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GOOD HEALTH

March, 1903

Air Contamination.
Studies in Costume.— *Illustrated.*
Nonflesh-Eating and Physical Endurance.
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Editorial.

MENS·SANA·IN·CORPORE·SANO·

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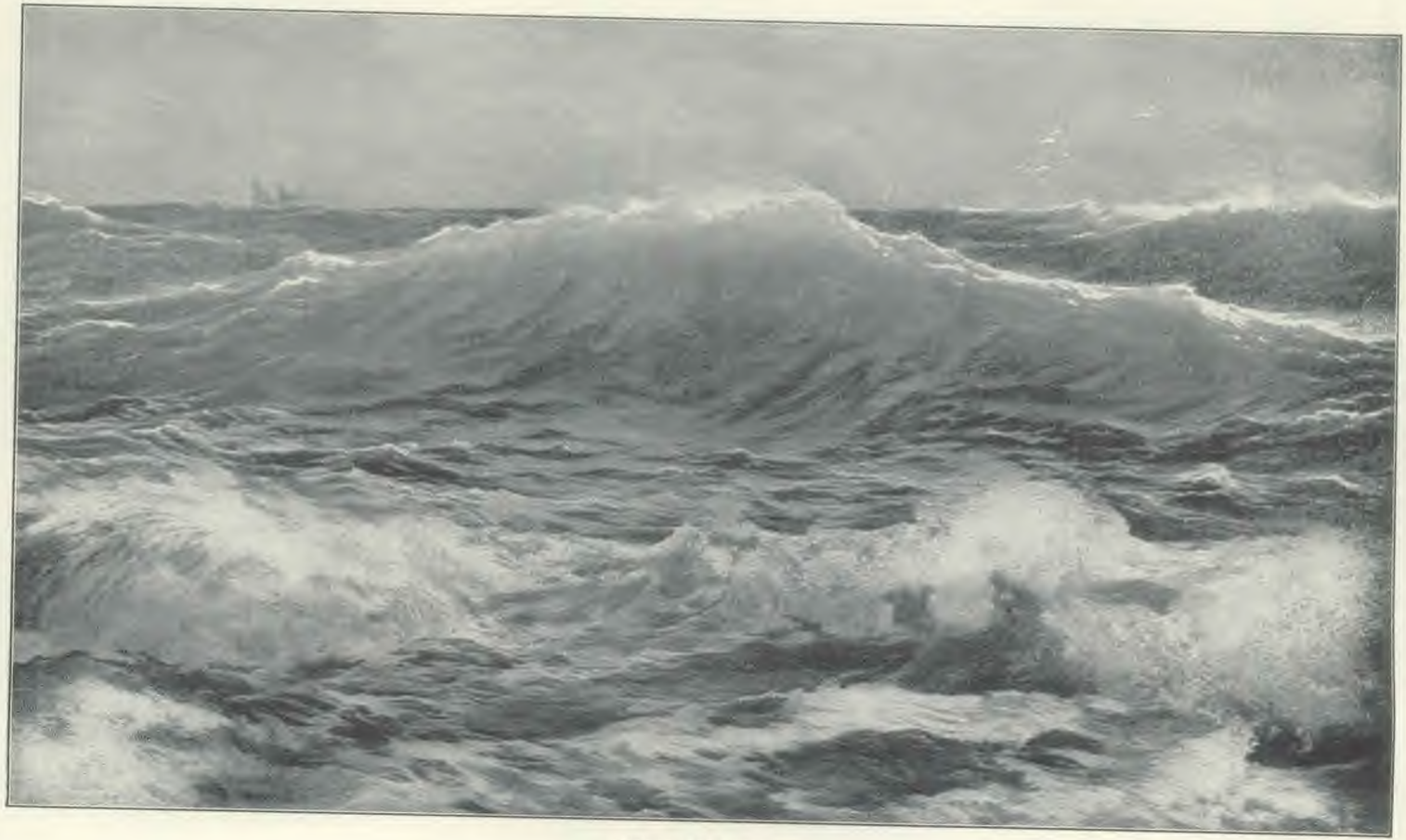

THE WAVE.

GOOD HEALTH

A Journal of Hygiene

VOL. XXXVIII MARCH, 1903 No. 3

AIR CONTAMINATION.

BY J. H. KELLOGG, M. D.

PURE air is the first of all our physical needs. Sedentary persons breathe much less air than is required for the maintenance of a healthful state of the body. Most civilized women are deprived by their dress of the power of breathing properly, and suffer in consequence from a meager air supply. The lungs should be developed by vigorous exercise during childhood and youth, and should be maintained in an active condition by moderate exercise taken regularly through life. Exercises which hasten the rate of breathing a little are necessary for lung development. So-called "breathing exercises" are of comparatively little value. Vigorous walking and swimming are the best means for developing the lung capacity. The clothing must be loose enough to allow for full expansion of the waist in deep respiration.

The most important source of air contamination is to be found in the emanations from the lungs and skins of human beings. Man, like every other animal, poisons the atmosphere about him. Each breath renders three quarters of a barrelful of air unfit for further use. Three thousand cubic feet of fresh air per hour should be supplied every grown person night and day. When the amount is less, the excretions accumulate to such a degree as to contaminate the air and render it unfit for respiration. Sewers, outhouses, neglected cellars, unventilated spaces under the houses, dust from the street, musty and dark closets, are other important sources of air contamination.

Proper measures should be adopted for suppressing these causes of air impurity by thorough cleaning, disinfection, admission of sunshine to cellars closets, and attics, and when necessary, by the employment of chemical disinfectants. Soap, especially soft soap, is one of the best disinfectants, killing nearly all germs within two or three minutes when applied pure, and in twenty or thirty minutes when applied in the form of strong, hot soapsuds.

Coal gas must be mentioned as another important source of air contamination. Both heating and illumination gas and also natural gas are dangerous sources of contamination in buildings where they are used. Ordinary illuminating or heating gas owes its deadly character to the presence of carbonous oxide, a gas which paralyzes the red-blood corpuscles. Exposing the patient to fresh air, rubbing, and especially the inhalation of oxygen, are the best remedies for poisoning from this gas. Malodors of any sort indicate air contamination, the need of thorough investigation of the cause, and its suppression by the proper means.

Cold air as well as foul is dangerous to life when the body is exposed after having been heated, and especially while

in a state of perspiration and inactivity. Cold air is also a powerful tonic, and great benefit is derived from hardening the body by daily exercise in the open air even in very cold weather.

Hot air is debilitating, lessening the vital resistance, and sometimes producing exhaustion and collapse of a most dangerous and even a fatal character. It should always be remembered that cold air is a remedy for the ill effects produced by overexposure to heat. Cold water may be poured over the patient's body while he is being rubbed vigorously by several persons.

Perhaps the most dangerous constituent of air is dust, especially the street dust of cities, and house dust. Such dust always contains many germs which are capable of producing death if permitted to obtain a foothold in the body.

Ventilation.

Those who live in tropical climates need little or no instruction on the subject of ventilation, as the heat compels living in open houses so as to secure a free movement of air, and at the same time obviates the necessity for constructing the air-tight dwellings which are rendered practically necessary by the inclement weather of the winter season in the temperate zone. By far the greater bulk of the civilized population of the globe is to be found, however, in countries the climate of which is such as to require closing of doors and windows during several months of the year. The neglect to provide an ample supply of fresh air under such circumstances, lays the foundation for many chronic diseases, and especially for that most dreaded disease, pulmonary consumption.

The simplest and one of the best methods of ventilation is the fireplace. There is no better method of heating, and the strong draught through the chimney secures an ample circulation of air through the house. The next best method of heating is the furnace. Air should never be taken from the cellar or basement for living rooms, a practice not uncommon. Stoves are a very defective method as they do not encourage the circulation of air to any considerable extent.

Steam coils and hot-water coils are objectionable on the same ground, unless special provision is made for the introduction of a considerable supply of pure, warm air. Steam coils and stoves should be relied upon only for supplementary heating, and it should be necessary to employ them only in the very coldest weather.

The general air supply for the building should be warmed as it enters, and the heat introduced in this way should be at all times sufficient except during the very coldest portion of the year. The air may be heated by passing through steam coils or through an inclosed space in which a stove is placed. A furnace is on the whole the best means of air heating. Bedrooms, as well as ordinary living rooms, should be warmed.

In the construction of a house, care should be taken that the kitchen and laundry are so placed that the steam arising from cooking and laundry operations will not readily find its way to the other rooms of the house.

The ingredients of health and long life are
Great temperence, open air,
Easy labor, little care.
--- *Sir Philip Sidney.*

STUDIES IN COSTUME.

THE ANGLO-SAXONS.

BY ETHEL REEDER FARNSWORTH.

"When we buy a bird of the fancier, the good man tells us briefly what is necessary for our new pensioner, and the whole thing — hygiene, food, and the rest — is comprehended in a dozen words. Likewise, to sum up the necessities of most men, a few concise lines would answer. Their régime is in general of supreme simplicity, and so long as they follow it, all is well with them, as with every obedient child of Mother Nature. Let them depart from it, complications arise, health fails, gayety vanishes. Only simple and natural living can keep the body in full vigor. . . . What material things does a man need, to live under the best conditions? A healthful diet, simple clothing, a sanitary dwelling-place, air and exercise."— *Charles Wagner in "The Simple Life."*

OUR modern life is entangled in a perplexing labyrinth of superfluities, but however misleading these may be, they all return finally to the primary necessities. And, while the dress and mode of life of our early Anglo-Saxon ancestors may seem to us all but barbaric in its simplicity, is it not possible, even probable, that they were far more obedient children of nature than we, and that through this very obedience they received without conscious effort the health of body and repose of mind for which most of their posterity work so unremittingly and with such unsatisfactory results.

In his "Cyclopedia of Costume," James Robinson Planchi expresses the belief that the nations of the ancient world might rightfully be divided into two classes, the trousered and untrousered, according as they did or did not wear a complete and separate leg-dress. To the bare-legged class belonged the Greeks, Romans, and Egyptians, while the Medes and Persians wore either the long loose trousers, gathered about the waist and descending into the shoes, or the close-fitting pantaloon. The Hebrews belonged to the bare-legged class, no doubt borrowing their styles of dress, like many of their other customs, from their Egyptian masters.

But as near the center of Greek and Roman influence as Asia Minor, we find the close-fitting pantaloon very much in evidence. As we go farther north among the Britons, Gauls, and Saxons we seldom see the fighting men pictured without some sort of leg-dress, usually a semifitting trouser gathered about the ankle or thrust into the shoe-top. These trousers fitted the leg much more closely than those worn by the Oriental nations, and from their appearance in the illustrations, one would conclude that they were made of much heavier material.

It has been suggested that this style of dress proves the people to be of Oriental origin, but while the conclusion itself may be correct, the rigorous climate of Northern Europe and Asia is surely sufficient reason for the wearing of this extra garment.

We are likely to think of this early race as little more than savages, and they were, no doubt, a rude and unlettered people; but we have no reason for believing that they lacked in ingenuity. Indeed we have good reason for believing that they possessed this element of character in abundance. And, if it existed, it would first be called out in supplying their primary necessities, among which the protection against cold and the dangers of war and the chase were by no means least.

Dr. Henry in his "History of Britain" tells us that as early as their es-

tablishment in England the Saxons were well acquainted with the art of preparing and spinning flax, which they wove into cloth and dyed various colors. From the fact that by the Anglo-Saxon law the wool was valued at two fifths of the whole sheep it would seem that wool was also used in the manufacture of cloth. Of course we, at this distance of time, have no means of knowing what proficiency they reached in the art of weaving but the following used by Aldhelm, Bishop of Sherbourne, as a simile, furnishes good reason for believing that the method of figure weaving was well known among them.

STATUE OF A GAUL IN THE TOWER AT PARIS.

"It is not the web of uniform colour and texture, without any variety of figures, that pleases the eye and appears beautiful, but one that is woven by shuttles filled with threads of purple and various other colours, playing from side to side and forming a variety of figures and images in different compartments with admirable art."

The representations of this people that have been passed down to us give evidence that they adopted not only the necessities, but also the conveniences and even some of the embellishments, of dress. The latter were considered essential to the distinction of rank.

Embroidery was by no means unknown, in fact in very early times this art seems to have been considered part of the essential education of the women, especially of the higher ranks. It was made use of not only in ornamentation but also in recording history. In a charter which Wiglof, king of Mircia, granted to the abbey of Crayland, mention is made of the king's golden veil embroidered with the history of the destruction of Troy, which he gave to the abbey to be hung up in the church annually in commemoration of his birthday.

In addition to the trousers, these hardy men of the north wore a body garment reaching to the middle leg, and having, in the majority of cases, close-fitting sleeves reaching to the wrists. Over this they wore a mantle, or cloak, fastened with a clasp over the right shoulder and allowed to fall loosely over the left shoulder and back, thus giving perfect freedom to the arms. To these were added stockings and shoes of raw cowhide with the hair turned out, which were called *esgidian*, meaning "protection from hurt." As long and luxuriant hair was considered a necessary element to a good appearance in both men and women, it is not

strange that the men are generally pictured with uncovered heads. When a covering was deemed necessary, however, they wore a sort of a cap apparently made of the skin of a small animal or of heavy woolen cloth. Barring ornaments used as the insignia of rank these garments comprised the dress of the men who laid the foundation of modern Europe.

[1] "We now pass to the habits of the Anglo-Saxon ladies; and it gives me no

A GAUL FROM A ROMAN STATUE.

small satisfaction to assure the female part of my readers that they will find the strongest indications of modesty in the dress of their country women, without the least tincture of barbarianism and without that proneness to change of fashions which so forcibly characterizes the later ages. Content with native simplicity, which is rarely inelegant, the Anglo-Saxon ladies adopted the fashions of their predecessors, and for several centuries the habits of the females seem to have undergone little alteration."

There seems to be ample evidence that the body garments of both men and women were made of linen; and the wearing of a woolen shirt is spoken of as a punishment for wrong doing.

The undergarment worn by the women covered the entire body from shoulders to feet. It was drawn close to the body at the waist by a soft girdle, and the sleeves which reached to the wrist were laid in fine tucks nearly to the elbow. Over this was worn the garment from which our modern gown is descended. This, too, was a full-length garment with long sleeves. It was confined about the waist with a girdle or sash of the same color if not of the same material. They also wore the mantle as an extra covering, but in addition they seem to have had a costume especially for traveling, with sleeves long enough to cover and protect the hands.

The coverchief, or kerchief, was an indispensable part of the Anglo-Saxon woman's dress. For though there is every reason to believe that she took great pride in the abundance and beauty of her hair, she is seldom pictured with it uncovered. The coverchief is sufficiently large and is so draped as to cover the shoulders and upper chest as well as the head.

In this brief review of the dress of our early Anglo-Saxon ancestors we read the story of their ingenuity pitted against their environment. Their garments were simple and well fitted to the simple, vigorous life they lived, and in all cases they were designed

[1] "Dress and Habits of the People of England," Joseph Strutt.

GALLO-ROMAN SHOES.

with evident regard for the comfort and freedom of well-developed bodies, and since simplicity is the first law of art they were not inartistically dressed.

So far wealth, leisure, and luxury have not come in with their effeminating influence to lead captive these children of nature, and like all who by choice or necessity are constant observers of Nature's methods, they were simple and practical.

GALLO-ROMAN SHOES.

NONFLESH EATING AND PHYSICAL ENDURANCE.

BY DAVID PAULSON, M. D.

THE most conclusive evidence is continually accumulating that prolonged mental and physical exertion can be much more readily maintained upon a properly arranged dietary than upon a bill of fare which includes meat, tea and coffee, and various irritating and stimulating substances. There can be no doubt that for a temporary exertion the meat-eater may appear to have an advantage over his nonflesh-eating competitor, but the battle to-day is won by the man of brain and brawn, and particularly by those who can utilize both continually for long periods of time.

Eustace Miles, the world's champion tennis-player of Cambridge, England, states that the question of brain freshness and brain fatigue are matters of the greatest importance to the athlete, and that the thing that affects this the most is the food. There is no other influence a quarter as powerful as the diet. The waste product from animal's flesh is probably waste product when it reaches the human brain; the effect will be almost the same as though it had been formed there by hours and hours of hard work by the individual. It is the waste products that bring on the feeling of fatigue. In eating the flesh of animals we introduce a large quantity of this, and that is one reason why one becomes worn out sooner on a flesh diet than on a nonflesh dietary.

Speaking of his own experience Mr. Miles says, "Once I used to get proteids chiefly from flesh foods, and I began to suffer from depression, headache, increased weariness after hard exercise, constipation and albuminuria, all of which made it necessary for me to give up alcohol; but I felt a strong liking for it and the struggle was a hard one. I was fond of what was called 'good living,' but I tried the fleshless foods and before long away went my depression, my headache, weariness after hard exercise, constipation, the symptoms of albuminuria, and my desire for alcohol, too. For years I have lived almost without flesh. When I have returned to it, back would come all my old symptoms, and also the desire for alcohol.

On my side stand many of the old Greeks, the Spartans, the Athenians; also the sturdy Romans and the English Commons when at their best."

Mr. Allen, of London, a few months ago walked a hundred miles in a little over twenty hours, which was a shorter time than it was ever accomplished in before. He states, "I did not undertake this walk simply with the idea of making a record, but to demonstrate the efficacy of a nonflesh dietary." At the conclusion of this walk, after taking a three hours' rest he walked about the town feeling as fresh as if he had taken only an ordinary walk. During the month preceding this walk he abstained altogether from all animal products and stimulating drink of every description. And the only food which he ate on his hundred-mile walk was two melons, a quarter pound of grapes, two bromose tablets, a quarter pound of protose, a quarter pound of whole-wheat wafers, 1½ pounds of pears, 1½ pints cold water, and two cups cocoa. He states, "I think I can lay claim to having accomplished one of the greatest feats, if not the greatest walking feat, that has ever been done upon the highroad, and this upon a dietary which has always been considered by misguided athletes to be totally insufficient to maintain strength."

The winners in one of the most famous long-distance walking matches in Germany, were all vegetarians. The champion long-distance bicycle rider of several years ago, lived upon a strictly natural dietary.

If athletes, and others who have to undergo surprising tests of bodily endurance, find it advantageous to abstain from flesh foods, is the plan not worthy of a trial by those who wish to use either their intellectual or physical strength and endurance in the service of God and humanity?

TOMMY'S DREADFUL DREAM

Tommy was sleeping like a top,
When, to his great amazement,
An angry duck, with knife and fork,
Came tapping at the casement.

"Be off, be off, you savage bird,
Or else I'll call my mother."
The duck replied in hollow tones,
"Why did you eat our brother?

"Revenge is sweet, and you must die,
No time is this for reasoning,
The oven's ready to a turn,
The cook has made the seasoning.

"They're busy now with Harry Ford,
He's to be cooked for dinner,
And then we'll roast young Jackie Smith,
Who feels a wee bit thinner."

"O, let me live!" cried Tom, aghast,
"At least till I am fatter."
"So long as you're not old and tough,"
Said they, "it does not matter."

"I'll never eat roast duck again,"
The culprit sighed, repenting.
The cook he seized and trussed him well
Without the least relenting.

They laid him neatly in a pan,
With tiny dabs of dripping;
The little ducks looked on, and then,
For joy they fell to skipping.

The oven door was open'd wide,
When Tommy, loudly screaming,
Gave a great jump, and found — hurrah!
He had been only dreaming.

— *Alfred Mahany, in the Vegetarian.*

CARE OF THE TEETH.

BY H. B. FARNSWORTH, M. D.

TO perform the first part of the work of digesting the food, and thus preparing it properly for nourishing the body, one must have and preserve good, sound teeth. At the very portal of the human body,— the gateway through which passes the sustenance of life, and also through which disease-breeding bacteria may enter the system, should stand an array of well-kept teeth. The Hindu has among the laws on health one which provides for the cleansing of the mouth after eating. He thus expresses the sacredness with which he regards and cares for the body.

The teeth have three distinct functions: First, to masticate the food and prepare it for stomach digestion. Second, to assist in the articulation of words. Third, to give expression and beauty to the face.

The best speakers among the Greeks and Romans were very careful to preserve the natural teeth intact that their oratory might be more perfect. There are some sounds which cannot be made if the front teeth are lacking, and there is then heard a lisping, whistling sound. If the whole set is lost there results a thick, indistinct, and guttural enunciation. The monotonous voice of the old should teach us the importance of the part the teeth play in proper articulation.

AN INCISOR.

There is nothing that can replace the lost teeth in giving a pleasing expression to the face. The loss of the canine teeth alters the whole facial expression. The beauty of a face is lost when it reveals uncared-for and decaying teeth; but nothing so rivets the attention upon a speaker as strong, shapely, and well-formed teeth. Solomon observed this, perhaps, in the ladies of his court, and thus gave expression to these words, "Your teeth are like a flock of sheep even shorn, which come up from the washing." Sol. Song, 4:2. Lord Chesterfield said that "fine and clean teeth are among the first recommendations to be met with in the common intercourse of society."

A well-arranged, even, strong mouth of teeth is indicative of a corresponding character, and a command loses force and authority from one who exhibits a diseased and slovenly mouth.

But the bad teeth teach us a far more important lesson. Good teeth are essential to proper mastication of the food, and this is absolutely essential to the preservation of the best types of manhood. A universal degeneration of the teeth bespeak a deterioration of the race. There are many bright, brainy men and women who have been endowed with weak, faulty teeth which soon decay. But it is essential for the people as a whole to have well-kept and strong teeth, to present healthy and strong types; for the degeneration of this set of organs is first, indicative of a general deterioration of the system; and second, it means further local and general degeneration from improper nutrition.


A MOLAR.

There are men of prominence and strength of both body and mind — George Washington for example — who have been possessed of great genius and force of character, who have suc-

cessfully combated impairment of the health and strength though they were compelled to use artificial teeth. But the general proposition still holds good that the men and women who shall lead the world in literature, art, science, or politics — in any branch of the world's best work — must be primarily possessed of strong teeth, because good digestion and nutrition are the foundation for physical and mental strength and vigor.

NORMAL ADULT'S TEETH.
(May's Anatomy.)

Dental caries or decay is usually a result from the retention of food particles both in the mouth and between the teeth. During the process of putrefaction of these food particles an especial acid is formed which has the property of dissolving the lime salts from the enamel, thus giving a place for decay which, unattended, will lead to the destruction of the tooth. It is of primary importance, then, for each individual to inhibit and restrain the formation of this lactic acid. This acid is the result of the fermentation of starchy foods, such as soft breads, crackers, and potatoes, which are allowed to remain in the mouth. The use of cane-sugar candy and other artificial sweets also encourages its formation, and not alone in the mouth, but in the stomach and intestines. The thick, ropy mucus which collects in the mouth after eating cane sugar and confectionery, is a carrier of bacteria which causes fermentation and thus the formation of lactic acid. This mucus sticks tenaciously to the surface and interstices of the teeth, holding in solution the sweets upon which these germs thrive. In this way candy eating becomes the direct cause of dental decay.

Besides the almost constant presence of this acid-producing germ, there are many other varieties found in the mouth which, after the lactic-acid germ has made way for dental decay, take advantage of the gate that is open through the tooth, and so enter the system.

One investigator alone (Vignal) has found and described nineteen distinct varieties of bacteria from the mouth. All these are retained and nurtured by the unwholesome condition of the teeth and mucous membrane in the mouth and fauces.

Food particles in every stage of decomposition offer abundant soil for their propagation. So by removing these particles after each meal the clean mouth becomes an important factor in guarding against the contraction of disease. A decaying tooth may be the gate-way through which highly infectious bacteria may enter the system. Germs which often grow in abundance in the mouth may also find an entrance through the tonsil to the body by way of the lymphatic system. In many patients there could be found no other avenue through which they had contracted tuberculosis of the glands of the neck and tubercular infections of other parts. Another writer noted a case of actinomycosis (same as lumpy-jaw in cattle) as having this origin. Still another reported nine cases of this

dreaded disease in man, in all of which dental caries were present. Smaller troubles such as the abscess that forms at the root of a tooth, causing much suffering, with swelling and inability to partake of food comfortably, is caused by some pus-forming germs gaining access through a decayed tooth or a soft gum.

This leads to the thought that so many are in the habit of holding small articles of every description, such as pencils, nails, and coins in the mouth, thus allowing the purveyors of possible contamination to be brought to the very entrance of the body. Such articles as have been mentioned are brought into contact with many sources of infection and pollution so that it is imperative that we should guard carefully against this pernicious practice.

A thorough prolonged mastication of the food is the first essential in preserving the teeth from decay. The number of bacteria in the mouth are thus reduced,— being brushed off and from between the teeth by the vigorous chewing, and carried into the stomach with the bolus of food to be acted upon by the normal stomach and intestinal juices. The articles of diet may well be such as will necessitate the food remaining for some time in the mouth. In this event the saliva will mix well with the food, serving the double purpose of supplying the necessary fluidity and of enhancing further the process of stomach digestion. Hence the use of milk, coffee, or any liquid at the meal should be avoided.

Dry and crisp (but not hard) foods serve this purpose best, and at the same time by coming into contact with the germs, they stimulate the capillary circulation in these tissues so that they are preserved in a firm condition and are better nourished because of it. The gums thus treated will rarely become spongy or unduely soft, but will clasp the teeth closely and aid in preserving them from decay. The enamel of the tooth does not extend below the line where the gum clasps the body of the tooth and hence if the gums do not adequately protect the root, decay of this part is more likely to occur.

The cleansing of the mouth should be for the most part a mechanical procedure, and should be attended to soon after each meal, and it is an excellent practice to repeat the cleansing before retiring at night and again upon arising. The articles necessary are a soft bristle toothbrush, water, and a goosequill toothpick — never wood; to which may be added dental floss and some pleasant wash or powder.

Borax or cimamon water affords a pleasant and effective wash, being slightly astringent and antiseptic; or, a powder of finely prepared chalk, to which may be added a few drops of oil of rose or wintergreen, may be used. But bear in mind that the breath should be sweet and wholesome, not from the use of some pleasant-smelling tooth wash, paste, or powder, but because the individual is possessed of a normal healthy organism and a perfect digestion which will not allow of the growth of micro-organisms within the alimentary tract and the subsequent evolution of their noxious gases.

The water should never be used at the extremes of temperature, but best from 85° to 95° F. The brush is used to best advantage by brushing in a vertical direction so that the interstices are well reached. But the whole of the tooth, the crown, inner and outer surfaces, and interstices must be well attended to. The object is not alone to cleanse the mouth, but to brush the teeth. Intelligence and concentration

of mind will do much to make the brushings effective. The brush should not be used after it begins to shed the bristles, as these by lodging in the tonsil or pharynx, or possibly in the throat, may cause serious trouble. Perhaps it is not necessary to mention that the brush should be thoroughly washed after each using.

As a class the natives of India have excellent teeth. They universally rub the teeth with the twig of fibrous wood, cane, and mallow roots, removing well all food particles and polishing the surfaces. It is a practice, too, which is well known to many a country lad. A highly polished enamel offers great resistance to germs.

A feeling of wholesome self-respect, tidyness, and readiness to meet men and women is instilled by the consciousness of possessing clean, white, well-groomed teeth. One does not fear offending another by an unpleasant breath and may, too, look forward to a visit to the dentist as an exceptional occasion. But if after all the necessary attention has been bestowed upon the teeth, there remains a cavity or other trouble of any nature, a skillful and careful dentist is one's best friend and should be freely consulted.

RECOMPENSE.

THE earth gives us treasure fourfold for all
that we give to its bosom;
The care we bestow on the plant comes back
in the bud and the blossom.

The sun draws the sea to the sky, Oh, stillest
and strangest of powers,
And returns to the hills and the meadows the
gladness of bountiful showers.

The mother regains her lost youth in the
beauty and youth of her daughters;
We are fed after many long days by the bread
that we cast on the waters.

Never a joy do we cause but we for that joy
are the gladder,
Never a heart do we grieve but we are for the
grieving the sadder.

Never a slander so vile as the lips of the willing
rehearser.
And curses, though long, loud, and deep,
come home to abide with the curser.

He who doth give of his best, of that best is
the certainest user,
And he who withholds finds himself, of his
gaining the pitiful loser.

The flowers that are strewn for the dead,
bloom first in the heart of the living;
And this is the truest of truths, that the best
of a gift is the giving.

— *Carlotta Perry.*

THE METAMORPHOSING OF A COMMUNITY.

(Concluded.)

BY JESSIE ROGERS.

WITHIN a week, a rumor was afloat that scarlet fever in its worst form, malignant and horrible had broken out in the overcrowded home of the class leader. Homes suddenly drew in their children as a sea urchin does its tentacles at the approach of danger. Operations about the headquarters of the "news exchange,"— the corner store — became less brisk, because of the dread of contagion. Still, masculine dignity seems wonderfully immune from contraction of such ills; therefore the respective spouses used their lords as mediums through whom to convey their sympathy.

The messages were strangely similar, — "so sorry, so *very* sorry — knew that poor, dear Mrs. Jones needed help in her affliction — would come in a minute if it wasn't for the children, but——"

Do not accredit this well-known aversion to help at the time help is needed, to the inherent hardness or even selfishness of the human heart. That was a wise and discerning man who affirmed that "self-defence is nature's first law." Some years before, this same baleful plague had swept over Orrville, and as a result, the confines of the village cemetery had been considerably extended.

Deacon Kirk was made the bearer of a brown-paper parcel to the class-leader's wife, and though the paper was thick, and the wrapping voluminous, it sent forth unpleasant emanations. On the back of an envelope was scrawled an explanation: —

"Deer Mis Jones i would come to you to once, if it wasnt for my jamie but i am sending a plaster which my Mirandy used on her little Johnnie before he died it seemed to do conciderable good and i think it helped him die easier" yours truly

jane kirk.

"ps just put it in the stemer till it sofens up so it will take holt."

The reeking, germ-laden antiquity was carefully opened. The unspeak-

able horrors of its rancid composition were all reckoned as virtues, since it came from the house and home of dear Mrs. Kirk, for who had had so much experience with sickness as she — who indeed, as nine small mounds in the cemetery bore witness.

It came from the steamer soft and pulpy, and was applied to the indicated region, while the helpless child screamed and kicked with what vigor the fever had left, and lustily implored, "take the nasty thing away." But a firm maternal hand prevailed, and the poor, little victim met the recognized fate of the weak in every physical struggle.

"She's about gone," said Mrs. Jones, in answer to her husband's anxious inquiry — for Thomas Jones loved his little ones with as warm an affection as a man who can and does provide a better home for the creatures he begets. Of course she meant,— "about gone to sleep," but a more sinister fulfillment hovered over the fluttering lids.

A firm tap at the outer door startled them,— had it been possible that a stranger had failed to see the glaring placard, "SCARLET FEVER," conspicuously posted at the front gate? Mrs. Jones stepped to the door, and opened it to the extent of a narrow crack. What she saw made her ejaculate,— "For the love of mercy, Mis Newton, go away. Don't you know we have the worst kind of scarlet fever here?"

"Why shouldn't I stay for the love of mercy?" said Ethel Newton, gently pushing open the door and entering.

But her mental conception fell so far short of the reality, that for one awful moment there came to her a mighty temptation to turn and flee. An instant later she walked across the room, and flung up the finger-marked sashes.

"O, Mis Newton!" exclaimed the mother, in tones of reproachful protest, "Mis Kirk always says to not let in a mite of air when there's fever, and *she* kept a kerosene lamp burning night and day when her Laura had it."

But the adjustment of the windows was not interfered with, and the sweet air blew into the fever-tainted room like the breath of a merciful angel.

Ethel was bending over the hot little body. The pulse was wild and erratic, and when the thermometer was removed from the parched lips, the record was appalling. Two vertical lines were faintly traced on Ethel's smooth forehead, which suggested that in time they *might* develop into a frown. One of the grievances of the village dames had been that "Mis Newton" was altogether too girlish and smiling to be admitted to their rank of "experience." But somehow, "Mis Newton" seemed suddenly to have taken the field, and Sarah Jones, she of wide experience, felt the advantage.

Ethel rapidly, but tenderly, removed the frowzy little dress, to the accompanying chatter of the mother, who maintained a running fusillade as to how Jane Kirk never approved of exposing the sick by undressing them, acting upon which advice, it happened that the child had lain for five days in the garments worn the day the disease manifested itself.

"This child must have a clean linen gown," said Mrs. Newton, turning quickly to the mother, who was obliged to explain, with much confusion, that the children always slept in their underclothes, and — well, in short, the household wardrobe did not reckon nightgowns among the things necessary to existence.

Long before the explanation was completed, Ethel had snatched up the

little grip she had brought, and from it had produced a dainty gown, sweet and spotless, and precisely suited to the size of the little sufferer. The peeling process had continued to a point where the reeking plaster lay exposed. As the last layer of clothing was removed, and the full virulence of the thing smote her sensibilities, her handkerchief, heavily sprinkled with disinfectant, was hastily snatched from the pocket of her white apron.

She strode to the kitchen range, snatched up the tongs, and in a twinkling transferred the horror to that unfailing purifier — the fire. With a cry of consternation, Mrs. Jones sprang to the rescue. "That plaster belongs to Mrs. Kirk's Mirandy, and she only loaned it to me, and — "

"Mrs. Jones your child is nearer dead than alive. I am no novice in the care of the sick. There is no time to lose. You must help me without question, and with all possible haste, or she will be dead before sunset. Get me a tub of hot water as quickly as possible."

The cuticle of the poor little body had the pitiful, shiny look indicative of infrequent bathing, and so readily detected by one who knows the dewy freshness of the oft-laved skin. From the crown of the tousled head to the calloused little heel, a lather of castile soap spread its virtuous foam. Soft linen — produced from the store of anticipated needs which Mrs Newton had brought — dried the little body, and the dainty nightdress was dropped over the pink shoulders. Ethel sorted the bedding that had been heaped upon the victim — Jane Kirk had always affirmed that fever patients should be kept very warm — and from the mass had selected one or two of the cleanest, most hopeful-looking coverlets.

By happy chance two sheets came to light, in various stages of collapse, but reasonably clean. In this cool, clean bed, Louise was laid, and the little eyes opened gratefully as her hot cheek touched the cool pillow, — "Nice,— Louie like it," she murmured.

One of the little Jones' was given a pail, and told to bring water from the Newton spring. As often as the pitiful wail went up, "Drink, Louie wants drink," a cooling draught was pressed to her poor little lips. Already improvement was evident, therefore Mrs. Jones watched without protest while Ethel threw out of the window the black tea simmering on the back of the stove. The medical oracle of the burg expounded the theory that a fever patient should never be allowed to drink anything but hot tea. Small wonder that the cry of "drink, drink," had become less and less frequent, since the little sufferer had learned that it brought a torrent of liquid fire, which only increased the tortures of the burning tissues, that were already wildly pleading for relief.

Two of the older children were set about the thorough cleaning of the front room, and as Ethel assisted from time to time, she had the satisfaction of knowing it was really clean. Into this room, the bed was removed, and the household banished. Ethel sat by the bedside, fanning the poor baby until it dropped into a natural slumber — the first of any consequence in five days; then from the little bag she took tablet and pencil, and wrote the following: —

"John — dear —, the doors of opportunity *have* opened. I know you will be willing — for Myrtie's sake. I was not a moment too soon. I must stay until the crisis is past." The sheet was passed quickly through a disinfectant, and dispatched.

"You have anticipated my services,

Mrs. Newton," said the Doctor, when a little later he stood by the bedside. He dropped the little box of powders back into the open case, saying, "I shall not leave this medicine,— I well know the value of the treatments you have given, and infinitely prefer that they be used,— always; but what can I do? There is not one family in fifty that understands the powerful effects of these simple elements that are right at hand."

A fierce light shone in Mrs. Newton's eyes, and the voice that presently spoke had in it that element of quavering which comes when the soul is under strain, yet the hands that applied the cooling lotions were deft and steady. "True, too true; lead as blindly by the drug-doping fraternity as ever papist by pope," she exclaimed passionately.

The popular and vivacious Mrs. Newton was not a stranger to Dr. Ashley — her home was a sort of Mecca to the more refined strata of Orrville's social life — but in the rôle of a trained nurse, she was an apparition. Later he understood.

Life had not been all sunshine with the prosperous young business man and his wife. Less than three years before, their child, the idol of a happy home, had been smitten with this same scarlet plague. Helpless and inexperienced, they could but follow directions. Then there came a black day when the little one lay dying in her mother's arms,— the agonizing wail of "water, water," ringing in the frantic woman's ears.

In the collapse that followed the last scenes of that tragedy, Mrs. Newton was taken to an institution far-famed for its rational treatment of disease, and there, in the blessed days of convalescence, her eyes were opened to marvelous dealings of mercy in the care of pain-racked sufferers. No patent on knowledge obtained in that institution, no copyright was placed on method. Convalescents were warmly invited to attend lectures, demonstrations, and experiments.

She was an eager learner. "Have I been made to suffer that I may see?" was the query of her soul. A definite purpose — that merciful anchor of human endeavor — took shape in her intent, "I am not the only mother who has suffered, and whose heart has been broken; I will learn, I will teach." And she did both.

When she stepped again across the threshold of her empty home, it was not to dumbly sit and nurse the horrors of memory. By sheer command of will, the old merry nature revived, and doors and windows were flung open that waves of sweet air and tides of sunshine might flow in. Then she took up her work; a whole foreign-mission field lay before her in the dark region bounded by —— and —— streets. The smallness of the old routine, the meaningless dawdle that constitutes "social life," quite faded from her horizon.

And now, in this emergency, the skill acquired in those months of loving service had borne its fruitage in the rescue of a community from the horrors of a pitiless plague, but — perhaps more important than the incident of one epidemic — opened the doors of understanding to the reception of the gospel of health.

Thus it came about that the homes of the little burg bore no funeral badges. Instead, there began a mighty revolution. I was about to say a "reform;" but the word is inadequate, for how can there be a "re-form" where no form has ever been! There began in that region a vigilant warfare against dirt and death, unwholesome habits and antiquated traditions, and in their stead

sprang up new customs, clean living, and a higher plane of thought and aspiration.

And where once was the dreary monotony of purposeless living, there came up a wholesome vigor, a definite aim, a general conviction that life is, after all, worth living.

SWEDISH GYMNASTICS.

BY JOHN W. HOPKINS.

IN last month's article a general view of the Swedish system of gymnastics was given, with typical exercises of each class. This article will be devoted to the consideration of the first and second classes, Arch Flexions and Heaving Movements. These two classes act directly upon the chest, and furnish one of the best means for its development.

The *Arch Flexion*, or Tense-bending, is defined by Swedish Gymnasts as "An arching backward of the spine, each vertebra taking part in the movement." Figure 1 illustrates rest stand, before the arch flexion. In Figure 2 the arch flexion is completed, being taken in wing-standing position. By comparing the two illustrations we can form a good idea of the effects of this class of exercises. The lifting and deepening of the chest is very marked, and the ribs are raised and spread apart, making the chest wider.

In taking exercises of this class, great care must be used to see that the whole spine takes part in the movement, that the bending is not simply in the waist.

The head should commence the movement, the chin being held well in. After the head is bent backward, the arching of the spine is carried into the chest, and finally into the waist. When lifting the trunk, the order is reversed, the head being lifted last.

This exercise is taken in wing-standing position (Fig. 2) first, then in rest standing (Fig. 1), and finally in stretch standing, the arms stretched high over the head. The next step in progression, practical for home use, is to execute the movement in stretch-standing position, with the back turned to the wall. Stand far enough away so that when the flexion is completed the hands will support the body by resting against the wall. While in this arched position raise the heels from two to six times, then lift the body, rest, and repeat the exercise, perhaps twice more. Or, instead of the heel raising, lift one leg forward, keeping the knee straight, and the instep extended. However, before raising the straight leg forward, it should be lifted with the knee bent. The knee is raised as high as the hips, and the foot, with the toes pointing toward the floor, hangs under the knees. This exercise is taken alternately

FIG. 4.

FIG. 1.

first with the left leg, then with the right, from two to four times.

The second class of exercises which directly develops the chest is that known as the *Heaving Movement*. Mr. Jakob Bolin defines this as "any movement in which the body is wholly or partly suspended by the arms." Hanging by the hands, work done while hanging thus, and climbing are representative exercises in this class. When the weight of the body is suspended by the arms, a strong tension takes place in the muscles connecting the arms and the chest. This strong pull, being exerted on either side of the chest, widens it. If the work done is swinging sideways, alternately right and left, as on the traveling rings, there is a lateral expansion of the chest; while if a hand-over-hand climb is taken on the rope, or one raises himself on the horizontal bar, the expansion may be vertical.

In Figure 3 the hanging position is shown, and also an abdominal exercise to be taken while holding this position. Bend one leg, then extend it forward bend it again, and then resume position. Repeat with the other leg, and finally with both at the same time.

After this has become easy, the legs may be lifted, and then lowered, with the knees straight. Or, after lifting the legs, separate, and then bring them together. This calls for vigorous use of the abdominal muscles.

The free standing exercises of slow arm extension, sideways or upward, take the place, to a great degree, of the heaving movements. The antago-

FIG. 2.

nistic muscles are brought into play, resisting the work of some of the inspiratory muscles. Figure 4 shows the starting position. The rigidity of the muscles, which is quite noticeable, illustrates the action of both sets, in that, while the triceps and deltoid muscles are working to elevate the arm, and extend it upward, the latissimus dorsi, teres major, and others oppose them. This same principle can be applied in exercising other groups, but should be used carefully.

The walls of the chest have all this time been pulled and stretched apart

FIG. 5.

sideways and upward. Some of the muscles upon which this tension comes, take part in inspiration, but in forced inspiration only; so that the main effect of these two classes of exercise is to enlarge the chest, making room for greater activity of the heart and lungs.

The muscles of ordinary inspiration are best exercised and developed by *deep breathing*. This does more, however, than simply to call the muscles into play. The inspirations of the average person are much too short and shallow to accomplish the purposes of respiration, to furnish oxygen to the blood in the capillaries of the lungs, and carry away waste matter from every part of the lungs. The business man, the student, the housewife, in fact, all persons of a sedentary occupation, breathe with only a small part of the lungs. The blood, however, is brought to the lungs to be cleansed and to receive oxygen. And if the inspiration is too short to reach all of the air cells, then the blood must return to the various parts of the body no better than when it left them. In this manner, while exercising the muscles of respiration that we may have greater lung capacity, it should be remembered that deep breathing is the true blood purifier.

This full, deep work is illustrated in Figures 4 and 5. The clothing must be loose, giving free use of the lower part of the lungs and the diaphragm. Filling the lungs is like filling a pair of bellows; the air goes to the broad end. So with the chest; the greatest broadening and deepening is in the base. The diaphragm contracts and descends, and the ribs rise and separate on inspiration; the action is reversed on expiration. If the corsets are thrown aside and the clothing loosened, the deep inspirations will more than make up their loss. The waist and abdominal muscles will gradually lose their soft, flabby condition, and become firm, requiring no artificial aid to support the organs. The rhythmical motion of the deep breaths will extend down into the abdomen, bringing more of the clearer, purer blood to the stomach, liver, and bowels. And by a gentle, massage-like movement, will stimulate and aid them in their work.

FIG. 6.

But it must not be forgotten that these exercises are only the means of bringing the air to the body, and into it as far as the capillaries of the lungs. But the air is not in the body even when it has entered the lungs, and respiration is yet deeper seated. An important part of the respiratory art takes place in the tissues when the oxygen from the blood does its work of cleansing, burning, and purifying. And so it is necessary to do work which will quicken and strengthen the circulation, and carry oxygen to all parts of the system. For this purpose, walking, running, singing, swimming, and sawing, chopping, and splitting wood are best. In all work breathe deep, full breaths.

The business man or student may bend backward over his chair back, and taking long, full breaths, stretch his arms slowly upward or sideways several times.

The following simple exercises are a beneficial diversion for the housewife:—

1. (a) Rest standing, backward bending of the trunk (Fig. 1). (b) Wing standing, forward bending of the trunk. Take these with deep and regular inspirations.

2. Bending and stretching of the arms upward (Fig. 4).

3. Wing or rest standing, knee bending.

4. Reach standing, arm flinging alternately sideways and upward, as described in Exercise 4 (February GOOD HEALTH).

5. Continue the lying, leg raising; also hang by the hands on the horizontal bar (Fig. 3) or in the door as follows: Reach up and grasp the top of the door, standing with your back turned toward it. Allow the weight of the body to come on the arms, then take the exercises in Figure 3.

6. Rest stride stand, side bending.

7. Run in place.

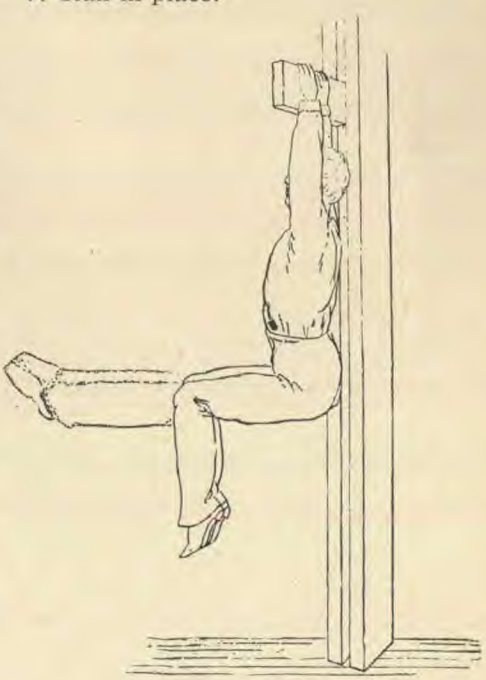

FIG. 3.

8. Wing, walk, stand (one foot about two feet in front of the other), forward bending of the trunk.

9. Respiratory exercises.

In the latter movement lift the arms upward with a strong pull, inhaling at the same time. Return easily, exhaling. This strong pulling up will develop the back muscles and help keep the shoulders straight.

DEALING WITH SOME COMMON FAULTS.

BY MATERNA.

ALL children have faults. All parents have a duty to aid them in overcoming these faults. In many instances the child's fault is the outworking of a natural tendency, as selfishness or obstinacy. Others are acquired habits, as idleness and disrespect. These latter may be styled preventable faults, and it largely remains with the wise and careful parent as to how few of such shall be incorporated into their child's character. The correction of established faults is one of the most difficult of tasks. There is no patent way of accomplishing the work. Each child must be dealt with upon an individual basis according to his own special needs and proclivities. This necessitates a thorough understanding of the child, and requires of parents much thought and effort coupled with Divine aid.

The fault must be analyzed and the treatment directed as the skilled physician directs his treatment of a bodily ailment toward the rooting out of the cause. Not infrequently the parent may be surprised to find the cause "at his own door" so to speak. Children are apt imitators. Both the good and the evil they observe in the conduct of those around them is readily reflected in their own behavior; so that with the small child nearly every fault is at first a borrowed one. A single occurrence may not greatly affect the child unless it be something of such an unusual character as to merit his special attention, and because of this becomes emphasized upon his mind; but the constant recurrence in his presence of a good thing or of an evil thing will exert its molding influence upon him, and such is the perversity of human nature that the evil often appears the most attractive to the child and is hence the more readily imitated.

The first step in the correction of our children's faults should be a close heart-searching into our own lives, a careful examination of our own example and bearing in their presence, daily and hourly. If we find no counterfault in ourselves, let us investigate their environments and associations. One mother, greatly distressed at her little daughter's making faces, sought far and wide for the cause until one day accompanying her to the kindergarten she customarily attended, the mother observed a much older girl in the same building making faces at her daughter. Nothing was said to the little one about the matter, but her route to the kindergarten was so planned as to avoid the older child. There being nothing to call the little one's attention to her fault and the model after which she was patterning, the habit was soon dropped.

If in example or environments there be found no clue to the fault, investigate the child's physical condition; loss

of sleep, indigestion, and other sources of nervous irritability are often sufficient causes to explain all the child's so-called naughtiness. Any one who has experienced pain and nervousness resultant from physical causes can remember how ill-tempered and unamiable one is apt to feel, and can readily see how the child, who has not yet gained that control necessary to hold his feelings in check under such circumstances, would be likely to exhibit many very disagreeable traits. One little girl very aptly said, "When I feel bad they say I am *naughty*, but when mamma feels bad they call it *nervous*." What many a child needs for the correction of faults is a better physical condition. The fact must also be recognized that many seeming faults, as viewed from our grown-up standpoint, are really only the natural sequences of the immaturity of the child, and should not be classed as errors. We are apt to form our conception of goodness for our children after the standard by which we guage the conduct of adults, forgetting that the *good* child should not appear like the good man, but should act like a child, think like a child, talk like a child, waiting till he is grown up to put away childish things. A child being an undeveloped being is lacking in perception, in judgment, in reasoning ability, attributes that grow with increasing age, hence is unable to grasp the full situation in the way an adult mind does. A very annoying and hapless deed may result from a child's very loving thought. It is not the result but the motive prompting the child's effort that must be taken into consideration.

We must learn to distinguish between actions which are in themselves wrong or have a tendency toward evil, and such as are simply due to immaturity. It is natural for a child to be more or less clumsy in its movements. An adult has the power to cling to an object while the mind is wholly occupied with other things, but the baby repeatedly drops its rattle at every sight diversion, because the nerves which control the muscles of the hand have not yet become well established in their habits. The same is true of other muscles and nerves of the body, yet how often is the little child punished for its clumsiness, as though it were a matter for which he were blameworthy. Offenses against things, the breaking of a dish, tearing of clothing, soiling of the carpet, fill a large place in the category of what we are wont to term faults. Carelessness, so frequently the cause of these offences, is natural to the young. The ability to properly correlate and keep in mind is an adult power, and while carefulness should be cultivated by every right means it should not surprise us that the child is largely deficient in this respect.

In the correction of faults one point is pre-eminently important,— the selection of a right time and place. Any one who has engaged in the cultivation of flowers understands that a thing so necessary to their growth as water may be given them at a wrong time; even so we may use discipline, which is necessary for the child, at a wrong time. It would be difficult to give definite directions as to what constitutes a right time suited to all cases, but when a child is tired, hungry, excited, or fretful is seldom a right time. There are times when the little one's conscience is awake, when his heart opens out in loving confidence to his parent; it is then he can be reached and taught. With many children a quiet period just before the bedtime hour is the time when they are the most susceptible to

influence. The excitement of fun and frolic being over they gather around the mother's chair, creep into her arms, lean upon her knee with their hearts softened and their minds more thoughtful; then they are in tune to talk over with her the events of the day. In some families this "home circle hour," as it is called, is the happiest, holiest portion of the whole day. The earnest, tactful mother may use this hour in a great variety of ways for the moral growth and spiritual advancement of her children. One mother, anxious to impress upon her children's minds the importance of watching for opportunities and of taking thought for others, is wont to call her little ones around her at this hour to count up the "waymarks" of the day as they are styled, taking with them a retrospective view of the day just over, where opportunities for doing good have been overlooked and lost. To lose an opportunity which by care might have become a waymark on their day's pathway, is considered a great misfortune.

A cultivation of the opposite virtue is the surest and best way of dealing with most faults. It requires much love and patience, and usually much time and effort, to correct an error of any kind. If a wrong thing has become a habit, the only way to displace the wrong habit is by putting a right habit in its stead. To make anything a habit requires doing it over and over until it becomes familiar and natural to do it always under the same circumstances. If a child is habitually doing a wrong thing, he must be led to habitually do a right thing in its place. For example, the child who, coming in from play, drops his hat in any convenient place, may be cured of the careless habit by being sent to pick it up, go out the door again, come in, and hang the hat in its proper place. If once doing this each time he comes in and throws the hat down carelessly is not sufficient, he should go through the procedure over and over several times after each offense. If the mother be careful and sees that the correction be made with invariableness each time, it will not take long to correct the habit. To pick the hat from the floor and hang it up will seldom prove as efficacious as picking it up, putting it on, going out doors, coming in again, and hanging it in its right place does, because each step in the process helps to form the habit which will make it strange for him to enter the door with his hat and not put it in its right place.

The effectualness of all corrective measures lies in their continuity. Occasional discipline will not serve the purpose. The treatment must be kept up without intermission until the occasion for it no longer exists. The need for continuous watchfulness and effort on the part of parents often proves the barrier to the child's overcoming the fault. It requires so much thought and patience, and there are so many other things demanding attention, it is exceedingly difficult for a busy mother to be on the alert; or perhaps when the fault is noticed she is so weary or so much occupied she feels inclined to let the matter pass for the time being without correction; but every interruption only lengthens the process of cure, if it does not avert it altogether, for while much painstaking effort is necessary to instil good habits, evil ones grow as if by magic.

Correction of faults is a more difficult matter with some children than with others, and measures that prove efficacious in dealing with one child may not in the case of another; so that often many problems must be solved before

the fault is eliminated. The need of parents having a deep insight into child nature becomes more apparent with every step in our study of character-building, not only that one may unravel the child's motives and deal justly with him, but that the first tendencies may be recognized, temptation intercepted, and the child's character strengthened in its weak points for the prevention of evil. Says Miss Harrison: "Every one recognizes evil when it culminates in some forbidden *deed*, but the wise mother perceives that the act is the result of a chain of previous evils. Let a child steal and you are horrified, but you do not perceive that this is only a climax; it began with secretiveness, then followed meddling with what belongs to another, than perhaps a covetous thought or lack of some sort of ownership, finally ending in thievery. At any stage it could have been checked more easily than at the last."

In the management of children's faults there is need of much training on the part of parents as well as of the children. We are so apt to be influenced by the effect of the child's misdemeanor upon our personal comfort, convenience, so ready to speak out our minds without careful forethought, so hasty to meet out punishment without consideration of all the issues at stake, that it seems almost marvelous when we think of it that any child should reach maturity with even a modicum of good temper and good nature, such bunglers are we in our work of trying to mold and train human beings. How to keep silence when silence is golden, how and what to say when words are needed, how to present the matter to the child so that he shall be helped and not hindered, how to uplift instead of lowering human nature — these are problems ever present in the training of children. So much is involved in the parents' own demeanor, their physical, mental, and spiritual condition reacts upon the child, the expression upon the face, the tone of the voice, their manner of movements as well as their choice of words, all lend influence and weight in matters of training. A parent should undertake no measures of correction while unable to exercise self-control at the time. If grace and wisdom be lacking, let it be sought of Him "who giveth to all men liberally and upbraideth not."

As has been elsewhere stated, the same corrective measures may not be suited alike to all children; however, one often finds in the experience of some other mother, a suggestion that proves helpful or a plan that can be modified to accord with one's special needs. A few of the common faults of childhood and the measures which have proved efficacious with children we have known, may for this reason be interesting.

A reprehensible habit annoying to parents, and detrimental to those indulging in it, is that of tale-bearing. It is a many-sided fault, and requires varied treatment. The child who notes every slight as a personal grievance, who considers the thoughtless deed or outspoken words of his playmates as an offense to be resented, needs the cultivation of a broad, generous spirit which will lead him to presume the offense to be unintentional rather than purposeful, and teach him to overlook, forgive, and forbear, to laugh heartily over accidents and let them pass instead of running to tell mother of Tom or Georgie. Envy, jealousy, self-love, resentment, a desire to bring punishment upon others, are some of the roots from which the habit of tale-bearing grows. This sort of telling is always concerning the *evil* observed, the *bad*

things which have occurred, and some children are helped by the mother asking after she has listened to a rehearsal of some of Robert's misdeeds, "Now tell me of something good which you have seen Robert do to-day, some loving deed, some pleasant word, some gentle act?" If the mother insists that each child who comes with tales, must needs tell two, a good one to complement the bad one, he will soon come to think oftener of the good, and consequently look with more leniency upon the actions of others; his tale-bearing will decrease proportionately. He will be encouraged to relate the good, to watch for it in those around him.

Most children like sensation, and much tale-bearing is the fruit of a desire to astonish their hearers, to surprise or startle by being the first to impart information, in other words, to create a sensation. If the facts in the case are not of sufficient importance in themselves to warrant as deep an impression as they desire, the temptation is to distort the truth or add to it. Such children may be helped by being taught to regulate their stories by the measuring rod "Is it true, is it necessary to tell, is it just." In this sort of tale-bearing many children are simply striving to imitate the example of their parents whom they hear indulging in all sorts of gossip. It is unfortunate for children to be allowed to listen to gossip, as it also is for their elders to indulge in such conversation.

Train the children to talk of nature, of books, of character, instead of people. Discourage aimless chatter and prattle just to hear ourselves talk. A very shallow mind can keep up a conversation concerning people, their sayings and doings, but it necessitates one's having given the matter some thought beforehand to talk well about things. With some children addicted to gossipy tattling it serves well to simply ignore their tales as far as they may know, though it is wise to investigate the matter unknown to them. A surer remedy is to fill their minds brimful of other interests, to give them something worth while to talk about. Many parents distressed with the tale-bearing habit are wont to forbid the child to come to them with anything, or punish him for so doing, supposing this will stop the habit. A better way is to retain the child's confidence and eradicate the evil by measures you can "keep your hand on" so to speak. There are many times even with children addicted to tale-bearing when it is right and just that they should be allowed to speak of their real or supposed wrongs. Parents should listen patiently, seek to view the matter from the child's standpoint, and do what they can to make the matter right with or for the child.

When an evil has been committed and children are called to account for it, it is wisest to give the offender an opportunity without publicity to tell of himself rather than to allow others to tell of him. Children should be early taught that it is not right to witness or be knowing to a wrong which conscience tells them their parents or teachers should know without telling of it, but they should also understand quite as well that there are right ways and right times for speaking of such matters, and that their guide should be the never-failing golden rule. A plan that worked well in one family was for the witness of a misdeed to politely remind the culprit that he was doing or had done wrong, and that he ought to go at once and tell mama about it. If he refused to do so, then the witness was allowed to say to mama, "Georgie has something he needs to tell you," but to relate

nothing of the circumstance unless necessitated by Georgie's continued refusal to speak of the matter, and then only with his consent and in his presence.

A propensity for whining is the bane of peace in many families. A plan that serves well with some children is to tell them the tone they speak in is a language with a foreign accent which you do not care to listen to, and invariably appear not to hear any remarks or requests made in the obnoxious tone. If father, mother, and all the family accord in turning a deaf ear, the child will soon tire of whining to no purpose. Meanwhile see that none but pleasant tones fall upon his own ears for him to pattern after; setting the example is sometimes much better than giving the precept.

One great difficulty in eradicating this and similar faults lies with the parents who, distressed or irritated over the matter, try to "talk" the child out of the habit, thus keeping it constantly before him and emphasizing it in his mind. With many so-called faults, involving no serious commission of wrong, such as disagreeable tricks and traits, the less notice taken of them the sooner they will disappear, provided also the cause be removed. Unwise parents sometimes hinder the overcoming of their children's faults by making light of the little one's cute remarks, smiling at his antics, or talking them over with others in his presence or in his hearing.

GIFTS.

LABOR and rest
These are the best
Blessings that Heaven gives;
And happy he
Who makes them be
His gladness while he lives.

With every day
To wake and say: "Thank God for work and light,"
And when at last
The day is past
Thank God for rest and night.

This is to find
Sweet peace of mind
To know life's precious worth;
God's gifts to take
And with them make
A paradise of earth!

—*F. D. Sherman, in Leslie's Monthly.*

SEASONABLE RECIPES.

BY LULU TEACHOUT BURDEN.

Almond Sandwiches.

Make a filling from one part of chopped almonds to two parts of celery cut into crescent shapes, moistened with a mayonnaise dressing. Spread this between thin slices of buttered brown bread. Taken with a cup of cereal or with a dish of stewed fruit, these make a very substantial light luncheon.

Home-made Cereal.

Brown together in a moderate oven for three quarters of an hour the following: Three pints of wheat bran, one pint cornmeal, one cupful of graham flour or rolled oats, two thirds of a cupful of malt or malt honey, and three small eggs or two large ones. When quite brown, for a good cereal drink steep with each cupful of water one large or two small table-spoonfuls of the cereal.

Potatoes and Turnips.

Boil one quart of sliced turnips twenty minutes, add five good-sized potatoes, boil half an hour, drain, mash well with a fork, and season to taste with salt, and add one cupful of rich milk. Beat until fine and fluffy with a wire spoon egg-beater. Serve in a heated dish. Nut butter may be added if desired.

Stuffed Sweet Potatoes.

Wash and bake good-sized sweet potatoes. When done, cut a cap from the top of each and scoop out the inside. Mash fine in a saucepan over the fire, adding a little butter or nut butter, a generous quantity of cream, salt to taste, and the beaten whites of two eggs to six large potatoes. Fill the skins with this mixture, set back in the oven, and serve hot. It is preferable to

stuff either sweet or Irish potatoes if there is any delay to be experienced in serving as soon as they are done.

Hash — English Style.

Wash and put on to cook in salted, boiling water one cupful of rice. Into another kettle put one quart of strained tomatoes, two small onions cut fine, and one half-pound can of protose cut into dice. Season with salt, and boil one-half hour. Then add to it the rice, a little butter, or nut butter, and more water if it is too thick, and let it simmer fifteen minutes longer, being careful that it does not burn. The rice should

cook at least forty-five minutes before it is added to the tomatoes and protose.

Stuffed Spanish Onions.

Skin six Spanish onions, and parboil them for about an hour. Pull out the center of each onion, and fill the cavity thus made with a stuffing made as follows: Mince fine one-fourth cupful of nuttolene and one-half as much savory protose; add to this a part of the onion centers, and season with salt. Fill the onion cavities, and cover with some of the pieces removed. Put the onions in an oiled baking dish with one-half pint of vegetable stock, and bake about one

hour; baste frequently. Thicken the gravy with a little brown flour, and strain it over the onions to serve.

Vegetable Salad.

Boil one cupful of rice in one quart of boiling, salted water for ten minutes. Drain, and put it in a double boiler with two cupfuls of milk; cover, and steam until the milk is absorbed. While hot, sprinkle with salt, and pour into a buttered ring mold. When cold, turn it on a bed of crisp lettuce, and fill the center with one-half cupful each of cooked beets and carrots, and one cupful of drained peas. Mix the vegetables with French dressing, and pass mayonnaise to be served with the salad.

"With health of body and content of mind,
And with ambition cast without his heart,
He is the richest man, in sober truth,
Although for lack of bread his life depart."

The Hundred Year Club

Increased Length of Life.

A table has been prepared in the census office to show the increasing age of population from decade to decade. In the volume of the census recently published, this increase was shown for the period from 1880 to 1900, by computing the average age of the population of the United States. In 1880 the average age was 24.6 years, in 1890 it was 25.6 years, in 1900, 26.3 years. The median age of the colored population from 1830 to 1900 increased only about one half as fast as that of the whites. Many complex influences have co-operated in producing as a resultant this steady change in the age composition of the population. Among these may be mentioned the rapid progress of medical and sanitary science, which has tended to increase the average length of life; the decrease in the relative number of children born, which has made the earlier age periods less preponderant numerically in the total population; and the influx, especially from 1840, of great numbers of adult emigrants, increasing the number in the older-age periods. The difference between the white and colored populations is doubtless due in a great measure to the fact that these influences have wrought more powerfully upon the white than upon the colored race.—*Medical Times.*

A recent newspaper article sketches the lives of twenty men and women, the youngest of whom is 102 years old.

According to this article the two oldest people now known to have recently lived in the United States are Noah Raby of Middlesex Co., N. J., and Mrs. Mary Mc Donald of Philadelphia, each of whom had reached the remarkable age of 131 years, when their cases were reported.

Noah Raby, Aged One Hundred and Thirty-One Years, New Jersey.

Noah Raby was born in 1772, and is, therefore, older than the republic of the United States, being four years old when the Declaration of Indepenence was signed. His mother was an English woman and his father was a full-blooded Indian. He became an overseer on a Virginia plantation when he was a young man, and afterward entered the navy and served through the War of 1812. His occupation has always required him to live an active, out-of-door life. He has never been married.

Mrs. Mary Mc Donald, Aged One Hundred and Thirty-One Years, Philadelphia, Pa.

Mrs. Mary Mc Donald who shares Mr. Raby's distinction, is a bright, cheery old lady who can still see well enough

to sew, and seems to get a good deal of pleasure out of life in a quiet way. She remembers the days of Valley Forge, and described the rags and sufferings of the American soldiers very vividly. She herself helped to carry food to them and to care for the sick and wounded.

Abraham Elmer, 119 Years Old.

Abraham Elmer, was 119 years old when last heard of. He was born in 1782, and served in the War of 1812. He has lived a simple hardy life, observing the laws of health, and restricting himself to a very simple diet. He attributes his long life and vigorous health to these facts.

Bernard W. Morris, Aged One Hundred and Eight Years, Prospect Park, Brooklyn, New York.

Bernard W. Morris, a native of Ireland, gave up his position as watchman in Prospect Park, Brooklyn, N. Y., in 1901, at the age of 108 years. Up to that time he had done regular service in that capacity. His life has been active and his habits simple, and when interviewed, he said that he did not feel his age, and was good for several more years.

Isaac Brock, Aged One Hundred and Twenty Years, Texas.

Isaac Brock, a resident of Texas, was born in 1783, and has the distinction of being a veteran of four wars. He fought in the War of 1812, the war of Texas against Mexico in 1835, the Mexican War in 1846, and though he was 73 years old, he was called upon by the confederacy to assist in the defense of Galveston in 1861.

BENAJAH S. PHELPS.

Benajah S. Phelps, Aged One Hundred and Three Years, Colorado Springs, Colo.

Benajah S. Phelps, of Colorado Springs, Colo., was born in 1800 and spent much of his boyhood in a lumber camp on the banks of Lake Champlain. Working in the timber in the winter, rafting the logs down the swollen streams in the spring, and working on the farm in the summer no doubt gave him the wonderful physical strength and endurance which has enabled him to live in almost perfect health for more than a century. He continued to live a very active life until he was more than 98 years old, and even after that time he walked daily, retaining his vigor and strength for the full century.

GENERAL TOPICS.

Physical Culture vs. Drugs.

Theoretically, every adult person of any intelligence, wishes to be strong and healthy. Practically, a majority of them wish nothing of the sort. They would like it well enough, but are not willing to pay the price, though it really costs nothing. When a man gets out of health he usually wants to get some one to "patch him up" so that he can continue the foolish things which have caused his bad condition. Hence the almost universal resort to drug treatment instead of the natural means of restoring and maintaining health and strength.

If a man is really desirous of being naturally sound and healthy he will try to study out the means of becoming so. These means are all included in the seven foundation principles of practical hygiene; namely: exercise, rest, air, light, food, drink, and bathing.

A moderate and intelligent activity of the muscular system, followed by proper periods of relaxation and rest, is essential to healthy functional activity. Fresh air and a certain amount of sunlight are equally important. But these are not enough; wholesome nourishing food and drink must be supplied to furnish material for the building of healthy tissue. The ever-accumulating waste materials must also be removed by frequent applications of nature's great solvent — water. These constitute the foundation. But there is yet more. Such things as indulgence in the tobacco habit and venereal excesses, seriously influence physical and mental conditions. But how many are willing, even if circumstances enabled them to do so, to give up even one pet vice, and study and practice a few of the plain, simple rules of health, for the sake of enjoying the pleasure of the possession of robust, vigorous, natural health? Oh, yes, they would all like it, but not well enough to induce them to exchange their vices for it. They want both health and the vices, but both they cannot have. So they choose their vices, and when Nature begins to withdraw her support they seek some means of temporarily stimulating the flagging vital forces, in order that they may a little longer indulge in their follies.

When Nature demands a rest they give the lash of stimulating drugs. That a very large number of people follow this course is proved by the huge and constantly increasing traffic in drugs and patent medicines. It is estimated that over ten millions of dollars are spent every year in the United States in advertising patent medicines and various forms of drug treatment. These figures give one of the reasons why this is an age of "nerves."

No man or woman in a normal condition would prefer sickness and a short life to health and length of days. It is only after the appetite has been perverted that any degree of enjoyment can be derived from indulgence in vice and bad habits. So the whole situation may be summed up in the plain proposition that the only way to attain to health and real happiness is by obeying nature's laws. Those who do not follow in this path are, of necessity, unhealthy and consequently unhappy.— *J. P. Bean, in Human Nature.*

The Treatment of Constipation without Drugs.

First, correct all the bad habits. Nothing can take the place of this injunction. . . . Take time for every meal, or don't eat it. . . .

Bending the body at the middle backward and forward, sidewise, twisting, stooping, swinging, and thrusting the arms upward, backward, forward, round and round, reaching, striking, pulling, and pushing — all these motions are of value. Rapid walking, horseback riding — if the horse is not too easy in gait! — kicking, swinging the legs, squatting and rising rapidly many times repeated. Any motions or exercises that act upon the abdominal muscles, that stimulate the diaphragm, accelerate the breathing function, and favor the peristaltic movement of the bowels, will aid in banishing the demons and hobgoblins that dance and devastate in the wake of this national, if not cosmopolitan, malady, constipation.— *The Dietetic and Hygienic Gazette.*

Punishment as a Therapeutic Means.

An English woman of good social position — in fact, the wife of a county magistrate — has just been convicted and fined fifty pounds for cruelly punishing her young daughter for incontinence of urine. The details of the case have been narrated at length in the English journals, and are not necessary for an understanding of the principles (or lack of principles) involved. Sufficient to say that this English woman "of good social position" resorted to cruel methods of punishment that would not have been justifiable even if her child had been guilty of a fault; but the child of course was not guilty of a fault; she was simply suffering with a physical defect.

Incontinence of urine in children is a much misunderstood affair; and it is misunderstood not only by the domestic moralist, but also by the average therapeutist. The evidence goes to prove that this affection is neither a sin nor a disease. It is rather a physical defect due to an undeveloped nervous mechanism presiding over the bladder. To punish a child for wetting the bed is about as reasonable as to punish it for being slow in cutting its second set of teeth.

Punishment as a part of a therapeutic scheme is a dubious business under any circumstances. We do not deny that punishment, or the threat of punishment, may sometimes be a powerful means of suggestive therapeutics. But it requires rare good judgment, and the practitioner should be pretty sure of his case and his diagnosis. Certainly, it should never degenerate into brutality or wanton cruelty.— *Philadelphia Medical Journal.*

Had to Obey Orders.

All doctors are not so careful of the welfare of their patients as they might be. Here is a story of one who went to the limit. He is the proprietor of a famous health resort not far from ———. When he receives a patient for treatment he says:—

"Now, I want it understood that unless you do exactly as I say, there is no use of your staying."

This rule sometimes requires him to be very harsh, but he never hesitates. He acts on the theory that he can better afford to offend a single patient and lose him than to have that patient go back home and tell his friends Dr. So-and-So had done him no good, relates the *Washington Star.*

Not long ago a well-known clergyman went to this resort for treatment.

The doctor looked him over upon his arrival and said:—

"While you are here you must take long walks every day."

"But I can't take walks," replied the parson. "I haven't done any walking for years. My heart won't stand it."

They argued the question quite warmly. As the clergyman and doctor were good friends, the latter was more lenient than usual. However, he bided his time. The next afternoon the physician said to the clergyman:—

"It's a nice day. I would like you to go horseback riding with me."

Riding they went. When they were about eight miles from the sanitarium the physician said: "Oh, doctor, won't you get me that flower by the roadside? I don't like to leave this horse."

As soon as the clergyman was on the ground the doctor galloped off with both horses, and the clergyman was compelled to walk back to the sanitarium. Upon his arrival he was very angry, and was for packing up and leaving at once. There was no train that night, so he was forced to stay a few hours longer. The next morning he came down radiant and good natured. "Doctor," said he, "I was pretty sore at you last night, but I forgive everything. I have had the first good sleep I have enjoyed in months. Hereafter I'll obey your orders implicitly."—*Selected.*

Strange Result of an Operation.

Dr. Karl Diwald, one of the best-known surgeons in Vienna, has just drawn attention to a very peculiar case, says a London paper.

A young man who was attending the military college was accidentally shot in the head by a revolver, and Dr. Diwald, who was summoned to attend him, extracted the ball, and at the same time removed a fragment of the brain.

Serious results were expected, but the young man speedily recovered, and soon afterward passed a successful examination.

Strange to say, however, since the operation took place his manners and habits have been deplorable, which is the more remarkable since he was reputed to have been one of the most polished young men in Vienna. His associates now say that they cannot tolerate him, and that even at table he is constantly guilty of gross breaches of good manners.

Dr. Diwald maintains that the portion of the brain which he removed while extracting the bullet must have been that very part which controls all matters relating to decorum and good conduct; in other words, that the bump of good manners is located in that part of the brain, and, that since he has lost it, the young man finds it impossible to display good manners.

Uses for Salt.

Salt puts out fire in the chimney.

Salt in the oven under baking tins will prevent their scorching on the bottom.

Salt and vinegar will remove stains from discolored teacups.

Salt thrown on soot which has fallen on the carpet will prevent stain.

Salt put on ink when freshly spilled on a carpet will help in removing the spot.

Salt and soda are excellent for bee-stings.

Salt in whitewash makes it stick.

Salt thrown on a coal fire which is low will revive it.

Overeating a Sin.

It is a part of our morbid civilized life, says the *Homeopathic World*, that eating and drinking are made servants to morbid passions and desires. They form a most important ingredient in our civilized life, so that our days are divided by our meals. It is considered no sin to overeat, while in reality it is an absolutely immoral act, and from a high standpoint a crime for which the body has to suffer at the high tribunal of that law which none can transgress with impunity.

ALKON'S ox is worn and old,
It has gained him grain and gold;
Must it to the shambles go?
"Nay," says Alkon. "Never so;
Long he helped me at the plough,
I'll be grateful to him now—
His declining days shall pass
Knee-deep in the pleasant grass."
—*Addeus Macedonis.*

Hiccoughing.

Noir reports an immediate cure of an attack of hiccoughing by means of continuous traction on the tongue for one and a half minutes. The patient, a nervous child, had been hiccoughing almost uninterruptedly for six hours. She had failed to respond to the various remedies applied, and was greatly exhausted. There was no recurrence.

A Successful Operation

One of the most eminent surgeons of this country was called to operate for the extraction of a plate of artificial teeth lodged near the lower end of the gullet. The X-ray located the teeth. The operation was skillfully performed, but the teeth were not there. They subsequently turned up in the patient's bed.—*Sel.*

The Drug-Habit Curse.

The following extract from the *Bulletin of Pharmacy* throws the light of professional investigation upon an evil the extent and seriousness of which few realize:—

"The use of cocaine by unfortunate women generally, and by negroes in certain parts of the country, is simply appalling. No idea of this can be had unless a personal investigation is made. The police officers of questionable districts tell us that the habitués are made madly wild by cocaine, which they have no difficulty at all in buying, it sometimes being peddled around from door to door, but always adulterated with acetanilid. Touching this special phase of this evil, we are allowed to quote two correspondents. One reports over 200 habitués: 2 using opium; 5, laudanum; 100, cocaine; 100, morphine; 20, trional; and 5, sulphonal. He writes: "Being in a 'peculiar' neighborhood, I find the above-mentioned drugs abused to an awful extent. Very few care to better themselves, if it were possible."

"Another pharmacist writes interestingly as follows:—

"'I spent a few months in a pharmacy located in what is known as the "tenderloin district" in this city. From my personal observation I can say that the number of men and women, in the prime of life, addicted to the laudanum, paregoric, morphine, and cocaine habits is appalling. Cocaine, of which the muriate is generally sold, is dispensed in crystals and also in solution, as ordered by the customer; and is used by the "fiend" by mouth and hypodermically. A considerable amount of cocaine is also disposed of in the form of catarrh snuff; the buyers of this article, being acquainted with the nature of it, buy it to get the desired

cocaine effect. One case in particular that came under my notice was that of a young man, I should judge not over thirty years of age, whose limbs were literally covered with marks from the hypodermic needle. Laudanum sold to "fiends" is, as a rule, a fifty-per-cent preparation; i. e., tincture of opium diluted with an equal volume of diluted alcohol, and colored with caramel. The amount of paregoric sold in the "tenderloin" is comparatively very small.'

"Attention may be called to the fact that quite a percentage of pharmacists and physicians are of the opinion that habits are formed for sulphonal, trional, and the popular headache remedies. This is an amply sufficient number to warrant a thorough investigation of this particular part of the subject, and to suggest caution in the sale and use of these products.

"Besides the drugs and preparations listed, habits were reported for chloroform, ether, bromidia, and several brands of catarrh snuff. Our correspondents, in considerable numbers, condemn these snuffs as extremely vicious. They have no doubt that they contain cocaine, and they believe *their sale should be suppressed.* Fear is also expressed that the danger of continuing the use of suppositories containing opium or morphine is often overlooked.

"Besides the information to which we have already referred, we have consulted police officers, jail physicians, and eminent specialists in nervous and mental diseases, as well as physicians of insane asylums and sanitariums, and they all unite in declaring the abuse of narcotic drugs to be on the increase, with results indescribably bad. Much of the insanity and nervous derangement prevalent is noticeably due to drug habits, and crime is often directly traceable to their impulses. Opium and cocaine are much more brutalizing than alcohol; and they have the additional horror of steady and certain progressiveness, and an almost absolute absence of reform.

"Now with the exception of proprietary and patented preparations containing habit-forming drugs, and the opium imported for smoking, the sale of these substances is almost entirely in the hands of the drug trade as represented by jobber, manufacturer, and retailer. The responsibility for their sale indeed rests largely with registered pharmacists, who not only have control, but discretionary control. The responsibility thus resting is frankly acknowledged by many honorable and manly pharmacists, greatly to their credit. Many of our correspondents, in fact the large majority, were jealous of their reputations in this regard, and boldly declared that they were not and could not be made parties to the degradation caused by the indiscriminate sale and use of narcotics. Pharmacy is proud of these, and pharmacy honors them! In no possible manner can a pharmacist be compelled to sell these drugs if, with good reason, he deems their use injurious to the person purchasing them. The responsibility then becomes a sacred obligation, and the excuse so often made, 'If I don't sell to him some one else will,' is as cowardly as it is specious. The responsibility is upon us, and we must meet it or go down. If asked what can be done, we may answer, Our level best, that's all!"

Doctor.—"Well, how is our patient this morning?"

Nurse.—"His mind seems perfectly clear this morning, doctor; he refuses to touch any of his medicine."

Ventilation and Hot-Water Heating.

The high price of coal due to the strikes in the anthracite region has added one third to the prices of soft coal in the West. Natural gas will soon be exhausted in the Indiana regions. Coal oil is too expensive for house heating. Wood is out of the question, being worth from $4 to $8 a cord in cities. The cost of heating a ten-room house in Indianapolis varies from $100 to $150 a year with the use of hard and soft coal and coke.

Therefore for economy new buildings are made air tight and are supplied with hot-water systems which are fed from a central plant, which is run by cheap grades of soft coal, the cooking being done with natural gas or with artificial gas at one dollar a thousand feet.

By this method a vast amount of labor is saved; dirt is avoided, stoves abolished, and housekeeping made easy, cleanly, and convenient. The cost is not more than by stove, grate, and furnace heating, once the hot-water system is installed.

But we fear *what is gained in money, comfort, and cleanliness, is lost in health and vitality*. For example, the ten years in which gas has been abundant in a city like Indianapolis may well be called the years of good health due to good ventilation. The meanest houses kept up their gas fires night and day, and there were no foul odors even where there was overcrowding and no attempt at ventilation. Now all is changed; the windows and doors are made tight for the winter season. The fires in the kitchens and living rooms of the masses of the people are allowed to die out from eight o'clock in the evening until five or six in the morning in order to cut the fuel bill one half or one third, and so that greatest of all ventilators, the room stove or open hearth, is done away with, and the family breathes and rebreathes the air akin to that of the black hole of Calcutta. And the contracts made by the hot-water-heating companies enforce a similar condition in the homes of the middle classes: those living in ten- to twelve-room houses at $40 to $50 a month. One of these contracts reads as follows: —

"We inclose bill for first payment on heating contract, and ask that you please send us check to cover same, upon receipt of which the hot water will be turned on.

"We call your attention to the following rules:—

"The cold-air duct to furnace must be tightly closed.

"The cellar must be made tight: all openings tightly closed. (There being no furnace fire in cellar, this item is very important).

"Door and windows must be supplied with weather strips where necessary to exclude cold air.

"When rooms are overheated, close the radiator valve instead of opening door or window.

"A failure to comply with all the rules of the company releases this company from its guarantees."

A glance at this contract shows that no ventilation is permitted or desired. Should the house have an open grate the hot, foul air might escape and fresh air be supplied from the crevices common to all modern construction. It is probably an oversight that the open hearth flues are not also ordered sealed by contract. Such a system, whether of steam or hot-water radiation, is an invitation and securement of all the evils of vitiated air. It means death to consumptives and a dissemination

of tubercular disease. The gains in economy, comfort, and cleanliness of all such systems of heating — central plant with house radiators — will be at the expense of the life and health of the women and children such systems are intended to make comfortable and healthy.— *Indiana Medical Journal.*

A Milk Epidemic.

Of the typhoid epidemics traced to milk, one of the most typical was that at Springfield, Mass., where, in July and August of 1892, one hundred and fifty cases occurred, concentrated in one of the most beautiful suburban districts of that city. The investigation by Prof. W. T. Sedgwick, showed that the path of the pestilence was coincident with the route of a certain milkman. It was next found that a portion of his product came from a farm where several cases of typhoid fever had occurred during the preceding summer. Shortly before the outbreak of the epidemic the discharges from the patients were spread upon a tobacco field. Manure from this field, carried on the boots of the farm hands, was obvious about and in a well near by. On the bottom of this well, and submerged, in leaky cans, stood the milk to be cooled before it was sent to Springfield. The chain of evidence was thus complete.—*C. E. A. Winslow, in the Atlantic.*

Work is the balsam of the blood,
Work is the source and spring of good.
—*Herder.*

"WHAT would you say" began the voluble prophet of woe, "if I were to tell you that in a very short space of time all the rivers of this country would dry up?"

"I would say," replied the patient man, "Go thou, and do likewise."

A WHOLESOME MEDICINE IS CHEER.

A WHOLESOME medicine is Cheer,
And Hope a tonic strong;
He conquers all who conquers Fear,
And shall his days prolong.

A happy heart, a cheerful lip,
Contagious health bestow;
As honey bees their sweetness sip
From fragrant flowers that blow.

Who lives in Love's enchanted hall,
Where Fear nor Sorrow stalk,
The melodies of Peace o'er all
Shall hear though men may mock.

A thousand years are as a day
To him who trusts the Truth;
Who shuns the path of Error's way,
Attains perennial youth.

Sing on, sing on, forever sing
And hope, despite thy lot;
From heaven thy fervent heart shall wring
The fate thy prayer hath sought.

Let cheerful thoughts prevail among
The sons of men alway,
And sighs shall change to Love's sweet song,
And night to golden day.
—*H. F., in Washington News Letter.*

Bath Treatment of the Insane.

W. Alter, an assistant physician at one of the Provincial Hospitals for the Insane in Germany, has an article on "The Bath Treatment of the Insane" (*Ctrlbl. f. Nervenheilkunde u. Psych.*, March, 1902). In bearing testimony to the efficacy of this method of treatment he confirms what so many others have asserted who have used it. The temperature of the baths varied from 94° F. to 97° F., and the patients were kept in for from two hours up to twenty-four hours, or longer. Usually the patients rested on a sheet suspended beneath the water, and another sheet covered

the whole bath excepting at the head end. Their meals were served to them in the bath. It was found that on an average one attendant to every four patients in the baths was required. The results described were such as are seldom obtained by any other method. At the commencement there were fifty-four patients, almost all in single rooms, and after a few months none occupied single rooms; and whereas previously most were noisy and restless the whole or part of the night, in spite of the administration of drugs, after the institution of the bath treatment it was a rare thing to find a patient noisy at night. The baths also seemed to improve both the mental and physical condition of the patients. Dr. Alter is of the opinion that if the difficulty as regards number of attendants and sufficient bathing accommodation could be overcome, the bath treatment should be introduced into every hospital for the insane.— *Medical Times.*

Use Both Hands.

Much of the mechanical work that is now done with the right hand could be done as well with the left if that member were sufficiently trained, and the division of labor thus made possible would not only result in more efficient work, but in an increased quantity of it. It is, of course, very evident that when both hands are equally dextrous they may be used alternately, and the worker need never stop for rest; for as soon as one hand gets tired he can use the other.

Accordingly, the German authorities have given considerable attention to left-hand work in their mechanical schools. The students are taught to saw, plane, and hammer as well with the left hand as with the right, and the importance of ambidexterity is impressed upon the minds of the young men and women.

In Japan the children are taught to write and draw with both hands at an early age. It is to that method, indeed, that many attribute the superiority in certain classes of Japanese art. The entire arm is employed in drawing, and no supporting device whatever is used. In a similar manner the German scholars are made to draw large circles and other figures on the blackboard, first with one hand, then with the other, using wrist or elbow, the whole arm thus being brought into action.

The art of writing equally well with both hands is one that should be cultivated and acquired by every one. Even a slight accident to the right hand incapacitates one nowadays from all manner of work, whereas, if the use of the left hand were cultivated as it should be, such misfortunes would lose much of their inconvenience.

Slight practice will work wonders. Write the alphabet through five times a day for a month, with your left hand, and at the end of that time you will be surprised to find that you can write as well with your left hand as with your right.— *Health.*

Lazy Breathing.

A physician writing in the *Homeopathic News*, gives the following excellent advice regarding a habit which is no doubt the foundation for many more of humanity's ills than it is now given credit for:—

"While much is being said in these days about proper ventilation and the value of pure, fresh air, the subject of proper breathing is frequently overlooked.

"It matters not how pure the atmosphere may be, it will avail little if the system is unable to appropriate it in sufficient quantities. A lack of appropriation is more frequently due to a laziness of the lungs than to a diseased condition of the respiratory organs.

"In all this spread of knowledge and good sense, it is unfortunately very possible to lose sight of the real issue. The air of heaven is free, but we must do our part if we would be benefited by it. Shallow breathing, especially among women and girls, is productive of much of the terrible ravages of consumption. Oxygen and tubercles are antagonistic; to keep free from the one, the other must be present in sufficient quantities.

"Many people are so indifferent in this matter that they rarely draw a full breath. They keep the body clean and the breath fragrant, maybe, but give no thought to the necessity of cleaning out the foul and noxious gases from the lung cells and filling them with pure, life-giving oxygen. One writer tersely puts it thus: 'No one would expect to have a good fire just because a pair of bellows hung on a nail by the chimney; but this is exactly what many people expect of their lungs, which are really only the bellows given us by which to keep the fire of life burning bright and clear within us.'

"We, as physicians, are in the habit of sending our patients to higher altitudes, where the air is rare and contains more of the life elements, but we frequently overlook the fact that by proper exercise of the lungs a sufficient quantity of these life elements could be obtained from the home atmosphere. Time enough for the higher altitudes when we have proved by systematic, deep breathing that there is not sufficient oxygen in the lower levels.

"To again quote the above-mentioned writer: 'It is not too much to assert that lungs properly used in a comparatively close room will do more good than lazy lungs in the open field.'

"The trick of shallow breathing is a habit like others, and can be overcome by persistent effort. A good way to start the habit of proper breathing is to take a few long, deep breaths several times daily. These should be taken preferably in the open air; but if that is not practicable, take them any way under almost any other circumstance. The object of a deep breath is to fill the lower lobes of the lungs and force all of the cells into activity. The blacksmith's arm becomes strong by use, and the same is true of the lungs. Disuse allows thousands of the minute air cells to become inflamed, and ultimately to fall into decay. By the non-use of these cells they are not alone injured, but others, in order to do the work of the inactive ones, are overtaxed and in turn become diseased, and consumption or other serious lung impairment results. To keep the air cells healthy they must be kept constantly in use, but not overburdened with work.

"In taking deep-breathing exercises, diaphragmatic action should be obtained. Place the fingers on both sides, just over the lower ribs, and swell out the chest at this point, when the lower lobes will be filled.

"It is good practice to force as much of the foul gases from the lungs as possible before beginning the deep breathing. There are many good breathing exercises advocated for the use of those whose lungs are in a state of disease, but my sole object at present is to call attention to the fact that the healthy lung needs proper care in order to prevent decay of the lung tissues and keep the whole system in perfect condition.

Nothing will do more to impair the human system than the breathing of impure air, and it stands to reason that if the lungs, through laziness, fail to appropriate the oxygen, the impurities of the atmosphere must be in the ascendancy. This brings about a sluggish action of all the vital organs, and results in disease and death. When once the pernicious habit of poor, shallow breathing has been broken up, the health undergoes such marked improvement, there is such brightening of the spirits and improvement of the looks, that the luxury of deep breathing is not likely to be foregone. Besides the gain to the general health which comes from the habit of deep breathing, there is created a reserve strength and preparedness which is often of great service in warding off acute diseases."

FOOD VERSUS PHYSIC.

WHEN the great Prophet still was on the earth,
A Persian king who wished to honor him,
Sent to the Arab land a skillful leech
Well versed in medicine and in all the arts,
By which diseases stem diseases' force;
But days and weeks and months and years went by,
And no one came to test his skill and power.
Then to the Prophet loudly he complained,
And said, "The king hath sent me here to be
Physician to the Prophet and his tribe,
But no one comes to test my skill and drugs;
Why am I held in scorn by you and yours?"
Then said the Prophet, "Skilled we know you are,
But still we have a rule within our tribe
Stronger than medicine or physicians' skill;
We never eat but when loud hunger calls,
And we leave off ere appetite is o'er."
"Now is the mystery clear," replied the leech,
"For such a rule enforces constant health."
And so he took his leave, and went away
To seek a land where foolish custom reigned,
And where excess brought many to the tomb.

—From "A Treasury of Translations," by W. E. A. Axon, Manchester., England.

A Substitute for Leather.

Vegetarians and humanitarians will be glad to learn that a satisfactory substitute for leather has at last been discovered.

This new material is a composite substance named "wolft," composed of vegetable or wool fiber saturated with a durable flexible modification of cellulose, the impregnating solution being entirely derived from the vegetable kingdom.

Wolft has already been utilized for boots and shoes, trunks and bags, tires, saddles, machine belting, insulated wire, film for medical purposes, and in connection with various other industries. Even the new motor-car industry is making use of this latest substitute for leather and india-rubber.

The impregnating material named "velvril," in solution can be utilized as varnish, and in this form is practically imperishable as it does not, like all varnishes containing linseed oil, deteriorate with exposure to the atmosphere. It forms an improved medium for mixing paint, and is valuable for enameling leather, leather cloth, and various other substances.

Apart from the intrinsic general advantages of "wolft" over leather, from the humanitarian standpoint, this material should be specially welcome. Hitherto, the more or less compulsory use of leather for the various necessary purposes to which it is applied, constitutes, of course, an inconsistency in the practice of humanitarianism.

But now, without that destruction of life which the use of leather entails, the humanitarian may still have his trunk, his motor car, etc., and be even more comfortably shod than in the wearing of ordinary leather footgear. — *The Herald of Health.*

The Little Rift.

You are puzzled to tell how it all came about; but the day which began so brightly has been obscured, and the household harmonies know the discord of "sweet bells jangled." Your darlings, with whom you are used to be at peace, are fretful and have to be chidden, the while, poor babies, you know in your inmost heart that the fault of their ill temper is far more yours than theirs. Your domestic, usually amenable to reason, is irritable and exasperating, and the friction in the kitchen is felt through the entire home. Worse than all, there is a slight misunderstanding — not more than that, oh, no!— between John and yourself; but it is quite enough to make you wretched all day, and to come between him and his ledger in the counting-room. What is this shadow of a ghost, intangible yet distressingly depressing, which occasionally creeps, like a sea fog, into the sweetest, most tranquil of homes, spreading a baleful influence wherever it appears? Not to be defined is it, yet to be at once recognized, like malaria, by its effects. There is nothing more to be dreaded by married people than the tiny beginnings of strife.

"It is the little rift within the lute
Which by and by will make the music mute."

After a quarrel, or any break in the serenity which ought to prevail in the perfect home, when the unfortunate partners in the trouble look backward, what do they discover? — Generally, to use a homely proverb, that one word brought on another. Perhaps the first word was uttered thoughtlessly, or was the expression on the part of either husband or wife of a transient annoyance or impatience. Judicious silence, a soothing, tender reply, a gentle caress, the tolerant acquiescence which we give to the moods of a petulant child,— we grown people are all children at times, — and the peril would have passed. The trouble was, the other person did not stop to think, but retorted in kind or spoke satirically, looked amused, injured, or contemptuous, and then the flood gates were opened, and words were spoken which left wounds — regretted, perhaps, in an hour, apologized for most humbly, yet, though followed by instant forgiveness, the little scene could not at once be forgotten, and only time could obliterate altogether every trace of the trouble. The slightest difference of feeling, not of opinion, between two who loyally love each other, leaves a pain of the heart which is felt for days.

Beware, dear friends, of the little rift; for you will perceive, if you survey it candidly, that most of the domestic dispeace in this world might justly be labelled, "Much ado about nothing!" The thing in dispute is often a thing about which neither of you cares particularly; but, having become a cause of argument, it is exaggerated in its importance. Pride steps in, and you do not wish to be the first to yield, nor can you confess yourself in the wrong. What a pitiful thing it is, that we are so often most impatient and least tender with those whom we love best, who are our own by blood and affection, bound with us in the same bundle of life, fellow-pilgrims with us in the same company to the celestial city! Constantly, between parents and children, brothers and sisters, and dearest friends, there occur strains of hurt emotion which would not be possible were the contending parties less near and dear, each to the other.

Entire politeness of manner and speech, practiced as conscientiously in the home circle and in the privacy of your own chamber as in the drawing-

room and on the street, will prove an admirable safeguard against sudden explosives. Ill temper is forced to hold itself in abeyance when manner and speech are obstinately courteous. Since "better is he that ruleth his spirit than he that taketh a city," the mere outward forms of self-control are to be aimed at and valued; for by an unerring law these outward and visible forms do often become the signs of an inward and spiritual grace.

Yet, everything else admitted, there is only one sure way of being blameless and satisfactory in home life as in other relations. "It is not the religion that you keep, it is the religion that keeps you, which can be depended on," said a minister in a very helpful sermon the other day; so, it is less the temper we keep than the temper in which we are kept, which obviates the danger of the little or the larger rift. The strength that comes by prayer, the divine gentleness bestowed by a pitying and ever-present Lord, are what we need, like the manna of old, every day of our lives. Is it not worth asking for? —*Mrs. Margaret E. Sangster.*

The Use of Tobacco by Minors.

While most States have laws forbidding the sale of tobacco to minors, it is a notorious fact that such laws are universally ignored. The parent, teacher, and physician are to blame. The parent, that he does not thoroughly train his child; the teacher, that he does not better supervise the conduct of his pupils; the doctor, in that he does not warn the parent, who perhaps errs himself.

School boys may be seen any day on their way to school with books under their arms, and a chew of tobacco or a cigarette in their mouths. Occasionally little girls may be observed indulging in the seductive cigarette on the streets. What will be the inevitable results? The best that could be hoped would be numerous tobacco users, but worse might be feared, and very much worse imagined.

The evil is evident, and the remedy is provided, but law is useless till enforced on violation. The dealer will not obey it till public sentiment demands it; the child does not choose to submit to it; the parent is negligent; the pulpit is indifferent or silent; and what is left for the child's salvation but action upon the part of the "guardians of humanity?" If we act, we move thankless. The parent will not appreciate; the dealer will be made an enemy; and the children will hate us as they become men. Pastor and priest, lawyer and laymen will sneer if we attempt to enforce the laws. Even but few of our own body politic may be depended upon to act, either by precept or concerted movement. Few physicians are even good enough politicians to ask a councilman or representative to vote upon a measure. The effort against the evil is necessarily, for the time, along the lines of individual effort. To do good, we must practice, act, and preach. If our "smoking" friends will close their eyes while puffing pipe or cigar, they will find that they cannot tell when they "have fire." What foolishness, to spend money and waste health to watch smoke curl. Horace Greely defined a cigar as "a roll of tobacco with fire at one end and a fool at the other," and we think him more than half right. If the use of tobacco by the adult be such idiocy, what shall we say of its consumption by the minor? — *The Medical Summary.*

EDITORIAL.

THE REBUILDING OF THE BATTLE CREEK SANITARIUM.

OLD friends and patrons of the Battle Creek Sanitarium will be glad to know that the new building is very rapidly approaching completion. This edifice, when finished, will represent by far the most complete and well-equipped medical institution in the world. The building is absolutely fireproof, being constructed almost wholly of stone, iron, brick, and cement. Each floor consists practically of one solid slab of artificial stone, reaching from one end of the building to the other, five hundred and forty feet, and covering a width of forty-six to sixty feet. The floor is six to eight inches thick. The surface is covered with marble mosaic, is smooth, impervious, and of a color agreeable to the eye. There are no hollow spaces in the walls or partitions, and no hiding place for roaches or vermin of any description.

The dining room, kitchen, and operating room are at the top. Two separate bath buildings, one for the ladies and one for the gentlemen, also one building to be used as a gymnasium, are connected at the rear by a corridor communicating with the main building. A semicircular space between these buildings, which are grouped on the east side of the building, between these and the main structure, is occupied by a beautiful palm garden, which is connected with the lobby of the main building, and this will be one of the most prominent and beautiful features of the institution.

The rooms are well lighted, throughly ventilated, and heated. Many of the rooms are provided with private bathrooms and lavatories. There are bathrooms on every floor of the main building in which feeble patients can receive treatment without being taken to the main bathroom.

The building is furnished with five elevators; one in each bathroom, and three in the main building. These elevators are of the most improved hydraulic pattern, and will be provided with every safety device.

The heating, plumbing, and plastering are practically done, and little remains to be completed with the exception of the wood finish, which is now being put on and will be completed within a few weeks. It is possible that some portions of the building will be occupied within a week or two, and it is believed that within six or eight weeks it will be possible to fit up rooms for patients. The letters we receive from all parts of the United States indicate that hundreds of people are waiting for the completion of this Bethesda. We hope to be able to publish in the next number the date fixed upon for the dedicatory ceremonies.

LET others bask in glories won,
Be thou content with duty done,
Better to rest on wheaten sheaves,
Than on the greenest laurel leaves.

—*Schwarzkoff.*

DISTILLED WATER.

WATER is the only drink. As afforded by nature, water is seldom entirely pure. Water which comes from the ground contains in solution more or less of the mineral substances with which it comes into contact. If these are readily soluble, as in the case of limestone, magnesia, common salt, soda, etc., these substances are found present in considerable amount; but water which comes into contact only with quartz or sandstone is almost entirely free from mineral ingredients. Such water is said to be soft, and is highly desirable for domestic purposes. Rain water is soft, but contains more or less smoke, dust, and germs washed from the air.

The water of lakes and rivers is always contaminated more or less with animal and vegetable matter. Water from such natural sources is likely to contain the young or eggs of parasites, and is often contaminated with sewage. This is still more often the case with well water. Well water is always unsafe unless obtained from an artesian well properly constructed.

Distilled water is free from all these objections. It is not quite so agreeable in flavor as natural water until one becomes accustomed to its use, but it is gratefully received by the digestive organs, while to a remarkable degree it stimulates the action of the kidneys.

The flavor of distilled water may be improved by aërating it; that is, by exposing it to the air by allowing it to fall in drops for a considerable distance, or distilling it through a charcoal filter.

The newspaper articles which now and then appear, condemning the use of distilled water, are wholly without foundation. The statement that distilled water is a poison is the sheerest nonsense. Most people could swallow with advantage one or two pints of distilled water daily. It is especially useful in cases of disease of the kidneys and as a means of encouraging intestinal activity.

Distillation is a very cheap process and one which may readily be carried on in any home by means of any of the numerous devices which are provided for this purpose. A single pound of coal will evaporate or distill a gallon of water. The cost of a pound of coal at five dollars a ton would be about one fourth of a cent; hence, the cost of producing distilled water, aside from the labor, is only about one fourth of a cent per gallon. In cities in which distilled water is furnished in considerable quantities at the present time, the principal cost is that of distribution to consumers. Distilled water should be used exclusively in hard-water districts.

THE HYGIENE OF RAILROAD TRAINS.

A COMMITTEE appointed by the American Public Health Association to suggest methods by which it would be possible to diminish the dangers of unsanitary conditions in railroad cars, waiting rooms, etc., submitted, at the 28th Annual Meeting held in Indianapolis, Ind., an interesting and exceedingly practical report which we give below, and which is commended to the earliest consideration of the public as well as the railroad corporations. Railroad officials who are in general giving attention to the convenience of travelers do not always appreciate the necessity for precautions to protect their patrons against these unseen dangers because of lack of information. The committee have done an exceedingly great service to the public in calling attention to these evils and the methods by which they may be remedied and gotten rid of.

RECOMMENDATIONS.

1. *Passengers Known To Be Ill with Contagious Diseases.*— When a passenger is known to be contagiously ill, he should be isolated in a compartment, appropriately equipped, and thoroughly ventilated in a manner to atmospherically separate it from and to protect the rest of the car. Through cars should be provided with sick rooms, as well as staterooms, interchangeable in use, if necessary, and for the use of which charge may properly be made proportionate to the service rendered to the individual and the public.

2. *Construction of Cars.*— The interior of passenger cars should be furnished with hard, smooth, and polished surfaces. All surfaces should be smooth and plain. Carvings, moldings, groovings, flutings, and all so-called ornamental work which furnishes lodgment and harborage for dust and dirt, should be avoided.

3. *Furnishings.*— The furnishings of floor, seats, windows, draperies, should be as nonabsorbent as practicable. Wherever admissible, carpets and mattings should give place to impervious material; for plush in seat and seat-backs some impervious material should be substituted; curtains of suitable nonabsorbent material should be used, rather than slatted blinds in windows. Floor coverings, seats, draperies, and window curtains should be made easily removable for cleaning.

4. *Ventilation.*— Coaches should be furnished with effective means for continuously supplying not less than one thousand cubic feet of warm air an hour for each chair or other single seat with which the car is provided, and for distributing and removing the air in an effective manner for doing ventilating work without troublesome draught.

5. *Temperature Regulation.*— The artificial temperature of the car should be so controlled either manually or automatically as to prevent the debilitating effects of overheating, and the still more harmful effects of chill, or of wide-range temperature fluctuations.

The excessive summer heat of cars brought from yards to be made up into trains, should be mitigated as much as practicable by shedded yards, protected car roofs, open deck windows, and also side windows, while the cars are in the yard; or, if need be, by sprinkling the car roofs.

6. *Car Cleaning.*— The cleaning of cars should be frequent and thorough, and without much, and certainly not exclusive, reference to evident dirtiness, since danger from this cause cannot be safely guaged by dirt quantity, nor indicated by its conspicuity.

The cleaning of all removable furnishings should be done outside the car, and when weather conditions permit, all other cleaning should be with wide-open windows and doors.

The feather duster should be used only with open windows, and for the purpose of lifting dust so that it may be removed by a strong, through current of air.

Under ordinary conditions the interior dusting should be done by means of dampened cloths.

When the cars are in transit and occupied by passengers, any method of cleaning which stirs up and floats the dust from the floor or furnishings should be prohibited. The brushing of floors or carpets with whisk brooms, the brushing of clothing in the open car, the porter's maneuvering for a tip, should be discouraged.

7. *Disinfectants.*— Floors should be washed frequently with suds and an added disinfectant of a simple, odorless, and effective nature. The sanitary and lavatory fixtures should be similarly and frequently treated with a disinfecting wash.

8. *Sterilizing Treatment.*— Thorough cleansing of all fabrics by beating, the air blast, dusting, airing, and washing should be supplemented by occasionally subjecting the entire interior car and contents to disinfectant treatment by sterilizing gases, vapors, or fumes, and by methods of recognized efficacy. Such

treatment should be followed whenever any known or suspected case of communicable disease is found among passengers, and periodically, even though such cases do not appear.

All bedding, including mattresses, pillows, blankets, and curtains should be similarly treated, being always thoroughly aired and otherwise cleaned after each use, and sterilized promptly after exposure to a suspected or known case of contagious disease.

All bed and lavatory linens should be thoroughly sterilized in the process of laundering.

9. *Excreta.*— The practice of disposing of excreta by scattering it over roadbeds is both dirty and dangerous — alike to the passenger and to the public. Such material on drying contributes to the dust of the road and in the cars, and becomes part of the floating contents of the air of the cities and the country through which the road runs. Convenience in disposal affords no adequate excuse for the maintenance of this filthy, and dangerous practice. Sewage tanks and earth closets should be provided under the cars.

10. *Water and Ice Supply.*— Water and ice should be obtained from the purest available source, and none should be used from any source which has not been proved by reliable tests to be safely free from harmful contents. If natural water and ice of such quality cannot be obtained, then the water should be treated by the most appropriate and effective method for its purification, and ice should be artificially made from such purified water.

Ice should no more be handled by bare and soiled hands or by dirty gloves than drinking water should be poured over such hands or gloves into the water holder. The use of ice tongs should be insisted upon.

11. *Water Tank.*— The water tank should be shaped and placed with reference to easy access to its interior for cleaning. It should be frequently cleaned and periodically sterilized with boiling water, or some other way equally effetive.

12. *Drinking Cups.*— The public should be discouraged from using common drinking cups, and educated to use individual cups. To this end, a conspicuous notice might well be posted at the drinking fountain cautioning passengers against the danger of the public cup, and parafined paper cups might be supplied by a "penny-in-the-slot" device.

The vertical-jet method of furnishing drinking water — in successful use in some public buildings in this country — is the safest conceivable and the best, aside from the difficulty of adapting a jet to all ages, and from the waste incident to its use by many unaccustomed to drinking water jetted into the mouth.

13. *Food.*— The use of canned goods in buffet-car service makes careful inspection imperative. Reports of sickness directly traceable to tainted canned edibles served on trains have occasionally reached your committee. Fruits and all edibles should, before and after purchase, be stored with care to avoid all unnecessary exposure to street and car dust.

14. *Fouling of Cars.*— Cars should be protected against all unnecessary fouling. The filthy habit of spitting on car floors should be dealt with in a manner to cause its prompt discontinuance. The nastiness should everywhere be made punishable, and should be punished as one of the most flagrant of the thoughtless offenses against the public right to health. Prohibitory notices should be posted in all cars, and suitable and sufficient cuspidors should be provided for the use of passengers. The experience of street-car companies has shown that a great reform can be wrought in this matter without serious difficulty.

15. *Station Premises.*— Station premises should receive attention directed to general cleanliness of floors, furnishings, air, sanitaries, lavatories, platforms, and approaches, and should be plentifully supplied with approved disinfecting material, and with pure water, and safe means for drinking it.

ANSWERS TO CORRESPONDENTS.

Full Chest — Female Trouble — Acidity of Stomach — Malted Nuts — Acid Secretion — Burning Sensation — Bathing — Sweet Potatoes — Lemon Juice. — A. M., Ohio: "1. How may one develop a full chest? 2. Is local treatment necessary or beneficial in female trouble where the organs are very much prolapsed? What treatment would you advise? 3. Exercise aggravates above trouble. Should it be continued? 4. Suggest treatment and diet for extreme acidity of stomach. 5. Hot-water drinking, with forward bending movement afterward, expels the water and acid from the stomach. Is this treatment advisable? 6. Should one in such a condition drink much cold water? If so, at what time? 7. Should sweets, such as sweet fruits and Sanitas candy, be eaten under such circumstances? 8. From which would the most benefit be derived, malted nuts or bromose? 9. Should malted nuts be used in dry or liquid form, and at mealtimes or between meals? 10. Is the acid secretion a disease in itself, or is it caused by other bodily ailments? 11. What causes burning sensations in different parts of the body, such as palms of the hands, right side kidney, bowels, and stomach. 12. What bathing would you advise in foregoing case? Skin is dry and harsh; cold sponge bath is taken daily. 13. Are sweet potatoes difficult to digest? 14. Is lemon juice injurious to an acid stomach?"

Ans.— 1. By cultivating the habit of sitting straight, holding the chest well forward, by swimming and other exercises in which the movements are executed by the arms.

2. Yes, in most cases for temporary relief while measures are being employed for removal of the causes of the difficulty. Such a case requires the personal attention of a competent physician. In the majority of cases, a few months of health training in a well-conducted sanitarium is very desirable.

3. Exercise is, in most cases, needed as a very necessary means of cure, but must be accompanied by suitable measures of support. The support of the abdominal walls is especially necessary. The Natural Abdominal Supporter will be found helpful as a means of preventing discomfort by exercises on the feet.

4. If the acidity occurs soon after eating, which we presume to be the case, the following measures will be found helpful: Eat only dry food, especially dextrinized cereals such as zwieback, toasted granose biscuit, granose flakes, corn flakes, and similar well-dextrinized foods. Each morsel should be chewed until every particle is reduced to a fluid state. Nuts taken in the same way should be freely used at each meal. A large handful of pecan meats, hickory-nut meats, or blanched almonds ought to be the proper quantity for a meal. If the diet is confined to these two articles, almost immediate relief will be obtained in most cases. Cocoanut cream or some equally wholesome fat may be added with advantage. Butter is a less desirable form of fat, but will be found beneficial in many cases. Four to six Pan-Peptogen tablets taken before each meal will be found beneficial as a means of increasing the formation of pepsin and diminishing the production of acid, two very important indications in this disease.

5. If the stomach becomes acid in spite of the foregoing precautions, water may be taken. Cold water is preferable to hot. When acid is present in the stomach after meals, half a glass of very hot water taken fifteen or twenty minutes before eating is found beneficial.

6. A glassful of cold water may be taken with advantage two or three hours after eating.

7. Sanitas candy may be taken with advantage half an hour or an hour before eating, but should not be taken after meals. Sweet fruits may be taken, but sugar in all forms should be discarded.

8. Both are wholesome.

9. Malted nuts should be taken at meals, either dry or with the addition of water, as is most agreeable.

10. There are various causes of excessive acidity. The most common are an irritated state of the gastric glands and a disordered state of the blood.

11. A generally disordered state of the nerves. Probably the chief fault is in the sympathetic nervous system.

12. Sun bath or short electric-light bath daily, followed by a wet-sheet rub or a shallow bath and massage.

13. Sweet potatoes are less digestible than the ordinary white potato.

14. In most cases, yes.

Cold Sweat. — L. H. L., Minnesota, is awakened a dozen times in the night by shortness of breath, cold sweat, hand stiff

and numb, and fingers too swollen to close. Give cause and prescribe treatment.

Ans.— The symptoms indicate a serious condition which requires special investigation by a physician. The case is too complicated for suggestion in these columns. Consult your home physician who will probably advise you to visit some establishment where a course of careful physiologic treatment may be received.

Hiccough — Oranges — Fruit after Meals. — F. M., New York: "1. What causes hiccough in infants? Prescribe treatment for same. 2. When should oranges be eaten when used as a tonic for the stomach? 3. Can fruit ever be taken after or between meals, with benefit to the system?"

Ans.— 1. Gastric irritation. Give the child a few sips of carbonated water. Apply fomentations over the stomach, followed by a heating compress.

2. Half an hour before meals, or at night. Take only the orange juice, rejecting every particle of the pulp.

3. In many cases it is well to take fruit at the close of a meal, rather than at the beginning. It is injurious, however, to supplement a hearty meal by the addition of fruit. Overloading the stomach is injurious, even if the food be most wholesome. Fresh or stewed fruit may be taken at night in the place of supper. Fruit is the only food which should be taken after five or six o'clock, unless the working hours extend far into the night.

Neuralgia.— Mrs. C. R. A., Belle Alliance, has severe attacks of neuralgia, and is very susceptible to cold. Cold baths cannot be taken, and severe cold is often caught while taking tepid sponge. Has tried, ineffectually, bathing neck, chest, and arms with cold water, and also with alcohol. Takes breathing exercises night and morning. Lives hygienically, taking very light breakfasts and suppers. Prescribe treatment and diet. Can you suggest preventive treatment, as well as remedial?

Ans.— You have a very feeble constitution, and need a course of health culture at a properly conducted sanitarium. Sun baths, daily exercise in the outdoor gymnasium, and carefully graduated tonic treatment, combined with a careful dietary, ought to restore you to sound health.

Piles — Pinworms. — L. L. S., Pennsylvania, desires remedy for piles and pinworms.

Ans.— Hemorrhoids when inflamed may be relieved by fomentations, followed by cold cloths applied next the inflamed parts. In chronic cases, a long, cool shallow sitz, temperature 60 degrees to 70 degrees, taken fifteen minutes daily, will be found beneficial. For the parasitic worms a decoction of quasi chips may be administered by enema. For special directions see "Home Hand Book," pages 951 and 952.

Constipation and Torpid Liver.— X. L., California, is troubled by constipation and torpid liver, brought about by chronic malaria. Suggest all-round treatment: also diet.

Ans.— Out-of-door life, daily cold bathing, fomentations over the affected parts, followed by a heating compress to be worn during the night, and hygienic dietary, especially fruits and fruit juices. The bowels should be kept open by daily enema, if necessary. Temperature of the water should be 75 degerees to 80 degrees.

Oxygenor — Viava.— T. S. F., Baltimore: "1. Will the Oxygenor, a much-advertised cure-all, generate oxygen sufficient to purify the blood, or does it merely generate an electric current, such as an electric belt or the ordinary battery? 2. Do you recommend either the Oxygenor or Viava treatments?"

Ans.— 1. In our opinion it does neither. 2. No.

Sedentary Life.— C. A. B., Michigan, is troubled with eruption completely covering the face. Appetite good, sleeps well, heart beats hard but very slowly, breath short when exercising, bowels irregular, urine varies in color, being sometimes clear as water and at other times very dark, with milky appearance. In cold weather urination greatly increased. Can walk all day, but cannot run three steps on account of heart. Circulation poor, hands and feet constantly cold, feels despondent. Business: watchmaker and engraver. Works steadily ten hours a day, no exercise. 1. Kindly prescribe complete treatment for case, including baths, exercise, diet, etc. 2. Would it not be well to leave present business and take up farming?

Ans.— 1. Your condition is evidently the result of a sedentary and artificial life. You require an entire change of occupation and habits. You should live as much as possible out of doors, and adopt a thoroughly hygienic dietary, discarding meats, condiments, and indigestible foods. A light cold bath should be taken every morning, securing good reaction. Avoid very cold general baths. Lie

down twice a day and put an ice bag over the heart with a single thickness of flannel between the ice bag and the skin, allowing it to remain in place fifteen minutes.

2. Yes.

Hereditary Cancer. L. A., wishes (1) to know the best mode of life to combat hereditary cancerous affection. Had tumor removed about seven years ago. Can it be prevented from returning? Mother and two sisters each died with cancerous growths. (2) Prescribe treatment for chronic nasal catarrh.

Ans.—1. An out-of-door life, daily cold bath, and a nonflesh dietary. Such a regimen has a wonderful influence in the development of resistance to cancer and all other parasitic diseases. The writer knows of one case in which a cancer healed without an operation after such a regimen.

2. In addition to the mode of life above described, cleanse the nostrils thoroughly each day by means of a coarse spray of soda or borax solution, and employ the Magic Pocket Vaporizer, procurable from Good Health Pub. Co., Battle Creek, Mich.

Oil Rubs.—A subscriber wishes to know what kind of oil is used at the sanitarium for rubs after treatment.

Ans.—Olive oil may be used, fresh cocoanut oil, or fine white vaseline. Cacao butter is also good, as well as massage cream.

Graham Bread—Rye or Boston Brown Breads—Predigested Cereals—Milk.—F. S. K., Toledo: "1. Is the ordinary Graham bread purchasable at bakeries made entirely of wholewheat flour? Is it healthful? 2. Are rye and Boston brown breads more healthful than white? 3. Are the advertised 'predigested' cereals preferable to those not 'predigested?' Name three or four of the superior cereals. 4. Many cafés have on their menu cards, 'milk' and 'half milk' and 'half cream.' Is it not a safe presumption that the milk is entirely skimmed and therefore valueless as a food? Would the 'half and half' contain an excess of nourishment?"

Ans.—1. Probably not in the majority of cases. It is the ordinary custom of bakers to mix bran with the flour when making bread. The product is not unwholesome, however.

2. Rye bread is more wholesome than either brown or white bread. Moist breads of any sort are not very wholesome.

3. Dry, well-cooked cereals are far preferable to mushes. The best grains are granola, granuto, and granose.

4. Skimmed milk has fully as high a nutritive value as new milk. It is robbed only of its fat.

5. No.

Micturition—Constipation.—D. W. F., Oregon, is troubled with constant micturition and constipation. Appetite good, works every day, very thin, losing flesh all the time, age 48, uses no tea, coffee, tobacco, or liquor, and very little potato. 1. Kindly prescribe treatment and diet. 2. Would buttermilk be a good article of diet?

Ans.—1. Use granose cakes or toasted wheat flakes in place of bread. Malt honey, cocoanut cream, malted nuts, the free use of potatoes, graham zwieback, and granola are foods which can be recommended in such a case. Have the patient wear a moist abdominal bandage at night, and exercise freely and as much as possible in the open air. A graduated enema may be necessary.

2. Yes.

Scorched Rye.—A subscriber, Watseka, wishes to know if scorched rye may be used as a substitute for coffee without producing constipation.

Ans.—Yes.

Bronchial Catarrh.—C. F. R., Massachusetts desires information regarding climate, diet, and treatment for bronchial catarrh and dyspepsia of bowels.

Ans.—A warm, dry climate which will permit of a constant, out-of-door life and will afford abundance of sunshine. An abundance of fruit, especially fresh fruit, such as peaches, grapes, fresh figs, strawberries, and all kinds of subacid fruits will be beneficial; also oranges, pineapples, and many tropical fruits. Take a daily cool bath and wear the chest pack at night.

Brittleness of Hair—Pain in Lungs.—M. F. L., Michigan: "1. For a week after washing hair (once a month) with Packer's tar soap, it seems dry and soft. As soon as the hair begins to get oily, it also begins to get coarse and brittle, breaking easily or coming out when combed. Head is entirely free from dandruff. Give cause of trouble and treatment. 2. The solution from Formula I, used in vaporizer, causes intense aching pain in lungs. Violent exercise or bicycling produces same pain. Give cause, and outline treatment."

Ans.—1. Cause is defective nutrition of the hair. Shampoo the hair every morning with cold water, dipping the tips of the fingers

in cold water and rubbing the scalp until thoroughly red.

2. It is evidently an irritable condition of the mucous membrane. Inhalation of steam is to be recommended, also the chest pack to be worn at night and the cool bath every morning. Live out of doors as much as possible, or at least five hours a day.

Worms — Stockings for Winter — Bed-wetting — Cow's Milk.— Mrs. F. F., Michigan: 1. "Is it natural for adults or children to have worms? What will destroy them? 2. What kind of stockings would you advise for winter wear? 3. What can be done for boy four years old who is constantly troubled with nightly micturition? 4. Is it absolutely safe to use cow's milk after thoroughly scalding it? 5. Can you name substitutes?"

Ans.— 1. It is not natural to have worms. Different worms require different remedies A doctor should be consulted as it is important that the variety of worms should be discovered before any treatment is employed.

2. Woolen stockings, or cotton stockings next the feet and woolen ones over.

3. A cool bath just before going to bed. Also avoid suppers and drinking late in the afternoon.

4. Yes.

5. Almond cream, cocoanut cream, and best of all, malted nuts.

Oil of Mullein.— Subscriber, California, wishes to know if oil of mullein is a safe remedy to apply for tense conditions of deaf congested ears, as a substitute for cod liver or olive oil. What treatment should be given above case?

Ans.— There is nothing better than olive oil. Fomentations over the ear once or twice a day and massage will also be beneficial.

Sorghum.— J. M. A., Kansas, asks if the free use of sorghum made from the cane is injurious to the system generally.

Ans.— Yes, sorghum is cane sugar and cannot be utilized by the human stomach. Cows have a stomach especially for the digestion of cane sugar, but the human stomach will not digest this form of sugar. Sorghum is excellent food for cows, but is not adapted to the human stomach.

LITERARY NOTES

BOOKS RECEIVED.

"A Compend of Diseases of Children" by Marcus P. Hatfield, A. M., M. D., Emeritus Professor of Diseases of Children, N. W. U. Medical School; etc., is especially adapted for the use of medical students, has been thoroughly revised, and is now issuing its third edition, with colored plate. Publishers: P. Blakiston's Son & Co., Philadelphia. Price, 80 cents net.

"How to Succeed in the Practice of Medicine," by Joseph Mc Dowell Mathews, M. D., L. L. D., President of American Medical Association, 1898-99. "A guide to success, intended principally for medical students and young practitioners." Published by John P. Morton & Co., Louisville.

"The Mattison Method in Morphinism," by J. B. Mattison, M. D., Medical Director, Brooklyn Home for Narcotic Inebriates. A modern and humane treatment of the morphine disease. Published by E. B. Treat & Co., New York. Price, $1.

"The Lover's World" by Alice B. Stockhom, M. D., author of Tokology, Karezza, etc. Published by the Stockhom Pub. Co., Chicago.

Last April we sent copies of the **Life Boat** to nearly every prisoner who was confined in the great prisons of our land. As a result hundreds of men have had a spiritual awakening, and some of them are earnestly studying the truth at this time. There is no missionary work that we have ever undertaken in which we have met with so many encouraging results.

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Editorial comment in Highways and Byways in the February **Chautauquean** deals with "The Monroe Doctrine and Venezuela," "Reciprocity In and Out of Congress," "Anti-Trust Bills Galore," "England's New Educational Law," "Economic Reform in Russia," "Shortening the College Course," "Talk of Church Union," "Two Hundred and Sixty Million Dollars a Year to Keep Up Churches," "Cost of Mission Converts," and other equally interesting and up-to-date topics.

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The "Suggestive Sketches for the Celebration of the Birthday of Abraham Lincoln," in the February *Homiletic Review*, are of peculiar interest to the preacher who wishes to take advantage of the anniversary of the birthday of this national hero in rousing patriotism. The *Review* has done well to embody in its pages the story, recently told by the grandson of Henry Ward Beecher, of how Lincoln came in disguise to see Beecher, in the dark days of rebellion, and how the two wrestled with God all night in prayer.

The illustrative material in the February number will be found unusually full and varied. We call attention to but one group of these illustrations, that by Dr. Louis Albert Banks on "The Drinking Habits of Women."

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755 Market St., San Francisco, Cal.
317 W. Third St., Los Angeles, Cal.
607 Locust St., Des Moines, Iowa.
Hygeia Dining Rooms, 58th St. and Drexel Ave., Chicago, Ill.
Hygienic Cafe, 118 Monona Ave., Madison, Wis.
145 So. 13th St., Lincoln, Neb.
Portland, Ore.
Vegetarian Cafe, 1635 Champa St., Denver, Colo.
Vegetarian Cafe, 322½ North Tejon St., Colorado Springs, Colo.
GOOD HEALTH RESTAURANT, 616 Third Ave., Seattle, Wash.
New Orleans Restaurant, 305 St. Charles St., New Orleans, La.
The Laurel, 11 W. 18th St., New York City.
The Vegetarian Restaurant, 391 6th Ave., cor. 24th St., New York City.

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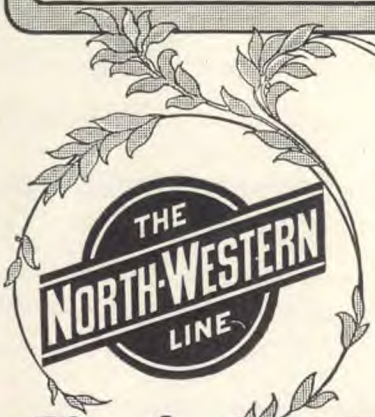

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