depressing effects of the sweating bath, and to stimulate the heat-producing or tissue-consuming processes of the body. After the bath, the patient should exercise vigorously until well warmed up and perspiring freely; he should then take a cold shower bath. This treatment should be repeated twice a day. For a more rapid reduction of flesh it is well to confine the diet to one or two articles, so that the appetite will not be stimulated by a variety. If there is an excessive accumulation of flesh in some particular region, as the abdomen, the consumption of fat in this particular part may be hastened by the employment of local packs twice a day, and the heating abdominal compress worn constantly between the applications.

2. Discard the use of yeast, and employ water breads instead. Yeast bread, salt-rising bread, and all fermented breads are more or less objectionable because of the multitude of germs and yeast spores which they contain. Full directions are given for making various water breads in "Every Day Dishes."

Hydrozone and Glycozone — Locomotor Ataxia. — N. M., Michigan: "1. Are Hydrozone and Glycozone good for either a catarrhal or a lung cough? 2. Is there any cure for locomotor ataxia?"

Ans. — 1. These remedies may be used with an atomizer, in the conditions named.

2. We have seen many cases of locomotor ataxia practically recover health under a thorough course of physiological treatment.

Drinking Coffee to Keep Awake — Clothing — Cramp — Soap — Kerosene for the Hands. — W. F. T., Wisconsin: "1. On account of night work, I drink coffee to keep me awake. Will you please name a substitute? 2. In hot weather I am obliged to wear the very lightest clothing, and in cold weather the very heaviest, to keep comfortable. Why is this? 3. What is the cause and cure for foot cramp at night? 4. What soap do you recommend for bathing purposes? 5. I am an engineer, and use kerosene to cut the grease and dirt on my hands. Would lard oil be better?"

Ans. — 1. It is wrong to compel the body to work when sleep is needed, and to use a drug to produce wakefulness is an abuse of the brain and nervous system which will certainly be followed by physical retribution. If, in emergency, it is necessary for one to work when he ought to be asleep, both the disposition and the ability to work may be increased by means of a general cold bath. Bathing the

face with cold water is helpful, though less effective than a general bath.

2. Doubtless because your vital tone is low, and your nerve centers are not able to regulate the heat-making and heat-regulating processes of the body.

3. Probably irritability of the nerve centers and spine.

4. Castile soap, tar soap, and Pears' soap are all good.

5. There is no harm in the use of kerosene, and it is probably more efficient than animal oils.

Fruit Odors in Urine.— C. G. D. C., Michigan: "After taking the juice of four or five sweet oranges, I have several times noticed a stimulating effect on the kidneys, and an appearance and odor in the urine which suggested that the juice had been thrown off by the kidneys. I have also noticed a similar effect from the use of grape juice. What does this indicate, and what ought I to do for it?"

Ans.—Fruit juice is a natural diuretic, and its influence upon the kidneys is beneficial. It is not necessary to employ any remedy to prevent this effect, as it is helpful rather than harmful.

Looseness of the Bowels — Food for Child — Coffee — Meat Substitute — Olive Oil — Weak Back. — Mrs. I. S., Mississippi: "1. Please give a remedy for extreme looseness of the bowels in a child two years old. 2. What food would be best for this child? 3. We are using grape nuts. Is it good for children? 4. What can we drink in the place of coffee? 5. What can we use to cook with vegetables in the place of meat? 6. Is olive oil healthful? 7. Where can I obtain a recipe book for preparing healthful dishes? 8. For a person compelled to work from four o'clock in the morning till eight at night, would not three meals be better than two? 9. Do you recommend the cold morning bath during pregnancy? 10. What can I do to help a weakened constitution and disordered digestion? Would a medicinal tonic be beneficial? What can I do to build me up?

Ans.— 1. Give the child a diet of browned rice, zwieback, fruit juice, or Sanitas Infant Food. The wet-hand rub should be applied daily, and apply a cold towel covered with flannel to the abdomen, changing every two or three hours; be careful that the child does not become chilled. It is especially important that the legs be kept warm.

2. In addition to the foods mentioned, granola, toasted wheat flakes, granose flakes, rice flakes, and grānut may be used.

3. This is not a Sanitarium health food, though by many supposed to be such for the reason that it is made in Battle Creek. There are many foods made in Battle Creek which do not emanate from the Sanitarium or any of its allied institutions. We have found no occasion for recommending grape nuts.

4. It is better to drink nothing at meals, other than a few sips of water or fruit juice at the close of a meal. If some substitute for coffee must be used, it should be taken in small amount, and we know of nothing better to recommend than caramel-cereal, which is the Battle Creek Sanitarium substitute for coffee.

5. Protose is a satisfactory substitute for meat.

6. Olive oil is wholesome, if eaten in the natural state; it may perhaps be used in moderation as an addition to other foods, but it greatly diminishes the digestibility of farinaceous foods when taken with them, and especially vegetables, and hence must be avoided by persons who suffer from slow digestion.

7. Address the Good Health Publishing Co. for a copy of "Every Day Dishes" or "Science in the Kitchen."

8. A little fruit, with malt honey, may be taken at five or six o'clock, and may be beneficial if one feels the need of food. Fruit and malt honey, or meltose, have the advantage that they represent digestible food, are ready for immediate absorption, and do not tax the digestive organs as do cereals, nuts, and more common complicated food stuffs. No one should be compelled to work from four o'clock in the morning until eight o'clock at night.

9. Yes.

10. The cool bath, and an abundance of simple, digestible food, nine or ten hours of sleep daily, two or three hours' gentle exercise in the open air. The sense of weakness in the back is probably due to a prolapse of some of the abdominal organs. This would be overcome by wearing an abdominal supporter; the Natural Body Brace is fairly good for this purpose, but the Natural Abdominal Supporter is better. It may be worn at any time without injury.

Catarrh — Food Combinations.— J. T. J., Wisconsin: "1. How long does it take to cure dry catarrh? 2. Are fruits and green vegetables a good combination?"

Ans.— 1. Dry catarrh can never be cured; palliation alone is possible. The reason of this is, that this disease represents the third and last stage of catarrh — that in which the glands of the mucous membrane have become exhausted, and have undergone degeneration.

2. No.

The Menopause — Uric Acid.— Mrs. W. W. G., of Georgia: "1. What is the best line of treatment for a woman at the menopause? Please give directions for cold bathing at that time. 2. What ought one to do to prevent the formation of uric acid in the system? 3. When it has al-

ready produced rheumatism, what would you advise? 4. What is the best treatment for a case of chronic inflammation of the stomach? 5. Please explain hot and cold lavage."

Ans.— 1. The patient should be relieved, if possible, from care, — from burdens, either mental or physical. Remain out of doors as much as possible, especially if very nervous, or disturbed by "flushings." A prolonged neutral bath at 92° to 96°, for twenty or thirty minutes, may be taken daily with advantage. A cool bath may be taken in the morning, but should be a towel rub or a cold mitten friction, rather than a cold tub bath or a cold shower bath; the shower and tub baths are too severe.

2. Exercise out of doors should be taken two or three hours daily. The muscles must be used to the extent of fatigue every day. The exercise should be vigorous enough to quicken the respiration so as to introduce oxygen, and burn up the uric acid. An antiuric-acid diet should be employed, and meat should be discarded. The food should be thoroughly hygienic in every way. The whole life should be regulated in accordance with the rules of health. A sweating bath just before retiring, followed by a short cold bath, will be found advantageous.

3. The measures suggested should be employed with much perseverance. The presence of rheumatism indicates that the system is saturated with uric acid, and the whole life must be regulated in such a way as to encourage the elimination of poison, and to prevent its further accumulation in the system.

4. The chronic inflammation of the stomach, or gastritis, commonly requires prolonged treatment in a thoroughly equipped sanitarium; there is no simple treatment which will effect a cure. The patient must be kept under immediate medical direction, as the diet and treatment must be carefully supervised.

5. Hot and cold, or alternate, lavage, consists in introducing into the stomach, through a stomach tube, hot and cold water in alternation. This treatment should be employed only under the supervision of a competent physician.

St. Vitus's Dance.—E. L., North Dakota: "1. What treatment would you prescribe for a boy of eight years who has flat chest, and is very thin and narrow shouldered? He is quite nervous, and of late has the habit of twitching his face. He also squirms with his whole body. 2. Is there danger of St. Vitus's dance? 3. Should he go to school?"

Ans.— 1. Abundance of out-of-door exercise and a daily cold towel bath at 60°, with a sufficient quantity of wholesome food, especially fat and blood-making food, such as toasted wheat flakes, granola, grānut, malted nuts, malt honey, food candy, and similar foods.

2. Yes.

3. Such a child should be taught at home by a private tutor.

Catarrh Polypi.—T. S. wishes to know what to do for polypi in the nose. They have been cut out and burned out several times, but always return. He is also troubled with catarrh.

Ans. — The polypi should be removed, and the nasal catarrh to which the growths are due, should be thoroughly cured by the application of appropriate local and constitutional remedies.

Bronchitis — Fermentation in the Stomach — Toast Foods.— W. E. B., New York: "1. Are catarrh and bronchitis caused by microbes? 2. Will fermentation take place in the stomach if microbes are not present? 3. Is toasted bread to be recommended for one who has gas in the stomach? 4. Are onions, lettuce, spinach, and tomatoes objectionable with vinegar?"

Ans.— 1. Chronic catarrh and bronchitis are certainly due to the pernicious activity of germs. Acute catarrh begins with congestion of the mucous membrane, but this would be quickly recovered from, were it not that the congestion lessens the resistance of the tissues to the invasion of germs, so that these enemies to life and health become domiciled, so to speak, growing and multiplying, and serving to establish the diseased conditions which are more or less permanent.

2. Fermentation generally results from the action of yeast-cells; these can hardly be called germs, but are closely related to micro-organisms, and are generally associated with them.

3. Yes.

4. Yes. Vinegar is an unwholesome substance, which should be entirely discarded from the dietary; it interferes with the digestion of vegetables and grains, preventing the action of saliva upon the starch. It is also shown to be highly injurious to the stomach and liver, sometimes producing cirrhosis of the liver. It has more than twice the power of alcohol to cause "gin liver." The "wrigglers," or vinegar eels, which good cider vinegar nearly always contains, as has been recently claimed by eminent scientific authorities, often take up their abode in the intestine, becoming parasites, like the tapeworm and other parasitic organisms.

LITERARY NOTICES.

AMONG the many special book numbers of the year, that published by the **Outlook** is notable for several novel features. The *Outlook* was one of the first, if not the very first, American periodicals to institute the custom of an annual illustrated holiday book number; and the present issue is the thirteenth of the kind. In addition to careful notices of a great many of the important art and holiday books of the season, and brief notes about scores of minor publications, this issue contains a collection of brief papers on that most interesting subject, "The Best Books for Children," to which contribute such famous writers of children's books, and writers about children's reading, as Mary Mapes Dodge, Kate Douglass Wiggin, Edward Everett Hale, Horace E. Scudder, Frank R. Stockton, Thomas Wentworth Higginson, Tudor Jenks, and others; while the articles are illustrated by portraits of the writers of classical children's books, and pictures from recent editions of these books.

George Madden Martin's Emmy Lou stories in **McClure's Magazine** have achieved a just fame. Emmy Lou herself is one of the most winsome little girls you will meet in contemporary fiction, and equally well drawn are Emmy Lou's teachers,—well drawn because they are always observed from Emmy Lou's point of view. With every promotion from "Reader" to "Reader" Emmy Lou has a new teacher, and each is a distinct and recognizable type.

The December number of the **Arena** opens with a paper on "The Rights of Men," by the Hon. W. A. Northcott, Lieutenant-Governor of Illinois. This is followed by a timely article on "Publishers and the Postal Department," by Gen. C. H. Howard, president of the National Publishers' Bureau, the same subject being considered also in an editorial on "Bureaucracy in America." "Dame Fashion's Thumb," by Marian Gertrude Haines, is an excellent piece of satire.

The approaching coronation in England is only vaguely understood in this country. The mediæval ceremonies have never yet been described in full. In the Christmas **Lippincott's Magazine** this is done with ample learning and a sense of the historic significance of the event, by Mrs. Belloc-Lowndes, author of the "Life of King Edward VII," whose descriptions of English life and manners have been widely read.

The most striking feature of **Current Literature** for December is the article, "Of Making Many Books," a timely review of the work that is being done in the line of book making. The article is profusely illustrated by pictures taken from various new books of the different popular publishers. This article is followed by another on "The Ideal Book," by William Morris, in which he considers the technique of a well-printed book. This is also illustrated by pictures of book covers and decorative illustrations.

The Christmas number of **Scribner's Magazine** is especially notable for charming fiction and novel and effective art features. The old-fashioned Christmas story does not prevail, but in its place has come the story of bright and cheerful social phases, delicate sentiment, wit, and humor. The best work of the best writers is used in these special numbers, rather than Christmas tales written to order. In this number appear such authors as Thomas Nelson Page, F. Hopkinson Smith, William Henry Bishop, and Arthur Cosslett Smith.

Apropos of the disappearance of leprosy and other skin diseases, we read in Gilbert White's **"Natural History of Selbourne,"** in letter 37, written Jan. 8, 1778, as follows:—

"This happy change perhaps may have originated and been continued from the smaller quantity of salted meat and fish now eaten in these kingdoms; *from the use of linen next the skin;* from the plenty of better bread; and from the profusion of fruits, roots, legumes, and greens, so common in every family. . . . The use of linen changes, shirts or shifts, in the room of the sordid and filthy woolen, long worn next the skin, is a matter of neatness comparatively modern, but it must prove a great means of preventing cutaneous ills. At this very time, woolen instead of linen prevails among the poorer Welsh, who are subject to foul eruptions."

(From a letter of John F. Fitzpatrick, Esq., St. Paul, Minn., of Sept. 20, 1901, addressed to the *Deimel* Linen-Mesh-System Company. See also their advertisement in this month's issue.)

The Handsomest Calendar of the season (in ten colors) six beautiful heads (on six sheets, 10x12 inches), reproductions of paintings by Moran, issued by General Passenger Department, Chicago, Milwaukee & St. Paul Railway, will be sent on receipt of twenty-five cents. Address F. A. Miller, General Passenger Agent, Chicago.

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J. H. KELLOGG, M. D., Editor

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THE CHICAGO, MILWAUKEE & ST. PAUL RAILWAY.

MANY people unacquainted with the geography of the West imagine that because the names "Chicago, Milwaukee & St. Paul" are used in the corporate title of the railway owning the Short Line between Chicago and Omaha, they must go via the cities of Milwaukee and St. Paul to reach their destination — if it be Omaha or west thereof. This is a mistaken idea. On a map, the line running directly east and west would look like this: —

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There is nothing more simple than that, and it is less than 500 miles between Chicago and Omaha. There are two through trains daily in each direction, with the best sleeping-car and dining-car service. All regular travelers know and appreciate the merits of the Chicago, Milwaukee & St. Paul Railway's Short Line between the East and the West.

Time tables, maps, and information furnished on application to Robert C. Jones, Michigan Passenger Agent, 32 Campus Martius Bldg., Detroit.

SPECIAL attention is called to the advertisement of Dr. Kellogg's "Plain Facts for Old and Young of Both Sexes," beautifully illustrated, and accompanied by a new Anatomical Chart, or open manikin of "The Body Temple," printed in nine colors, three sections, thirty-three inches long.

About 300,000 copies of "Plain Facts" have been sold by subscription in the smaller form, without illustrations; and now in its enlarged, 800-page, 20th-century edition, with 350 beautiful half-tone and other illustrations, it is offered during this month to the readers of this journal, at forty per cent dis-

count from the retail prices, in order to advertise it widely.

Each book contains a Certificate of Membership in the Health Library Association, all of whose literature before listing was examined and approved by Mary Wood-Allen, M. D., Supt. Purity Dept. World's W. C. T. U.; and each purchaser of "Plain Facts" may at any time order publications from this list at a discount in premiums. Parents and others are thus sure of getting that which is both morally and scientifically sound, in this age of false "helps" to the married and the unmarried. It is published by the Health Library Association, F. E. Belden, Manager, Battle Creek, Mich.

A NEW YEAR'S SURPRISE.

QUITE unexpectedly we were able to secure another consignment of that rare biography, "My Mother's Life," on terms that make it possible to continue the offer appearing in the December GOOD HEALTH; that is, to send one copy of "My Mother's Life," and one year's subscription to GOOD HEALTH for $1.50, plus 15 cents for postage.

"My Mother's Life" is the biographical autobiography of Mrs. S. M. I. Henry, who is well known to our readers both as a writer and speaker. The autobiographical part of this book is more fascinating than romance. It is not at all what you would expect from an evangelist and reformer — until you have read it — then it is exactly what you would expect.

The biographical part is by Mrs. S. M. I. Henry's daughter, Mary Henry Rossiter, who is also well known to the readers of GOOD HEALTH. It has been said over and over that Mrs. Rossiter has written just the things that we talk of to one another. She put into the book those incidents, — the warm, home-like, human touches that give to almost every page a rare and permanent personal interest.

THE December number of *The Life Boat* is one of the best yet issued. It is devoted to the Chicago Medical Mission in particular, and gives interesting reminiscences of the beginnings of this work. Among the most vivid are the experiences of Emma Brinkman, Dr Paulson, Dr. Rand, and Mrs. Sadler. *The Life Boat* is always an inspiration to more earnest and sustained philanthropic effort. The subscription price is only twenty-five cents a year. Is not even one warmer throb of interest in your fellow men worth twenty-five cents?

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THE FEBRUARY GOOD HEALTH.

THE February GOOD HEALTH will maintain the high standard of the first number of the new year. There will be articles by the editor, Dr. J. H. Kellogg. There will be a valuable paper on "The Cure of the Drug Habit," by David Paulson, M. D. The Rev. Wm. Penn Alcott contributes an article on Sylvester Graham, illustrated, notably by the frontispiece, a picture of "The Edward's Elm," of Northampton, Mass., a "Sentinel of Three Centuries."

"Smallpox, and How to Treat It," is the subject of an article by Frederick M. Rossiter, M. D. This is a very timely subject.

Mr. F. E. Belden, a new contributor, writes of "Swine," giving some important facts concerning meat inspection for foreign countries, and some of the results to meat consumers in the United States

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TWO influential magazines have made an offer to the management of Good Health by which we are enabled to make an unusually low price for three of the leading magazines named below. That offer is now and hereby announced, to hold good until March 1st. Send your subscriptions NOW.

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CLASS A.	Regular Price.
GOOD HEALTH, m	$1.00
Everybody's Magazine, m	1.00
Good Health and Everybody's must be in every Club.	

CLASS B.	Regular Price.
Harper's Weekly, w	$4.00
The Outlook, w	3.00
Art Interchange, m	4.00
Scientific American, w	3.00

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World's Work, m	$3.00
Literary Digest, w	3.00
Town and Country, w	3.00

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Country Life, m	3.00

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Modern Priscilla, m	1.00
Ev'ry Month, m	1.00

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" " 2 of C, 1 of E	5.25
" " 1 of C, 2 of D	5.25
" " 1 of B, 1 of C	5.25
" " 1 of B, 1 of D, 1 of E.	5.25
" " 1 of B, 1 of C, 1 of F.	5.50
" " 2 of C, 1 of D	5.75
" " 1 of B, 2 of D	5.75
" " 2 of B	5.75
" " 1 of B, 1 of C, 1 of E.	5.75
" " 2 of B, 1 of F	6.00
" " 3 of C	6.25
" " 2 of B, 1 of E	6.25
" " 1 of B, 1 of C, 1 of D.	6.25
" " 1 of B, 2 of C	6.75
" " 2 of B, 1 of D	6.75
" " 2 of B, 1 of C	7.25
" " 3 of B	7.75

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" " 1 of E, 1 of F	2.50
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" " 2 of E	2.75
" " 2 of E, 1 of F	3.00
" " 3 of E	3.25
" " 2 of D	3.75
" " 1 of D, 2 of E	3.75
" " 1 of C, 1 of E	3.75
" " 1 of C, 2 of F	3.75
" " 1 of C, 1 of E, 1 of F.	4.00
" " 2 of D, 1 of F	4.00
" " 2 of D, 1 of E	4.25
" " 1 of C, 2 of E	4.25
" " 1 of C, 1 of D	4.25
" " 1 of C, 1 of D, 1 of F.	4.50
" " 2 of C	4.75
" " 1 of C, 1 of D, 1 of E.	4.75

IMPORTANT NOTE.—Not more than five periodicals can be formed into one combination. "Good Health" and "Everybody's Magazine" must be included in each and every combination. Foreign postage extra.

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Cincinnati Northern Railroad Co.

TIME TABLE No. 9.

IN EFFECT SEPT. 22, 1901.

Trains Pass Battle Creek, as follows:

WEST-BOUND.

No. 22, Mail and Express.....6.53 P. M.
No. 24, Accommodation.....1.58 P. M.
No. 28, Local Freight.....8.30 A. M.

EAST-BOUND.

No. 21, Mail and Express.....8.30 A. M.
No. 23, Accommodation.....1.33 P. M.
No. 27, Local Freight.....5.15 P. M.

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J. L. READE,
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E. R. SMITH, City Pass. Agt., 6 West Main St.

GRAND TRUNK R'Y SYSTEM.

EAST	8	4	6	2	10	76
Chicago	AM11.05	PM 3.02	PM 8.15		AM 7.32	
Valparaiso	PM12.49	4.53	10.25		10.05	
South Bend	2.08	6.15	11.52		11.35	AM 7.10
Battle Creek	4.14	8.15	AM 3.00	AM 7.00	PMA2.00 L3.45	PM 5.00
Lansing	5.20	9.28	3.28	8.30	5.25	
Durand	6.00	10.15	4.25	9.30	6.30	
Saginaw	8.10			11.05	8.10	
Bay City	8.45			11.40	8.45	
Detroit	8.00		7.30	11.50	9.20	
Flint		10.40	4.54	10.21	7.28	
Port Huron	9.40	AM12.30	7.00	PM12.20	9.30	
London	AM12.32	3.37	10.10			
Hamilton	2.10	5.24	PM12.25			
Suspension Bridge	3.40	7.05	1.55	8.50	AM 3.40	
Buffalo		8.20	3.05	10.00	6.15	
Philadelphia	PM 3.47	PM 7.20	AM 6.55	AM 8.56	PM 3.47	
New York	4.33	8.23	8.23	9.33	4.33	
Toronto		AM 7.40	PM 1.30	PM 7.40		
Montreal		PM 7.00		AM 7.30		
Boston		AM 8.15		PM 7.05		
Portland		8.00		6.30		

WEST	3	5	7	9	11	75
Portland	AM 8.15	PM 6.00	AM10 30			
Boston	11.30	7.30				
Montreal	PM10.30	AM 9.00				
Toronto	AM 7.40	PM 1.00	PM 5.25		AM 8.30	
New York	PM 6.10	8.00	AM10.00			
Philadelphia	7.00	8.45				
Buffalo	AM 6.15	AM 8.00	PM 9.30			
Suspension Bridge	7.00	PM 2.00	11.15			
Hamilton	8.45					
London	11.05					
Port Huron	M 12.00	9.00	AM 3.20	AM 6.50	PM 3.50	
Flint	PM 1.35	11.07	4.54	8.45	5.54	
Bay City				7.25	4.00	
Saginaw				8.00	4.35	
Detroit	AM11.30	10.00		7.00	4.10	
Durand	PM 2.02	AM12.05	5.22	9.30	6.30	
Lansing	3.45	12.57	6.05	10.50	7.53	
Battle Creek	4.50	2.17	7.10	PM12.15	9.10	AM 7.30
South Bend	5.35	4.08	8.55	2.39		PM 5.20
Valparaiso	6.51	5.25	10.05	3.57		
Chicago	8.45	7.20	11.55	6.18		

Nos. 2—4—6—8—Daily
Nos. 10-76-Daily ex't Sunday

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Nos. 9-11-75-Daily ex't Sunday

W. C. CUNLIFFE,
Agent, Battle Creek.

MICHIGAN CENTRAL

"The Niagara Falls Route."

Corrected Nov. 3, 1901.

EAST	8 *Night Express	12 †Detr'it Accom.	6 †Mail & Express	10 *N.Y. & Bos. Sp.	14 *East'n Express	4 *N.Y. St.Sp.	36 *Atl'tic Express
Chicago	pm 9.35		am 6.45	am10.30	pm 3.00	pm5.30	pm11.30
Michigan City	11.25		8.43	pm12.08	4.39	7.00	am 1.20
Niles	am12.40		10.15	1.00	5.35	7.55	2.30
Kalamazoo	2.10	am 7.30	pm12.10	2.08	6.45	9.03	4.10
Battle Creek	3.00	8.10	1.00	2.42	7.17	9.37	5.00
Marshall	3.33	8.38	1.30	3.09	7.43		5.30
Albion	3.55	9.01	1.50	3.30	8.03		5.52
Jackson	4.50	10.01	2.35	4.05	8.40	10.50	6.40
Ann Arbor	5.55	11.1[illegible]	3.47	4.58	9.30	11.40	7.45
Detroit	7.15	pm12.2[illegible]	5.30	6.00	10.00	am12.40	9.15
Falls View							pm 5.09
Suspension Bridge							5.32
Niagara Falls							5.40
Buffalo				am12.20	am 7.00	7.50	6.30
Rochester				3.13	9.00	10.00	8.40
Syracuse				5.15	10.55	pm12.15	10.45
Albany				9.05	pm 2.30	4.50	am 2.50
New York				pm 1.30	6.00	8.45	7.00
Springfield				12.16	6.10	8 32	6.05
Boston				3.00	9.00	11.30	8.46

WEST	7 *Night Express	17-21 *NY Bo. & Ch.Sp	5 †Mail & Express	3 *Fast Mail.	23 *W'st'n Express	13 †Kal. Ac'm.	37 *Pacific Express
Boston		pm 2.00			pm 4.15		pm 6.00
New York		4.00		am 8.45	6.00		am 3.15
Syracuse		11.30			am 2.00		10.20
Rochester		am 1.20			4.05		pm12.10
Buffalo		3.20		pm 6.25	5.20		3.50
Niagara Falls					6.02		4.32
Suspension Bridge							
Falls View					6.31	pm	5.07
Detroit	pm 8.20	8.25	am 7.15	am12.30	pm12.40	4.35	11.15
Ann Arbor	9.38	9.23	8.40	1.20	1.38	5.45	am12.20
Jackson	11.20	10.20	11.05	2.20	2.40	7.25	1.35
Battle Creek	am12.40	11.34	pm 12.25	3.30	3.50	9.00	3.00
Kalamazoo	1.40	pm12.10	1.20	4.05	4.28	10.00	3.40
Niles	3.25	1.22	3.25	5.28	6.05		5.08
Michigan City	4.47	2.20	4.45	6.22	7.05		6.06
Chicago	6.55	4.00	6.40	7.55	8.55		7.50

* Daily. † Daily except Sunday.

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Life on the Kongo		50
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