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GENERAL ARTICLES.

WOMAN AND THE WHEEL.

BY DR. SARAH I. SHUEY.

I HAVE been prompted by the frequent adverse opinions on the use of the bicycle, accredited to physicians, to present my opinion, based on a year's experience and observation, particularly from a health standpoint, in regard to women.

Hundreds of women in every walk of life are suffering from the lack of proper exercise. Our physical culture departments show appalling deficiencies in chest development. At the University of California, the young women students, before training in the gymnasium, show narrow, hollow chests, small lung expansion, and weak arm and chest muscles. Most of the teachers in our schools might be placed in the same category. Another class, much larger, the girls in stores and shops, present similar deficiencies. How can it be otherwise, standing as they do the livelong day, or sitting at the sewing machine in a close, stuffy room? The position required in running a sewing machine is necessarily soon fatiguing to the muscles of the back, which must be kept rigid, the eyes at the same time intent on the seam, often for hours at a stretch.

The sewing machine is frequently likened to the bicycle, but compare it with the free and joyous motions of the wheel, in the fresh air, with the blood tingling through the veins, and ask yourself if there is any similarity.

Take another class of women, the woman of

leisure, aimless and pampered, with whom time passes wearily on a soft couch, or in ill-constructed chairs, in assemblies where the air is heated and impure, what would not wholesome exercise do for her in mind as well as body?

There is no exercise more favorable to good circulation of the blood, to symmetrical and all-round development of the muscles, than that of the wheel. The abuse is what is to be condemned. A thing being abused is no reason for condemning the thing itself. No one thinks of not eating because there are thousands of dyspeptics. Therefore, let women not give up the wheel, but find out the right way to use it.

Horseback riding, tennis, croquet, walking, or dancing, will not equal it; housework will not equal it as an all-round exercise. The exhilaration of the motion, the tonic of the fresh air, the excitement induced by the element of danger, if the equilibrium be not maintained—all these accelerate the heart's action, send the blood bounding through the body into the finest capillaries, thus equalizing the circulation, relieving congestion, cooling the throbbing and aching head, and giving altogether a most enjoyable and healthful sensation. But to promote health by the use of the wheel, and to procure the greatest benefit possible, certain rules must be observed.

First, the heart and lungs must be unimpeded in their action; therefore the corset must be discarded, and any style of dress that tends to constrict the waist. The body must be clad in tight flannel, preferably the "Jaros," that is fleece lined,

and permits the free perspiration to pass easily through its meshes, thus preventing too rapid cooling off and resultant colds.

Let the outer garments be of a material to suit the taste of the wearer. Skirts should be avoided, as they act not only as sails, impeding the progress and requiring too great exertion, but they interfere with the freedom of the movements, and are dangerous in case of accidents. All accidents that have occurred to me have been directly or indirectly due to the skirt. Bloomers made too full also catch the wind. Knickerbockers are preferable. Thoughtful wheelmen in a position to judge, earnestly advocate an appropriate dress for woman in riding the wheel. It is as necessary for her comfort and safety and development as the gymnasium suit for physical culture.

Second, the adjustment of the seat. It must be so placed with relation to the pedals as to permit full extension of the leg, not keeping it cramped, as in the short, pumping motion of the sewing machine. This pumping motion soon tires the knees and the muscles of the legs between the knees and the hips.

Third, the seat itself must be placed at an angle or in a position most comfortable to the rider, so that neither the end of the spine nor the pubic bone is pressed upon. Unfortunately, the bicycle seat, as well as the pneumatic tire, is capable of great improvement in construction, and the person who will make a bicycle seat physiologically adapted to the rider's need, and a tire that will neither puncture nor blow out, will receive the thanks of grateful thousands.

Fourth, the height of the handle bars. This is a very important consideration. By all means have them at a height that will not require the curving of the spine, which is at once not only ungraceful, but dangerous to health, for it narrows the chest, brings undue pressure on the heart, and forces the contents of the abdomen upon the yielding pelvic organs. In riding uphill it is not necessary to bend forward; one can ride with more ease and exert greater power of the legs in an upright position.

Fifth, do not dispense with the brake. It adds very little to the weight. One may seldom use it, but it is invaluable in an emergency, and may save a serious accident.

Sixth, stop the wheel before dismounting. Many a sprained ankle or knee has occurred from jumping while the wheel is still in motion. Do not

undertake coasting. Do not take long, exhausting rides. Do not join a club, and overstrain yourself by riding as far as the strongest.

In learning to ride, spend but a few minutes the first time attempting it. The chest and abdominal muscles of most women are soft and flabby, or altogether lacking. They must be gradually developed. The beginner is apt to hold her breath, or breathe imperfectly, though she still keeps exercising her feet; the result is a palpitating heart, and a throat and mouth so dry from excitement or fear that she can scarcely speak. Do not ride more than ten or fifteen minutes at a time without dismounting, until the muscles have gained tone and strength. An hour's ride is enough for one who has full mastery of the wheel. Avoid streets just watered. Avoid turning corners at a high speed. Cross a car track at right angles to the track.

Do not ride either up or down a steep hill. The former puts the heart to too great a strain; the latter incurs too great a risk to life and limb. Do not ride at a rapid pace, nor indulge in racing, for one's own safety and that of pedestrians.

After riding, if in a perspiration, or very warm, avoid cooling off rapidly. The best way is to take a vigorous scrub bath, with warm water, rinsing with the water gradually cooled down until it is quite cold. Dry the skin quickly by rubbing with a Turkish towel, and put on dry clothes. All this will not take more than ten or fifteen minutes, and the rider will not only be invigorated, but spared stiff and sore muscles. The early morning hours are the best time for practice. Rise an hour earlier than usual, take a luncheon of brown bread and butter, or a glass of milk, practice for half an hour; then enough time will remain for a scrub bath before breakfast.

In no case have I seen bad effects, but exceedingly good results in the use of the wheel, when it is used with judgment and moderation. I have seen sleeplessness overcome, dyspepsia banished, weak backs strengthened, chests broadened, depressed spirits dispelled and replaced by a buoyancy and cheerfulness that the poor nervous patient never hoped to possess.

To be of real value and genuine benefaction to womankind, the exercise must be systematic and regular. Spasmodic exercise is a useless waste of time. It is often as injurious as eating; that is, at one time a feast and another a famine, or an alternate gorging or starving.

Besides the advantages to the physical system

derived from a proper use of the wheel, there is a gain in moral strength, self-control, confidence. It is the imperative duty of every woman to give her body intelligent care. Health depends upon it. There is no home whose comfort and happiness may not be diminished or destroyed by ill health and frequent illness. Besides, every woman owes it to herself and to posterity to do those things that will make her well and keep her so. No mother has a right to curse her offspring with a weakened body, which means, more or less, a weakened mind.

Let me then urge women again to ride the wheel with moderation, controlling all temptations to overdo, no matter how fascinating the exercise, and the result will be a healthier body, and a more cheerful and rational frame of mind.

CAUSES OF CHRONIC GASTRIC CATARRH.

BY A. J. SANDERSON, M. D.

THE various chronic affections of the digestive organs are a direct or indirect cause of much of the suffering which comes upon mankind. The American people are spoken of as a class of dyspeptics. Dyspepsia is something that seldom exists alone; it so perverts the functions of digestion and nutrition that other morbid conditions sooner or later follow most cases of chronic indigestion.

Dyspepsia relates merely to the disorder of the functions of the digestive fluids, but as this can hardly exist without more or less structural derangement, we look for the physical conditions which are also found with it. In most of the ordinary cases, this either comes in connection with chronic catarrh of the stomach or dilatation of the stomach; so, before speaking of the varieties of dyspepsia, we will devote a little space to the causes of these common maladies.

The causes of chronic gastric catarrh may be divided into two classes—those which come from without, and those which are exciting causes within the stomach. Acute attacks of chronic catarrh, when frequently repeated, always result in the same chronic condition.

Among the first class of causes, heredity might be mentioned. We often see families and generations which suffer from similar weaknesses of digestion. This, however, does not prove that the main cause lies in heredity, for doubtless the common habits which run throughout the family have

much to do with the similarity of the condition of its members. Yet, without question, inherited vitality acts as the foundation upon which all the vital organs do their work, and when this is low, deficient work is sure to follow. Catarrhal conditions are the most common sequence of hereditary weaknesses; and the gastric mucous membrane is often the locality where it is the most deeply seated.

After this influence come the surroundings of the individual in infancy. Children who live active out-of-door lives are the most likely to have healthful mucous surfaces. This is also true to a greater or less extent in adult life. People who are confined to offices and poorly ventilated buildings in their work, and do not take enough recreation from it to get their share of nature's pure air and sunshine, are likewise laying the foundation for the manifestations of catarrh.

Dressing also has a very important relation to the healthful activities of the abdominal organs. The movements of respiration have an important bearing upon the stomach, not only in supplying oxygen to it, but in keeping up its normal movements. When these are interfered with by tight clothing about the waist, it puts the stomach at a disadvantage, from which it must suffer.

Work and digestion go hand in hand. Work calls for digestion by using up the products of digestion, and likewise digestion calls for work to keep it at its proper balance. An inactive life is a sure cause of indigestion.

Mental conditions may almost be said to be an index of the state of the gastric digestion, because, if the influence of the mind is not always consciously manifest in the stomach, it is certain to lead the organ sooner or later into the same condition as that of the mind depressed or otherwise. There is a growing tendency to attribute the large class of stomach disorders to this cause. Dr. Hughes, in a recent address before the American Medical Association, mentioned dyspepsia as a disease of the brain. The short selection which we have inserted in another part of the JOURNAL this month, from the pen of the same author, will give the reader an idea of the important facts upon which Dr. Hughes bases his opinion.

Another cause which lies outside of the stomach is that of the perversion of energy. People who do the heaviest portion of their work, especially if it be mental, following the most hearty meal of the day, will find that the vital energies are so divided

that neither digestion nor work will be perfectly performed; and as consciousness centers the energy mostly upon the work, the stomach is the organ which suffers most materially.

General conditions of the body also have much to do with causing dyspepsia. It is quite common for an ordinary cold to seat itself principally in the digestive organs. *La grippe* may fasten itself upon the system, and the taking of a hearty meal simultaneously with its onset, or perhaps some other influences, may lead it at once to settle upon the digestive organs, and give rise to a catarrhal condition, which will become more or less chronic. In like manner, disease in any other vital organ, or nervous system, brings about catarrh of the stomach in some cases where this condition was not already present.

The exciting causes which act within the stomach are the errors of diet which are so common, and unhygienic habits of eating. Space will not permit us to speak in detail of very many of these, but we will have the subject under consideration repeatedly in our JOURNAL, as it is worthy of much study. The extracts from parlor talks in this number of the JOURNAL also relate to this class of causes.

We will first mention the presence in the alimentary canal of that which is not food for the body. The taking of liquids containing alcohol is a factor which acts in different ways to bring about this condition. Alcohol is a poison and numbs the nerves, so that the user of it often is not conscious that he is doing himself any injury, but the substance is always irritating to the surfaces of the mucous membrane, and when taken in even the smallest quantities will set up more or less catarrh. Alcohol also renders the ferments of the gastric juice inert, and thus hinders digestion, so that the products of digestion themselves become foreign matter within the stomach. The use of tobacco in any form brings into the system a poison, among the evils of which catarrhal conditions are always more or less present. It is not necessary to speak of opium, and the various drugs which sometimes get into use, which act as decided causes in the catarrhal condition.

Among dietetic errors, one has to recognize those which are peculiar to himself. The use of milk very frequently gives rise to fermentation, which not only results in biliousness, but leaves a congested condition in the stomach in which it ferments. While milk may be a very good article of

diet for some, it must be avoided by many.

The excessive use of sugar, because of the almost sure fermentation which comes from it, will become an irritating cause, likewise that of other forms of sweets, such as honey, syrups, etc.

The use of fried food will not be excused by any stomach. The frying and burning of the fats develop fatty acids, which are very irritating in their nature, and the particles of food which are cooked in fat become surrounded with the same; and as the stomach does not digest fat, the food itself must lie unchanged, as foreign matter.

Condiments are not only useless to digestion, but they greatly hinder it. The excitement of the stomach which they cause, brings about a pouring out of the mucus of the stomach rather than the digestive fluids. This has been proven by the experiments of Dr. Kellogg in the Laboratory of Hygiene in the Battle Creek Sanitarium. Pickles are not only indigestible, but the vinegar and spices which are in them are very irritating. The acetic acid of which vinegar is composed is more irritating than alcohol, and should never be used with any article of food. Where acid is needed, it can be obtained in a much more natural condition in limes, lemons, etc.

Butter favors indigestion, especially in the use that is made of it in hot food, and where it is cooked in large quantities with various articles, for reasons mentioned above.

The manner of eating and the way of preparing food are questions which we have already discussed, and are very important factors, if one would avoid setting up catarrhal conditions in the alimentary canal. Perverted appetite is a common obstacle that is sometimes difficult to surmount, especially in cases where slight catarrhal conditions have been set up from other causes. It seems to be the tendency of an unnatural appetite to set itself against the most wholesome things, and to crave those which should never be used. These cases have a work to do in the training of appetite as well as in the selection of food.

The use of water to the extent that is necessary for the most healthful action of all the organs of the body, as well as that of the alimentary canal, is essential, though we should not drink a large amount of liquid at or near meal hours, as it is important that the gastric fluids should be provided for by mastication and glandular work rather than that these fluids should be supplied by the use of water at the digestive hour.

KINSHIP OF THE MIND.

THE mind possesses something of the chameleon's power, and presents to each individual that aspect which best accords with his own. We love most the society of those whose sympathetic comprehension permits us to be natural. To be natural means to give full play to our inherent rather than our acquired faculties. The mind contains originally the germ of all its possibilities, some more rudimentary than others. Environment provides the friction necessary for their development. Certain individuals draw out the best of which we are capable, and we turn to them as the sunflower to the sun, delighting in the invigorating effect produced by contact.

The natural order of the mind is evolutionary. Balked in this by the circumstances of life, a feeling of discontent and restlessness is engendered, which explodes in acts of folly or crime, according to the original mental bias.

All do not recognize the source of such unhappiness, or comprehend the reason for their attachment to those able to lift them out of the depths of everyday mental and moral sloth. Those who do possess this faculty of analysis will find the true meaning of life, and attain genuine happiness by restricting themselves to the society of individuals who exercise this elevating influence, and reading only books which tax and quicken the mind.—*Medical Brief.*

GERMAN FORESIGHT.

DURING the last seven years the Prussian Government has paid over \$400,000 indemnity for cattle slaughtered on account of tuberculous disease.

A GIVEN acreage of wheat will feed at least ten times as many men as the same acreage employed in raising mutton.—*Enigma of Life.*

TO CURE ABNORMAL SWEATING OF THE FEET.

AN eminent French authority recommends the following: Bathe the soles of the feet and the spaces between the toes every morning with a ten per cent. solution of nitrate of silver in alcohol. The application should be continued until the horny bed found upon these parts falls off.—*Modern Medical.*

COLDS.

BY G. H. HEALD, M. D.

(Concluded.)

4. *Cure of a cold.*—A cold in the head occurs in three stages. First, a swelling and distension of the mucous membrane of the nose, lasting from a few hours to a day. Second, a profuse secretion of watery fluid, necessitating a frequent change of handkerchiefs. The end of the nose is apt to become congested from repeated rubbing, and from the irritation of the fluid which is poured out. After a day or two the fluid gradually becomes thicker and yellowish. Accompanying the secretory change, there may be stoppage of the nasal passages, pain over the eyes, and a number of other familiar symptoms. It is during the dry stage that success is most apt to follow attempts to break up a cold. After the secretion has set in, the object should be to cause the disease to run as mild a course as possible.

The remedy which gives most marked and prompt relief to the unpleasant symptoms connected with acute catarrh of the nose, is cocaine; but as its influence is only transient and its use attended with considerable danger in the hands of the inexperienced, no directions will be given in this article for its use.

Menthol is very efficient in acute nasal stoppage, whether used in the familiar menthol inhaler, or in a snuff. The following is recommended by a good authority. Powdered menthol, two grains; bismuth sub. carbonate, one drachm; white sugar powdered, one and one-half drachms. These should be thoroughly mixed, and the powder snuffed several times a day. To this powder may be added with advantage one or two grains of camphor. A convenient menthol inhaler may be improvised by placing in a small lamp chimney a piece of absorbent cotton, or other absorbent, saturated with a strong alcoholic solution of menthol, both ends of the chimney being corked when not in use. Equal parts of carbolic acid and iodine mixed and used in such an inhaler, or poured on cotton, in a wide-mouthed bottle, and inhaled, forms a good palliative remedy. The following has been recommended for use in the same way: Carbolic acid, one part; alcohol, three parts; ammonia, one part; distilled water, two parts. Care must be used in handling these latter remedies, as the fluid is very irritating to the skin, and especially to the mucous

surfaces. The old household remedy may be tried, as follows: Equal parts of vinegar and water are placed on a stove in a patient's room, the fumes being given off into the air.

Fomentations, or hot sponging, applied over the forehead, eyes, and bridge of the nose, act favorably on the headache, and also relieve the local congestion.

Perhaps the most efficient and lasting remedy the application of a caustic to the congested surfaces, after thoroughly cocainizing the nose; but this should always be done by a physician.

5. *Acute pharyngitis, or sore throat.*—This affection yields readily to astringent gargles, as a weak solution of alum, borax, tannin, etc. Dr. Bosworth recommends the following: Chloride of potash, thirty grains; powdered gum arabic, and white sugar, one-half ounce each, mixed. A small portion of this mixture allowed to melt in the mouth will be distributed over the congested parts with good effect. Lozenges are not always to be recommended, because some are not altogether harmless; but we have used with considerable satisfaction lozenges of red gum, as prepared by John Wythe & Brother of Philadelphia. The lozenges of guaiac prepared by the same house, are especially useful in those cases of sore throat where the tonsils are involved. It is well to remember that pharyngitis may result from an extension of acute catarrhal condition of the stomach, and is always aggravated and prolonged by a concurrent stomach trouble. In any case it is well to fast for twenty-four hours during the first stage of a cold, drinking large quantities of hot water, in order to aid in clearing the system of much of the waste matter which is an invariable accompaniment of cold. Following the twenty-four hours' fast, the diet should be light and unirritating.

Acute laryngitis, manifested by hoarseness and loss of voice, is best treated with steam inhalations containing volatile oils or resins, as, for instance, compound tincture of benzoin. Steam may be continuously inhaled from the nozzle of a teakettle, by means of a paper cone placed over the nozzle, care being used not to inhale the steam while too hot. If the patient is in bed, and there be a stove in the room, the air of the room may be kept moist by placing a dish of water on the stove. In affections of the larynx and bronchial tubes, the nebulizer or volatilizer is especially useful, and every family will do well to have one of these valuable instruments in the house.

EXERCISES.

BY IDA POCH.

It is not supposed that we have learned to stand properly in one short month, but we have made a beginning; and in this matter, the old adage, "Well begun is half done," is not inapplicable. To be sure we must have for our motto, "Repeat, repeat, repeat;" but when we have once so thoroughly begun that we begin to realize results, we have taken a long step, for the spirit of the age is to measure the value of everything by individual gain. Be the gain ever so small, our confidence grows, and we become enthusiastic, which changes our work from a dull routine into a lively pleasure, thus adding an important element, which will result in more rapid and greater gain.

If the exercises given last month have been conscientiously practiced, we have made such a beginning, and are ready to take up these new ones with greater zest.

The last two months we had balancing and poising exercises; let us continue those through this month, and add another set.

We have found the great trouble with our sitting to be weakness of the waist muscles. They are unable to support the body in an erect attitude because of this weakness. We propose in this number to give a short, but none the less effective, practical answer to the question, "How shall we overcome this weakness?"

Take the correct standing position, bring the chest well up by taking the arm movement and filling the lungs at the same time, as given last month. Repeat a number of times. Be sure the weight of the body is on the balls of the feet, by rising on toes several times.

Now we are ready for body movements. First we will give some attention to the development of the neck, by simply bending forward and back, and from side to side. Repeat each from four to eight times. Do it slowly, please, in this way: Head forward bend. Now force it a little farther, so as to use muscular power. Allow it to rest on the chest for an instant. Now raise slowly and bend it backward. Contract the muscles forcibly to pull it well back. Devitalize the muscles and let the head hang for an instant. Let the mouth be open to relax the front neck muscles. Now contract the front neck muscles and pull the head into position. It is astonishing how much one small

head weighs when it is pulled from side to side and forward and back in this way. Observe the same method in the side bending. Repeat each the required number of times and then rest for a few moments.

While we rest our bodies, let us think what we mean to accomplish by our next effort.

There are no exercises so full of immediate good results as those which bring into action the waist and abdominal muscles, because upon them are dependent internal vital organs. It is impossible to use these muscles without affecting the digestive processes, lung action, and, in fact, every process of life. Considering the importance of the results to be obtained, it is necessary that we should perform each exercise with the greatest care. Above all, let every portion of the body be *perfectly free*, and avoid a *jerk motion*, because there lies the possibility of great harm.

Exercise 1.—Position: Place the arms akimbo, with thumbs forward. This facilitates holding the body below the waist line rigid. Now describe as large a circle as possible with the torso, keeping the head in line with the body. To get the full benefit of the exercise, keep the hips from moving forward, and the knees straight. If you can not do it standing, sit on a stool (without a back). Do it slowly, gradually, without jerk or jar. Make the circle perhaps four times for a beginning, and increase as you become stronger. Notice the strong grip at the pit of the stomach. Rest again for a few moments.

Exercise 2.—Position: Raise the arms shoulder high and flex the elbow, dropping the fingers lightly on the chest. Now drop the right knee, throwing out the left hip. This is just that common, ugly poise so often seen among schoolgirls. Now throw the hips back without raising the body. Then throw the hips to the right by flexing the left knee. Now throw the hips forward, breaking at the waist line. This last portion of the exercise is that grotesque position so commonly seen; the weight is on the heels and the abdomen protrudes. You notice that this exercise is just opposite to the foregoing one. In this the upper portion of the trunk is kept stationary, and the knees are dropped slightly.

At first this will seem a difficult exercise, and it will be almost impossible to make the movement continuous. It may be found necessary to break up the exercise into various positions by alternately straightening the knees. With practice the stiff

muscles will become flexible and the weak muscles will grow strong, thus allowing the movement to become a rolling of the lower portion of the torso.

Exercise 3.—Lie flat upon the floor, with face up, and arms stretched at the sides. Raise the leg until at right angles with the body, slowly. Bring as slowly back to position. Repeat not more than four times with each leg, at first. Rest a moment, then raise both legs in the same way, and place again, very slowly. Take care not to use the arms as levers to raise the body. Keep the knees straight, and do not allow the body to rise. In this movement the abdominal muscles are used.

Exercise 4.—Reverse exercise 3. Place the toes under some heavy piece of furniture to prevent them from rising. Now raise the upper portion of the body to a sitting posture. Keep the hands at the sides, but do not use them to raise the body. Make the movement slow and steady. Do not come to the position with a jerk. If you find it hard, do not attempt to come all the way; come only so far as your strength will permit with the slow, steady motion.

Exercise 5.—Lay the body face down across a bench or couch, so that the waist line will come in the middle of the bench. Place the arms akimbo. Catch the feet under some heavy piece of furniture. Now raise the head and upper portion of the trunk. Repeat slowly several times.

These exercises, if properly taken, will not fail to strengthen those muscles which are used in maintaining the body in the erect position. No doubt there will be sore spots; these only show that you are working unused muscles. Do not stop the work, thinking you will try again when the soreness is gone, because each time you stop and begin again you will have the same experience. If the soreness becomes too great, lighten the exercise a little. After the soreness has been overcome, the muscles will have become stronger.

To learn the sitting down and getting up there is nothing better than to sit down and get up as directed in the article on that subject in the February number. If you would become thoroughly acquainted with the use of the body in the sitting posture, take the proper position and bend the body from the hips forward and back, and from side to side, keeping the chest well up and the head in proper relation.

Do not become discouraged if all the difficulties do not immediately dissolve into thin air. Re-

member that those things are best appreciated which are obtained under great difficulties. Look beyond the trials to the final achievement, when you will say "a long farewell" to round shoulders and sunken chest, unsightly humps and hollows, with all those little paddings and bolsterings where-with your dressmaker was wont to delude you into thinking your figure was quite as desirable as that of the Venus de Milo.

MODERN BICYCLE RIDING.

THE following story was related to us by Theodore Kragness, who, with his brother, has recently taken a bicycle trip from Minneapolis, Minn., to San Francisco. The brothers are both riders of some experience, and Mr. Kragness has devoted considerable time and attention to athletic work. He is a member of the Young Men's Christian Association, and for some time has held the position of trainer in their bicycle clubs. Their experience was somewhat novel, not only because it was late in the fall, and they had to endure many hardships, but because Mr. Kragness, who related the story to us, made it somewhat of a test in reference to the strength-giving properties of certain classes of foods. He had become convinced that for strength and endurance of hardships, a diet excluding flesh meats was as good or superior to one which included the same. For this reason he wrote to the Health Food Co., at Battle Creek, asking, for the sake of the experiment, that they would furnish him with foods of their manufacture, so that he could subsist upon the same during his journey. The food company, being interested in the same principle, gladly accepted the proposition, and forwarded foods to the important places where he would stop. The brother who rode with him was not so much interested in the diet, and partook of miscellaneous food as he had opportunity, using flesh meats after his usual custom when they were available.

Theodore rode a twenty-three pound "Ide" wheel, and his brother an eighteen-pound "Munger." Both wheels were heavily loaded, as will be seen by the following list of articles, which was given to us as being carried by each. Theodore carried one set of blankets, one tent for two, one telescope case, containing cooking utensils, repair outfit, two pairs of tires, two bicycle seats, a change of underwear, stockings, mitts, and gloves. His

brother Edward carried repair outfit, one extra handle-bar and cranks, one breech-loading gun, one 38-caliber Colt's revolver, 116 rounds of ammunition. The quantity of food varied according to the distance between the stopping places. From Ogden, Theodore started out with twenty-seven pounds of food, and his brother with seventeen. They left Minneapolis on October 2, and the first incident of any note was an attempted hold-up by three highwaymen, who, however, were frightened off at the point of the pistol. The roads encountered were very bad on account of the recent rains, and as night overtook them at some distance from any village, they were unable to proceed, and spent that night in a shed, an experience which they found themselves obliged to repeat many times subsequently, and under less auspicious circumstances.

On the 6th of October they reached Sioux City, Iowa, after having contended with head winds since leaving Minneapolis. At this point Mr. Kragness took a new supply of foods. From here they proceeded to Omaha, reaching that place on the 8th, after the same experience with roads rendered very muddy by rains. Here a new supply of foods was laid in. They remained here two days repairing their machines. From Omaha they found the roads somewhat better, but were again obliged to contend with head winds. Having left Omaha at ten o'clock A. M., they reached Lincoln that evening, a distance of seventy miles. The journey from this place to Cheyenne, Wyoming, was but a repetition of the old experience of bad roads and head winds. They arrived at this place on the 20th of October, having been obliged to walk for half of that day, and riding twenty-two miles after dark.

From Cheyenne they went south to Denver, which was two days' travel out of the direct route, and returned to Cheyenne, having traversed 235 miles out of the direct line of travel.

On reaching Laramie, Wyo., the cyclers encountered a snowstorm, and from there until they came into Nevada, they had to encounter the perils of severe cold and snow. From Laramie west for some distance, the country is without roads, and they were obliged to follow the railroad track and ride over the ties. Large "nests" of cacti were frequently encountered along the line, rendering it impossible to ride, and causing numerous punctures of the tires as the wheels were pushed over them. The only signs of habitation now to be found were

the section houses, and at these they secured the best accommodations which the Chinamen would grant them, which were very meager, as the Mongolians would not permit them to remain in the section houses. They were obliged to sleep upon the ground, and keep up large bonfires to prevent freezing, as the cold was extreme. Accidents of various kinds frequently necessitated walking until they reached places where repairs could be made. In the Wasatch Mountains wheeling was rendered impossible by ten inches of snow, and they had to carry their wheels much of the time for two days. Mr. Kragness said: "Coming down the western slope on the Shaw Creek Cañon trail, my brother and I collided, and he lost his handle bars and a crank, which could not be replaced until we reached Salt Lake City. We escaped injury, although it seemed miraculous, for the trail is a mere sheep path, and very dangerous."

At Salt Lake City they found the snow eighteen inches deep. Here they were obliged to remain for a week, until the roads became to a degree passable, when they proceeded to Ogden.

Arriving at Ogden on November 11, in the evening, the brothers laid in a fresh supply of food for the trip across the desert, upon which they set forth the next morning, having reshipped supplies to Reno, Nevada, which was to be the next supply station. During the following night, which they spent at Brigham Young City, a large amount of snow fell, melting as it fell, and converting the roads into rivers of mud. Through this they were obliged to wade and carry their wheels.

Progress during the remainder of the journey from here to Wadsworth, Nevada, was very much impeded by sand, mud, and strong winds. At this place ends the desert, and from here they commenced to climb the Sierras, beyond which lay the end of their hardships, and their haven of rest.

They accomplished the ascent of the Sierras, and rolled down into San Francisco by way of Auburn, Elmira, and Sacramento, arriving there on the 27th of November. The distance traversed was over two thousand eight hundred miles, and was accomplished in thirty-eight days, or an average of about seventy-four miles a day.

HOW TO GET RID OF FLEAS.

SWEET the entire house from top to bottom one day with salt. Then each day for a few days afterward brush around the beds and in the nursery with salt strewn over the floor. This treatment will always be successful.—*Medical Brief*.

CHOICE OF FOOD AND WHEN TO EAT IT.

[Extract from parlor talks given by A. J. Sanderson, M. D., at the sanitarium.]

The selection of food for individuals is a very difficult matter even under normal conditions. Taking into consideration the various disorders of digestion, which are so frequent, it is still more perplexing. In fact, no laws can be laid down that will apply to every one; however, there are certain general principles from which each one can draw right conclusions when he has good judgment in reference to his own peculiarities.

One of the first essential questions that comes to our minds as we consider that which is best for our diet would be the object for which we eat. First, we eat to live, not merely to exist, or simply to get that which will temporarily satisfy; but length of days and qualities of life are essential features, which should be taken into the consideration of this question.

Of course the food should vary greatly, according to the age of the individual, both as to quantity and variety; but at whatever age and under whatever circumstances, we should consider that we are laying the foundation, not only for the comforts and pleasures of the day, but for the future life as well; and the quality of life which we enjoy depends in a certain measure upon the quality of food we eat. If our intellect is to be superior, it must be developed by mental activities that are sustained by the best of nourishing foods, excluding those things which will bring about nervous derangement and confusion of mind. If our morals are to be the purest, they must be built upon a physical foundation which can only be obtained by pure food, that is well digested, and able to give nourishment to the body, without anything that stimulates or benumbs the finer sensibilities. If our strength is to be the most perfect, it is because we eat for strength, and not to gratify disordered appetite.

Among the common errors which may be mentioned as against the best selection of food is that of a monotonous diet, also one that is prepared without painstaking and care. We can not afford to fail to give the selection and preparation of food an appropriate amount of time and attention. When the system is fed continuously upon the same article of food, always prepared in the same way, the digestive organs become tired, as other portions of the body become tired when any one

kind of exercise is taken, to the exclusion of all other kinds. We can not expect the digestion to continue healthful when fed only upon one kind of food any more than we can expect the mind to reach its highest development when it is given only one line of study upon which to dwell.

Unripe or immature food is a violation of the laws of eating, and one which is commonly met with. Much of our fruit shipped in from distant parts of the country is packed in an unripe condition and kept under unfavorable conditions, and is not fit material to give either satisfaction to the digestive organs or nourishment to the body. Of course in this line there are many evils which are hard to avoid; however, it is very essential that vegetables, fruits, and grains should be taken from the field ripe and used fresh, or carefully preserved, in order to be the best articles of diet.

Overripe and stale fruits are likewise injurious to the system. The influences which favor decomposition are mainly moisture and heat, and as these conditions are met with so much more perfectly in the body than out of the body, we can not expect food that has not withstood this action before going into the body to resist it after it has entered into the alimentary canal, where the moisture and heat are more favorable for these degenerative processes.

Avoiding these last two evils mentioned, the one who is seeking to get the most healthful diet has abundant variety to select from in the many lines of fruit, vegetables, and grains we have at our command.

But food when it has been selected is not ready for the work of the system until it has been properly prepared and cooked. Much study and pains-taking can profitably be placed upon the consideration of this subject. The articles which compose our diet have within them qualities and flavors which are developed and utilized only when they are properly and thoroughly cooked, and a large measure of all that is necessary for flavors and seasonings in food can be obtained in the article itself when this is done.

(To be concluded.)

"Just do a thing and don't talk about it. This is the great secret of success in all enterprises. Talk means discussion; discussion means irritation; irritation means opposition, and opposition means hindrance always, whether you are right or wrong."

THE HOURS OF SLEEP.

THERE is an old saying which, in its too literal application, has done infinity of mischief, and has prevented a great many people taking the rest that is needful to them—"Nine hours' sleep is enough for a fool." That is as may be, but it is none the less true that many who are by no means fools feel that they require quite that time to recuperate themselves. Different constitutions require different amounts of sleep; what is enough for one person is inadequate for another. We are believers in sleep, and plenty of it, and the probabilities are that the originator of the phrase, "Nine hours' sleep is enough for a fool," was a philosopher and a cynic, and erred in making his own frugality in this respect the standard for the rest of mankind. We may, of course, err in the opposite direction, and sleep too much, for it is quite possible to do that; but it is only natural that one should one's self be the best judge of the time that is most beneficially devoted to sleep. It will be conceded by all thoughtful persons that the brain in very young children requires quite twelve hours' sleep, and this period is shortened gradually until at fourteen years of age a boy is found to need only ten hours'. When full grown and in good health, a man may find that eight hours' is quite sufficient to render him thoroughly refreshed and invigorated; but if he finds, on the other hand, that the period is not sufficient, then, by all means, if he can, let him take more.—*Selected.*

THE LAW OF LIKENESS.

THE face or the personal character which holds our gaze fixedly, is likely to be a transforming power in our lives. We gradually come to be like those whom we like, the traits and characteristics which we most admire in them being developed in ourselves through our very delight in those indications and exhibits of character. A child's expression of face, and his modes of speech and conduct, are shaped more by the person on whom his young gaze is fixed with loving admiration than by any inherited tendencies. All the way along in life the admiring gaze is a large factor in the character-shaping of the gazer; and one of God's choicest gifts to any man is the exhibit before him of a winsome and noble character, that shall fix and hold his gaze, as an object of his affectionate interest.—*Sunday School Times.*

Mother's Helper

CONDUCTED BY HARRIET S. MAXSON, M. D.

BUILDING.

I WAS sitting alone in the twilight,
With spirit troubled and vexed,
With thoughts that were morbid and gloomy,
And faith that was sadly perplexed.

Some homely work I was doing
For the child of my love and care,
Some stitches half wearily setting
In the endless need of repair.

But my thoughts were about the "building,"
The work some day to be tried;
And that only the gold and the silver
And the precious stones should abide,

And, remembering my own poor efforts,
The wretched work I had done,
And even, when trying most truly,
The meager success I had won,

"It is nothing but wood, hay, and stubble,"
I said; "it will all be burned,
This useless fruit of the talents
One day to be returned.

"And I have so hungered to serve Him,
And sometimes I know I have tried,
But I'm sure when He sees such building
He will never let it abide."

Just then, as I turned the garment,
That no rent should be left behind,
My eye caught an odd little bungle
Of mending and patchwork combined.

My heart grew suddenly tender,
And something blinded my eyes,
With one of those sweet intuitions
That sometimes make us so wise,

Dear child! she wanted to help me;
I knew 'twas the best she could do.
But, oh! what a botch she had made it,
The gray mismatching the blue.

And yet—can you understand it?
With a tender smile and tear,
And a half compassionate yearning,
I felt her grow more dear.

Then a sweet voice broke the silence,
And the dear Lord said to me,
"Art thou tenderer for the little child
Than I am tender for thee?"

Then straightway I knew his meaning,
So full of compassion and love,
And my faith came back to its refuge
Like the glad returning dove.

So I thought, when the Master Builder
Comes down this temple to view,
To see what rents must be mended
And what must be builded anew,

Perhaps, as he looks o'er the building,
He will bring my work to the light,
And, seeing the marring and bungling,
And how far it all is from right,

He will feel as I felt for my darling,
And will say, as I said for her,
"Dear child! she wanted to help me,
And love for me was the spur,

"And, for the real love that was in it,
The work shall seem perfect as mine;
And because it was willing service,
I will crown it with plaudit divine."

And there in the deepening twilight
I seemed to be clasping a hand,
And to feel a great love constrain me,
Stronger than any command.

Then I knew by the thrill of sweetness
'Twas the hand of the Blessed One,
Which would tenderly guide and hold me
Till all the labor is done.

So my thoughts are nevermore gloomy,
My faith is no longer dim;
But my heart is strong and restful,
And mine eyes are unto him.

—Selected.

It is as foolish to turn aside to find difficulties as it is weak to turn aside to avoid them. We are only required to overcome obstacles we meet; there will always be plenty of them.

THE FIRST DUTIES OF PARENTS.

IT is the wise, experienced Dr. Holmes who has said that the child's education must begin three hundred years before he is born; and, indeed, considering this subject, we must confront and recognize the inexorable law of Jehovah, "The iniquities of the fathers shall be visited upon the children unto the third and fourth generations of them that hate me." But, as we consider this, it may almost seem cruel thought, let us hold constantly before our eyes that parallel law—"Showing mercy unto thousands of them that love me and keep my commandments"—much stronger, if there be comparison of strength in God's laws, inasmuch as love is the strongest and most far-reaching attribute of his character. It even includes and swallows that other attribute, the attribute of justice. Backing this with the promise that the work of God shall destroy the work of evil, even in our bodies and our intellects, the parents, collaborators with God himself in the work of creation, under him hold in their grasp almost infinite power for good.

Man is not seen in his completeness when alone; neither is woman. It is rather the harmonious blending of both that gives the power to do a complete work. This is true not only in physical relations but in intellectual and spiritual, and in all phases of life; hence my subject, "The First Duties of Parents," not mothers alone, as we are often wont to hear it.

"In God's mind stands an ideal of every human life, and this ideal is the highest possible development of all its faculties, physical, mental, spiritual. To realize this ideal, parents must be coworkers with God in a very exalted sense. To them is intrusted, in large measure, the working out of his plans; on them it greatly depends whether God's ideal of manhood or womanhood shall be realized by that soul, or whether, dwarfed by neglect, deformed by sin, it shall become only a maimed, distorted caricature. Impress upon all parents a sense of the solemn responsibility, as well as the glad privilege, which the coming of each child brings to them, and neglected childhood—whether neglected through the frivolity of fashion, the pressure of business resulting from undue haste to be rich, or from overburdening care and labor for the meat that perisheth—will cease to be. The life will be recognized as more than meat and the body than raiment."

Where do these responsibilities and privileges

begin? So far as personal responsibility goes, it can not be before that fateful period when the choice of life companionship is made; and how great are the destinies hanging upon that point few understand. Here let me drop a word of encouragement to any parent whose children have passed the moulding period of which we are now speaking particularly. You can at least inform yourselves, your daughters, and your sons upon this subject, and impress upon them the great importance of studying well the results of their choice—results, not to them only, but to their offspring, for whose happiness and usefulness they will be held responsible. But when this step has been taken, where then lies our responsibility? Is there no possibility that the mistakes of youth may be overcome, and the future greatest good of offspring retrieved? —Yes, in large measure. It is a glad fact, and one that should give us great encouragement, that an inheritance of good is more persistent than an inheritance of evil. The former is unto a thousand generations, the latter unto but three or four. Evil corrected in our lives will thwart that law of evil heritage by that stronger law of the transmission of good. "No stronger barrier against the entrance of evil habits and passions, and no higher incentive to pure living, can be set before men and women than the fact that unborn children are to reap the fruit of their doing, whether it be good or whether it be evil."

The physical and intellectual training of both parents throughout all preceding years places its stamp upon the children. But, leaving all that has passed before out of the consideration, a great possibility for influencing the mental as well as the physical condition of the children lies at the beginning of their existence. The harmonious blending of two natures, cemented by the strong bands of enduring love, cheerfully, hopefully expectant of its divinely-appointed fruition, constitutes the only soil in which may safely be planted seed for immortal bloom.

Kate Douglas Wiggin says: "Why should we be astonished at the warped, cold, unhappy, suspicious natures we see about us, when we reflect upon the number of unwished-for, unwelcomed children in the world—children who, at best, were never loved until they were seen and known, and were often grudged their being from the moment they began to be. I wonder if sometimes a starved, crippled, agonized human body and soul do not

cry out, 'Why, O man, O woman—why, being what I am, have you suffered me to be?'

The grade of tissue with which the new life commences will have much to do with its subsequent development. If a parent be weary or worn, sad, sick, annoyed, or depressed, the offspring must suffer in body as well as in mind. A case in point is related by Mary Allen West, in "Childhood: Its Care and Culture." A lawyer of superior ability joined in wedlock to one every way his equal, begat a child afflicted from infancy with epilepsy. The result of the union of two such individuals as appear in her parents should have been offspring of a superior type. The cause of these unnatural results was traced to these facts: Her father took the last two years of his college course in one. Immediately after graduation of himself and wife, they were married, and both at once commenced teaching in an unusually hard school, and continued to do so until three months before Alice was born. The doctor said the vitality of both parents was thus exhausted, and they had no nerve power to bequeath to their child. Lacking this, she is an epileptic for life.

The conduct of the mother during that sweet period of expectant motherhood has much to do with the child's subsequent development. It is often remarked that the present generation is weaker than the ones preceding it. There may be many causes for this, but not insignificant among them is the fact that many mothers of the two generations past have used up their vitality in carving homes which they have bequeathed to their weakened posterity—weakened on account of their own unnatural energy. A New England housewife, upon whose premises never a speck of dirt was seen, the best cook in the neighborhood, as well as the best butter and cheese maker, when she was seventy was hale and hearty, still doing her own work, including washing, priding herself greatly upon her strength. Her sons, as well as her daughters, were in poor health. The mother was once heard to say:

"I can not see why my children are not more healthy. None of the four can do as much as I can now, and when I was at their age, I could do more than all four of them together."

"That is the trouble with us," remarked her eldest daughter. "You used up our strength before we were born."

And it was the fact.

Another instance occurs to me. This also was

in a farmer's family, where the surroundings were unusually conducive to health. All the children were well and strong except one daughter, the middle child in a family of seven. While developing intellectually and spiritually into a beautiful character, in physical strength, though not in size, she never developed beyond infancy; was never during her life of twenty-two years, able to bear her weight upon her feet, or help herself more than a baby two years old can do. Friends looked upon it as a mysterious dispensation of Providence. To me the mystery was solved by a remark of the mother one day, who never suspected that in the fact thus incidentally stated lay the solution of the mystery. A neighbor was complaining of feeling oppressed for breath, and the mother of the unfortunate Annie remarked:—

"I know how to sympathize with you; all that summer before Annie was born my husband suffered from neuralgia so terribly that he could not bear a breath of air. We slept in a little bedroom at the head of the stairs, and we could not have the door or window open the least crack. I never shall forget those long, hot nights, how I panted for breath. It seemed as though I should die of suffocation."

Here was the secret—the stifling air of that close-shut little room was totally insufficient to purify the mother's blood and make it fit to nourish her own body, much less that of the unborn babe. This antenatal smothering resulted in lifelong invalidism for the daughter.

Hereditary evils may manifest themselves in many different ways. Tobacco heredity, for instance, may produce an aversion to the vicious habit in the offspring, but it may manifest itself in St. Vitus' dance, general nervous debility, or intellectual obtuseness, also in a bilious temperament.

Stock raisers have proven that proper conditions of development from the moment of conception give to the offspring qualities far exceeding in excellence those of their pedigree. The same is true of the garden plant. Why may it not be true of the human plant?

H. S. M.

"Grant, O God, to us success!
And with rich store of wisdom bless,
That we may ever safely lead
Thy little ones in thought and deed."

COMB the baby's hair the wrong way to make it curl.

CHILD STUDY.

THE following, clipped from the *Kindergarten News*, contains a suggestion which possibly it may be opportune for some of our readers to consider:—

"In the kindergarten we must accept a child as he is, and, although we can not alter his past, a knowledge of the past is needed to throw light on the present.

"We sometimes think that we can read a child best in the light that shines from a period previous to his birth, as we see, or think we see, reflections in the child of the character of a parent. I observed two boys in a kindergarten the other day, filling their pockets with cubes belonging to the fourth gift. Upon finding that they were detected, my attention was arrested by the different manner in which the two boys behaved. One hung his head guiltily and looked heartily ashamed, quickly restoring the blocks to the box. The other, out of bold blue eyes, looked defiance, hung onto his pockets with both small hands, flatly refusing to give up their contents. Nothing that was said had any visible effect upon him, and it was a full half hour before, tired out and hungry, he consented to return the blocks to the box. On investigation it was found that the parents of the first boy, though very poor, were strictly honest, while the father of the second boy was steeped in wickedness. If the clue of our destiny is ever discovered, will it not be by the patient study of childhood as one watches the development of the newly-born child? Here alone lies any hope of reward in the unraveling of the mysteries of creation. Here, too, lies the only reward worth having,—the wisdom which teaches us to know mankind, and, knowing it, how best to improve and benefit.

"Marked visible returns for the patient labor of a teacher of children may be long withheld, yet she knows that the training during the early years of a child's life bears an indelible impress upon its future; consequently, if this training is as it should be, she has a right to expectantly hope for the best.

"While a knowledge of the general characteristics of children may be useful, it is only by patient and intelligent study of the *peculiar* characteristics of the individual child that any great degree of success is reached. It is *then* that every word, every motion, becomes to her a sign that admits of interpretation."

THE HYGIENE OF THE NURSERY.

REGULAR habits, proper food, and long hours of sleep are necessary conditions to a healthy infant.

The three prime essentials in the nursery are fresh air, good food, and pure water.

Never put a bottle nipple into your mouth and then into the baby's mouth; this will often prove dangerous.

Always hold a baby in your arms when feeding it in about the same position as if nursing it.

Feeding at night, after the third month, is both inconvenient and unnecessary; sleep at night is better than food.

Do not feed the baby because it cries; this may be due to pain, and it is hurtful to fill an infant's stomach at such a time.

Have a rule for feeding the baby, and do not vary from it; without regularity the mother becomes a slave.

More infants' lives are taken by overfeeding than by starvation. Never liken an infant's digestion or diet to your own.

An infant's thirst is not quenched by milk; it needs clean water to drink with regularity.

Plain boiled water, given between feedings, will often aid the digestion and satisfy the child when restless.

Vomiting and diarrhea are indications that the child is either sick or approaching sickness, and probably needs a physician.

Cholera infantum would be of rare occurrence if proper attention was always given to the quality and quantity of the food.

A nursing mother who worries, or who is exhausted, or who indulges in excitement, may become a source of danger to her infant.

An infant is a creature of habit, and usually responds to the wish of the mother, if the mother has order in her will.

Rubber tubes, complicated nipples, and nursing bottles are dangerous and should never be used.

Light and loose clothing, frequent bathing, or cool sponging, are necessities for the infant in hot weather.

Cleanliness, as applied to the body, the mouth, the food, the vessels, the clothing, the furniture, the floor, the carpets, the beds, and the atmosphere, should be strictly observed.—*Atlanta Med. and Surg. Journal.*

THE HEALTHY CHILD.

In order to understand the language of disease it is necessary that we have a clear conception of what constitutes health. Disease often invades the frail bodies of our darlings, and secures a deadly grasp upon their little frames before its existence is even recognized, simply because the mother or nurse has no distinct standard of health for her little one.

A new-born babe, if it has a good start in life, should be plump, and should weigh anywhere from six and one-half to ten pounds. A child which is born thin is not necessarily unhealthy, provided that its growth subsequently shows that its lack of adipose is not due to a low grade of tissue in its vital organs. Its length should be between sixteen and twenty-two inches.

The skin of the new-born babe should present a reddish appearance, and will appear blue or mottled only when ill or suffering from the cold. To the touch the skin has a peculiar velvety feeling, this being due to the presence upon the surface of the softest down. This disappears in the course of a week or ten days, and with it the outer layer of skin is shed. This process, together with the yellowish color assumed by all healthy babies, makes the little one anything but attractive. Fortunately for our poets, however, this transition stage is very short, and in a few days, when the baby is about two weeks old, the skin assumes the characteristic smoothness and pink-and-white freshness so universally admired.

There are other marks about a well-developed and healthy child which every mother should understand. We will consider some of them.

Let us begin with the head. When the little stranger first appears before his expectant admirers, his head presents various ridges, caused by the shutting past each other of the bones which comprise the skull. These quickly adjust themselves to each other, and the ridges disappear, and in their places will be felt soft lines. Where the corners of the bones meet are to be felt depressions known as fontanelles, or "soft spots." There are two of these on each baby's head. The one at the back is quite small and is triangular in shape. The one on the top of the head is diamond shaped. This is larger and more important. Right here, to the eye of the experienced physician, is often held out the danger signal when disease is approaching. In the perfectly well

child the surface of this soft spot should be even with the surrounding tissue. A slight pulsation should be observed with each heart beat. In size it should measure from three-fourths to two inches in length. It should not close entirely until the child is about sixteen months old. It is needless to add that this spot should be handled with care, inasmuch as the delicate brain tissue lies directly underneath the scalp.

The head should be oval in shape, without prominent points. It may be covered with a thick growth of hair, or it may be perfectly bald. If hair is present, it will most likely fall out after a few weeks.

The eyes are always small, inasmuch as they are undeveloped, but they usually develop rapidly after birth. The color is always an indefinite blue, which changes to its permanent color sooner or later.

The tongue during the first week of life, until the saliva begins to be secreted, is normally covered with a whitish coat.

The chest is poorly developed compared with the head. This is understood when we remember that up to this time there has been no expansion of the lungs.

The abdomen is comparatively large and prominent, due, no doubt, to the large size of the liver, which at birth is larger than all the other glands of the body combined.

The arms and legs are small and short, the legs particularly so, and they are also naturally crooked toward each other, the soles of the feet looking inward.

The face of the babe when awake is, if its fond admirers are shorn of fancy, expressionless; or, if a look of intelligence is there, it is only apparent and not real. All its movements are instinctive or reflex. When asleep its eyes should be completely closed, and every muscle relaxed. The head is usually turned to one side. Breathing is almost entirely imperceptible. For a few days the baby will be almost motionless when awake, except for a grasping movement of the hands, but soon its movements become general and energetic.

Congenital blindness can not be distinguished from idiocy, with which it is very often accompanied. When the child is completely idiotic, it will fix its eyes on objects after a few months, which, of course, a blind child will not do. Only time will tell.

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OUR readers will notice that we have quite a large Editorial Committee. Although we have at this time received no articles from their pens, yet we are sure that the future usefulness of the JOURNAL will be increased by the contributions which will hereafter be published from them. We spoke of Dr. Belknap last month as being connected with sanitarium work in Portland, Or., and the names of Drs. Paulson and Winegar are familiar to all those who are acquainted with the physicians at the Battle Creek Sanitarium. Their experience and their great interest in the health work will give special value to the articles which they will write.

INQUIRIES have been received in regard to where questions should be sent which are intended to be answered through the JOURNAL, as some had thought that with the few changes which have recently been made other parties might become responsible for such work upon the JOURNAL. We will say, however, that the new members of the Editorial Committee are only in addition to those who have composed it, and those who have had charge of this branch of the work will bear the same relation to it as heretofore. All correspondence pertaining to questions to be answered in the JOURNAL, or similar queries which our readers may wish to ask, should be directed to the former editor, Dr. Maxson, at St. Helena. All business correspondence should be sent to the PACIFIC HEALTH JOURNAL, St. Helena, as heretofore.

WE regret that this JOURNAL goes to press without the accustomed article from Mrs. Schram, who is earnestly engaged in the work of healthful cookery. In the past few weeks she has been called away to other parts of the state to engage in teaching this branch of household work, and has been prevented from contributing to our columns. It is the aim of the JOURNAL to make this one special feature of the Household Department, as it bears so important a relation to every home. Mrs. Schram's experience as a practical cook and a teacher of the art has made her amply fitted to do work in this line which will be appreciated by all. The members of the sanitarium family have all been gratified with the work she has done, both the practical part in the kitchen and the theoretical part, along with the experienced drill which she gave to the guests during her stay at the sanitarium. One of the special features of our sanitarium work is along this line. Our experimental kitchen, with which Mrs. Schram and other experienced workers are connected, is being systematized to develop the art of cookery in its most practical forms.

HEREAFTER we will have in our JOURNAL a department for the benefit of orphans, friendless, and needy children, the object being to obtain intelligence in reference to such cases, and also to obtain a knowledge of all who are willing to make homes for, or provide means for the maintenance of, children whose unfortunate circumstances have made it necessary for them to have such assistance. Among the friends of the JOURNAL already quite a work in this line is going on, and we trust through the JOURNAL to make the work far more extended and beneficial in its benevolent efforts. We will publish from month to month such cases as may come to our notice, and the means which are being provided for their maintenance. We would, also, solicit correspondence with any who may feel interested in this matter and can furnish us knowledge concerning such children, or concerning homes with which such children could be provided.

OUR readers will notice in the General Articles of this number an account of the experience of

Theodore Kragness in his ride across the continent. The experience was somewhat significant, on account of the demonstration that is given to the efficacy of the use of a single line of foods. His diet was exclusively composed of grains made into the form of crackers, granose, gluten, and granola, etc. No flesh meat whatever was eaten, with very few exceptions no vegetables were taken. The trip was an exceedingly hard one, as will be noticed by reading the account of it and noting the unfavorable conditions that were encountered on account of the season of the year. Yet strength was perfectly maintained during the entire trip, which included thirty-eight days of actual riding, on an average of about seventy-four miles a day. The rider lost nothing in weight, but, on the contrary, was one pound heavier when he arrived in San Francisco than when he left Minneapolis.

Only water, and occasionally milk, was used as liquids on the entire journey. Mr. Kragness' brother, who accompanied him, who had been more of an expert in riding, especially upon short distances, hardly stood the trip as well as did Theodore. His diet included, in addition to that which his brother used, the ordinary use of meat and common foods when at places where they could be obtained. When he arrived in San Francisco, he was fourteen pounds lighter than when leaving Minneapolis. This change in weight, however, was not due especially to the diet, as his temperament is such that he takes on and throws off flesh more rapidly than does Theodore. However, the experience is very conclusive evidence of the superior quality of strength that can be obtained from the use of an exclusively grain diet, when it is well prepared.

S.

A NEW SEARCH LIGHT FOR SURGERY.

MUCH has been said in the papers of late concerning a new form of light which has recently been discovered, that is used in photography. If all the statements that have been made are true, it will be one of the most useful discoveries of science; and nowhere will its benefits be more largely realized than in the practice of medicine and surgery. It has been taken up by some of our best journals and newspapers, and doubtless many of the things which have been related concerning it are authentic.

The discovery was made by Professor Roentgen,

of the Bavarian University of Wurzburg. He has by the use of electricity provided means for photographing the human body, bringing out the details of the skeleton, while the softer tissues are only faintly traced. The important factor in this new discovery is one of the most recent productions of electricity, the force that is being so extensively utilized in all the enterprises of modern life. Specially prepared currents of electricity are made to pass through a cylinder containing a vacuum, and from this are given off parallel rays of light which have the peculiar properties. These rays are more nearly in the form of heat than light, and have power to penetrate opaque substances as ordinary rays of light penetrate glass and water. It will pass through wood, leather, clothing, flesh, and even some kinds of metal, while bones, and most metals, and some compact substances, remain opaque and are pictured. The picture found, however, is not a negative but a positive. The rays of heat can hardly be called light, as they are said to be invisible to the human eye. It is said to be light because it acts as light in the process of photography.

The Springfield *Republican* relates that the inventor took a picture of a man's ankle in which a bullet had lodged, which showed the bullet and the exact spot where it was imbedded. He also photographed a leather purse, showing the money in it with perfect distinctness. A human hand was subjected to the rays, and the result was a picture of the bones in full detail, with the envelopment of flesh only in a shadowy form around them.

If these investigations prove to be thoroughly scientific, we can hardly estimate the value that such an instrument will possess in the practice of surgery.

S.

ANTI-TUBERCULAR REMEDIES.

SINCE the discovery of tubercular bacillus by the German scientist, Koch, in 1882, much careful scientific study has been put forth along the line of the development of this germ, and the way in which it enters and performs its work in the system. Much has also been done to produce remedies which can be used for the destruction of the germ, and to render the system immune against its action. The experiments of Koch himself with tuberculine, which was the first remedy of this kind, created quite a sensation at the time it was

announced, but, contrary to the expectations of many, it did not prove efficient in the cure of that terrible malady, consumption. The failure, however, was greater in the eyes of the laity than with the scientists themselves, as no one has ever yet pretended to have found the remedy which will be a cure for consumption, although many have hoped that the problem might be worked out in the future.

Tuberculin and other remedies of the kind are poisonous substances which are developed from the germ itself. The study in this line was begun in view of the fact that it has been discovered that all germs in their action produce substances which, when in large enough quantities, quite destroy the germs themselves. It was thought that such a substance, which would destroy the germ outside the body, might hinder or destroy its action within the body.

One of the remedies which is being used somewhat at the present time is antiphthisin, which is a product made by Professor Klebs, of Asheville, N. C. Quite a number of cases have been reported upon which this remedy has been tried with quite favorable results, although of course it can not yet be said to have become established as a cure, if, indeed, it ever will become a remedy that will be generally adopted. Its use has been more often satisfactory in cases of children.

This remedy, instead of being the total product of the germ culture, is supposed to be simply one of the bi-products made from it, and taken out by some careful chemical manipulation. This was done with the hope that some portion of it might contain a remedy which would render the body immune against the action of the germ, and thus prevent the tubercular bacillus from colonizing and going on with its work of destruction in the system. We can not but appreciate the careful work which has been done by several men along this line, and hope that the time will come when the results of their investigations will be of greater benefit to mankind.

But in the question of overcoming this dread disease, consumption, we do not deal only with the tubercular germ. While we may allow that it is the active agent causing the disease, the condition of the system, and the grade of vitality that the individual possesses, are the real things which immune the system against the disease, and which, after all, are the problem to be dealt with in the prevention of the spread of this dread enemy.

Along this line come the general problems of hygiene and the best physical development, which every individual must study and understand for himself if he would be on the safe ground of being immune against not only the disease germ of consumption, but against others as well. S.

MILK DIET A CAUSE OF DISEASE.

MILK has always been regarded as a staple article of diet, and, in fact, nature provides that the early and tender years of all the higher grades of animal life shall be dependent upon this one article of food alone. It is a well-established fact that it takes certain elements in the various digestive fluids to digest the hardier articles of food. These elements children under two years of age have not to any marked degree; consequently the very young are shut in to this article of food principally, as it has the constituent elements of the body, and from the fact also that it is very easily digested by the young stomach, and nothing can take the place of it.

It is a lamentable fact, however, that so many children die yearly from no other cause than a poor quality of milk, especially in our large cities. We are told that nearly thirty per cent of all deaths in large cities, from all causes and at all periods of life, are infants of the first year; and ninety per cent of these die from diseases of the nutrition, directly or indirectly. Statistics also prove that over one-half of the hand-fed babies perish before they are five years of age.

Inasmuch as there is such a high death rate among infants of the first year, and especially those that are hand fed, it will be of special interest to notice the relation of city babies to city milk. From the time of Romulus and Remus, who were nourished by milk from inferior animals, the question of artificial feeding among babies has been growing in proportions until to-day, unfortunately, the hand-fed babies are the rule.

No doubt cow's milk furnishes the best substitute, and with some few simple changes can be made to approximate in its elements the consistency of woman's milk; and if it were always an assured fact that city babies could have pure milk, and have the proper care in keeping it, the question of hand-fed babies would not be so full of meaning. In the young and very tender months of baby life, adulterations in the sole article of diet should be recognized as a most heinous crime.

The principal questions to be considered in the interests of the babies of the city are the production of milk, the proper handling, and the assurance that it is not adulterated. The latter phase of the question can only be assured as the parents deal directly with the producer, with the bond of assurance that he is honest. This means a good deal when the future interests of sixty per cent of the babies born in large cities depend upon the honesty of the man.

All cities should have a medical commission, organized to influence the production and handling of the milk, with a code of requirements so stringent and binding, with ample securities, with a territorial limit for the sale of the product, and a control to a very large extent of the dairies that supply the city milk. Good milk must depend upon healthy animals. An animal that is confined a portion of the twenty-four hours with other animals in an inclosure, cannot always maintain perfect health. Plenty of pasture room, good air, kind treatment, only will insure good milk. Milk from dairies kept in the city, where the animals are more or less confined, and are fed with the slops from breweries, etc., should always be condemned for infants' use; for in these dairies we not only have a poor grade of milk, but we will invariably find one or more animals infected with tubercular disease, or other diseases which render the milk absolutely poisonous.

In some locations they have a commission appointed, with a code of requirements, stringent and binding, comprising a chemist, a bacteriologist and a veterinary surgeon. This commission has an oversight of the pasturage and fodder, the location, ventilation, and drainage of buildings, the water supply, preventing the use of water from wells or springs holding surface drainage. The code requires perfect cleanliness in every respect, and controls every step of the collection of milk and its preparation for shipment. A commission of this kind in every city, that could not be in coalition with the dairymen, would help very much to lower the death rate among infants.

Dr. Henry Coit, of New Jersey, in his report of the State Board of Health, says:—

"The relation sustained by the milk question to mortuary statistics furnishes a field for investigation which promises a rich reward, while innumerable facts justify their association and show their co-relation. It may be proper to mention a few of these facts, namely:—

"That it has been claimed that twenty per cent of all who are born to man in large centers of population, die during the so-called nursing period.

"That there is a general lack of robust health in city children, most of whom are fed on milk contaminated with stable filth.

"That there is a lack of physical resistance in city children to epidemic diseases resulting from a want of suitable food to conserve their highest development.

"That ignorance and greed in those engaged in the production of milk prevails; and its delicate nature is disregarded in the commercial expedients for its sale.

"That microorganisms are found in all milk after it is drawn, but never in the healthy udder.

"That these bacteria and micrococci are found in such countless numbers that milk which contains 100,000 in a cubic centimeter (fifteen drops) is considered remarkably clean.

"That milk before it spoils contains in the same amount probably 500,000,000 germs, which may represent as many as 40 different varieties.

"That the records of infectious contagious epidemics have often shown them to be indigenous to the dairy.

"That so-called cholera infantum and the summer diarrheas among children are now regarded by authorities to be largely due to milk infection."

All nurses should be thoroughly instructed as to the means of sterilizing milk. The early application of heat is probably the most effectual means of preserving it, which it accomplishes by destroying the bacteria.

Dr. Coit tells us that "the thermal death point of all known disease-producing bacteria is below that which has an injurious effect upon the milk itself."

It has generally been supposed that it was necessary to maintain milk at the temperature of 212° for some time, in order to render it free from germs. Milk thus treated becomes so changed in character as to render it distasteful to many. Changes take place also which make it much less digestible, and small, delicate children will not thrive upon it.

This fact has brought much perplexity to those who have devoted themselves to the discovery of the proper food for infants. A solution of the problem was found when it was demonstrated that subjecting the milk to a temperature of about 167° Fahr. for half an hour is practically all that is nec-

essary to destroy harmful germs. This fact was discovered by the French scientist, Pasteur, and is called Pasteurizing. It will not keep so long, and when this method is depended upon, it should be prepared at least twice daily.

W. H. M.

QUERIES.

6. (1) CAN I get anything to support my joints, particularly the knees? Both knee-joints slip out of place frequently. They have troubled me more or less for fourteen years. (2) For over three years I have been troubled with my hands swelling every time they are exposed to the cold, and, when long exposed, they get very badly swollen and feel as if they would burst. I find that other parts of my body will swell also upon exposure to the cold. Can you give me any remedy for this trouble?

E. V.

(1) Manufacturers of surgical instruments and appliances have rubber caps which are made to fit tightly over the knee-joints, and thus give support to the weakness of which you speak. They can be obtained from any dealer in surgical instruments. (2) The trouble of which you speak seems to be a nervous one peculiar to certain individuals. We have known this tendency to exist in several members of one family. The disease evidently manifests itself through the blood-vessels. As far as we have had anything to do with it, it has been readily overcome by massage and rubbing of the hands very vigorously. Dipping the hands in hot and cold water alternately will also tone the circulation and help to relieve it. We would recommend that those thus affected avoid exposing the hands to the cold as much as possible.

7. I HAVE had a running sore on my limb for three years. It will sometimes heal over, with the use of iodoform, and again break out. The matter that comes from it seems to be poisonous, and causes blisters upon the skin where it touches. Can you tell me the cause of it? Is there any other treatment that I can use for it?

V.

It is an indolent ulcer, caused by a low grade of nutrition of the tissues. There is a poison developed in the serum which exudes from the surface, and is so irritating that it blisters the skin in other places. Every effort should be made to increase the general nutrition of the body, as well as the local nutrition of the limb. It may be necessary to remove all the diseased tissue about the ulcer before it will become permanently well. This should be done by surgical measures. For home treatment it should be kept perfectly clean by washing with some antiseptic solution, as the five per cent carbolic acid. If the diseased tissue is not too deep, it might be removed by the application of burnt alum to the surface, afterward dressing it with iodoform as before; or aristol might be used in place of the latter.

8. ARE poultices useful in pneumonia?

H. K.

Yes, notwithstanding the fact that they are

spoken against by many. Doubtless in some cases they are likely to be very much overused, and in some conditions of pneumonia other lines of treatment would be preferable. Yet in those rapidly-developing pneumonias where the circulation is very much depressed, the continued heat of the poultice over the most affected portions will greatly aid the circulation and facilitate the clearing-up process, as well as give comfort and ease to the patient.

9. How much liquid should be used at each meal?

E. S.

Nature does not intend that a very large quantity of liquid shall be used with meals, as she has provided an abundant flow of secretions to uphold the digestive processes. Liquid hinders the work of digestion rather than aiding it, as it dilutes these fluids and has a tendency to bring the food into the stomach without its being properly masticated and mixed with the saliva. Not over one glass of liquid should be taken as a general rule, and there are a great many cases in which absorption in the stomach is very slow, where it is best not to take any liquid at all. These are cases where there is much heaviness about the stomach after meals, and oftentimes liquid can be felt in the stomach by making a sudden pressure upon the organ.

10. ARE nuts useful as an article of diet?

F. G.

Nuts have often been considered to be very indigestible, but doubtless much of this prejudice against them comes from the fact that they are very rarely properly masticated. They are rich in nutritive elements, and we know of no reason why they should not be a healthful article of food if properly prepared. They should be masticated very thoroughly, and oftentimes if they were baked and ground into a meal, they would be used to much greater advantage. We believe that they would be a useful article of diet if prepared in this way and judiciously used with other lines of diet. People who have poor teeth should not undertake to eat them without some such preparation.

S.

A CORRESPONDENT asks us some questions concerning the treatment of a fibroid tumor. If the individual will address us personally, giving her own name and address, we will be very glad to give such suggestions as we are able, by private correspondence.

The Household



BE KIND TO THE LITTLE CHILDREN.

BY HELEN W. GIBSON.

Be kind to the little children;
They have their part of pain,
And sorrow lieth heavy
On childish heart and brain.
Thank God, the pain is transient,
Or the burden were too great,
And childhood's frail endurance
Must faint beneath the weight.

Be kind to the little children,
They were blessed by Christ, the Lord;
You call them tiresome, foolish—
Are you as near to God?
Take heed lest you crush the blossom
As it struggleth toward the sun;
Beware lest you grieve the spirit
Of "one such little one."

Be kind to the little children,
Ye can not have them long;
Time's swiftly flowing river
Is bearing them along,
And, as careworn men and women,
They soon must join the strife,
And fight as you are fighting
On the battle field of life.

Be kind to the little children,
In after years may come,
Like the sound of distant music,
The memory of home;
And the kiss of a long-lost mother,
The "touch of a vanished hand,"
May win the weary wanderer
For the home in the heaven land.

FASHIONABLE DRESS.

BY IDA M. POCH.

THERE is no greater tyrant than custom, and to no potentate is universal homage paid like that which is exacted and received by fashion. That portion of the human family which claims the stronger mind, boasts that fashion does not exist for them; but we notice that the tailor who turns out the "latest cut" in vest pockets and coat tails has the largest patronage. So we may safely say that the human family as a whole bow the knee to the goddess of fashion.

We will concern ourselves only with the acknowledged fashionable half of humanity.

Bird and beast and creeping thing have been made to furnish material to construct garments with which to clothe and deck our bodies. And the old earth herself has been made to give up her most precious hidden treasures to furnish ornaments wherewith one human creature may eclipse another.

When we consider the amount of time, money, and effort expended to create say what comprises one fashionable lady's wardrobe, it is not strange that a very small portion of time or money or effort can be spared for other things than *dress*. And when we further consider the uses and abuses of the various garments and appliances which are necessary to produce that ultra-fashionable "stunning" effect, we are lost in wonder at the improvements that have been made in the art of dressing, shall we say? since man—yes, woman too—first dressed in fig leaves. Imagine mother Eve step-

ping into the modern lady's dressing-room! With what wide-eyed astonishment she would regard that French corset, and that bodice with the latest style of sleeve!

Let us hastily glance at some of my lady's garments, and notice how they affect the body, and how well they serve the purpose it was originally designed clothing should fill.

Here are the undergarments. There are elegant combination suits made now, so we shall not be surprised to find them here, though to many ladies the advantages of the two pieces still appear greater than the ill effects of the waistband. In the latter case we will make a note of one waistband, consequently one garment suspended from the hips.

Ah, here is the corset—an eighteen-inch garment to a twenty-five-inch waist! It must go on, however, because a small waist is the style, and one might as well be out of the world as out of fashion. Sometime we will speak at length upon this evil, but just at present we will let your own imagination picture the state of panic into which the stomach, liver, kidneys, bowels, and, in fact, all the other organs, both above and below the waist line, are thrown when those merciless steels force them down, down, and crowd them out of ever so slight a resemblance to their original shapes and sizes. "How can they possibly endure it?" and "Where does the dinner go?" are old questions which have been propounded many times, and the answer is always a shake of the head. The liver does sometimes become weary of this state of things and concludes it has a better chance by dividing and allowing part to abide above and part below the waist line. The kidneys become dissatisfied with such close quarters, and sometimes one, sometimes both, develop a roving disposition, which is by no means agreeable to their neighbors. It is needless to say that these organs put up a lively protest against this infringement of their rights, but might prevails, and by and by a sad lethargy takes possession of them all, and little by little they lose ground, and finally we find them a confused mass far from home, and always sending up a wail for help against that cruel thing which deprives them of power and liberty to accomplish their prescribed work.

Next the skirts fasten about the waist. There are at least two besides the dress skirt. Do they seem heavy? Never mind; see how beautifully they flare around the bottom. It is just the very latest thing. But the dress skirt deserves a little time

all to itself. It is a beautiful piece of goods, and there has been no stint of material. A moderate estimate would allow perhaps six yards of fifty-inch goods for the skirt. It is lined with silk, or some other skirt lining, and interlined with chamois fiber, or some such material, perhaps haircloth, to give the proper flare and stiffness. Now the whole must be faced with some of the dress material, and the bottom is finished with the corduroy binding. I am not prepared to state the weight of this garment, since I do not possess such a one, but surely it is nothing small. This fastens around the waist with a band. Perhaps it is attached to the bodice by means of three hooks and eyes. What shall we say about this? It is not necessary to make any comments. This frightful injustice to the wearer's own person speaks for itself.

Now comes the dress bodice. The sleeves are small balloons or miniature dress skirts, lined and festooned. Around the waist, at intervals of perhaps one and one-half inches, is arranged a palisade of whalebones to reënforce the corset. Over the chest, or rather over the upper portion of the trunk, is a layer of cotton padding perhaps an inch in thickness. This is to improve nature's model of the female figure, to correspond with the latest French pattern. The whole creation is surmounted with a collar which might be useful in supporting the ears.

We have not yet noticed the footwear and the gloves. The size of feet and hands did not enter into the idea of beauty in olden times; then it was wholly a matter of perfect shape. But now there are styles in feet and hands. Every woman, if she aspires to being called "stylish," must wear the fashionable number, or as near it as possible, in boot and glove, regardless of the size of the member to be clothed therewith.

This is but a hint of the abuses of dress to suit the demand of fashion at the present time, and the end is not yet. What new schemes to create a market for their wares, fashion mongers may put forth, and what new instruments may be invented to torture the human form still further out of resemblance to the original pattern, are matters upon which we dare not express an opinion. Time alone will tell.

And woman is called the "weaker vessel." Surely the originator of that phrase was not acquainted with her and her abilities. That was a bright woman who said, "Woman must surely be superior to man if the doctrine of the survival of

the fittest is true, for men would all have been dead, buried, and forgotten if they were required to clothe their bodies as we do ours."

Now, when we have a human body squeezed and fitted into this mould, and clothe it with all this superabundance of dry goods, have we something which in any way appears truly beautiful? Does the result add to the happiness and well-being of the human family? Is it conducive to making the most and best of our God-given powers? Does it fit us for the great work womankind should do in the world? Woman desires to stand side by side with the best men in all the high places; does she show the good sense and true womanliness such a position demands? To all these questions, and many more, we must answer emphatically, *No!* Then why all this misery, this needless torture, to become something utterly without use or beauty? —Simply that the individual may be called "stylish," or at least escape that dreadful adjective, "old-fashioned."

Fashion is the altar upon which women lay comfort, health, yea, life; and, more, happiness, home, and moral right are given in exchange for this delusion. Is it strange that men smile when we speak of claiming our rights? "He who would be free must strike the first blow."

TOO SLOW.

DR. HOLBROOK takes issue with the prevalent opinion that as a people the Americans are living too fast, and is inclined to think that the majority of us are living too slow. For instance, we are in no hurry to go to bed at night or to get up in the morning. We are in no haste to learn the best ways of living so as to make life deeper and richer. We are in no haste to give up unwholesome food and drinks. There is no hurry about changing unhealthy style of dress for one better adapted to our needs, nor is anybody in haste to build more sanitary houses or develop physical bodies as perfect as nature intended them to be. If we were in greater haste to do these things, we might work at a far more rapid rate than we do, and be the better for it.—*Medical Brief.*

SATAN does not worry over Christianity that stops the car of prohibition just before it reaches the ballot-box.—*The Corner Stone.*

THE GOLDEN RULE EXEMPLIFIED.

BY EMMA H. ADAMS.

A FEW miles southeast of the commercial capital of Washington stands the neat little village of Orting. Twelve years ago the place contained possibly two hundred inhabitants, a post office, a station of the Northern Pacific Railway, and a small store carrying a stock of dry goods and groceries.

The store and the post office drew daily to the little hamlet a number of the hardy farmers scattered over that section of the Puget Sound Valley. Some of these settlers were in comfortable circumstances, others were making a great struggle for existence.

Some seventeen miles distant from Orting there lived at the time an interesting family, consisting of husband, wife, and five children. Their dwelling—the ordinary log house—stood on the verge of a forest, four miles from other human abode.

Here, because the land was both rich and cheap, Mr. Arms had "taken up" a valuable "claim." The man was a farmer from choice. "Other men," he was often heard to say, "may harass themselves with business in cities, but I shall win my bread from the soil."

Mr. Arms greatly regretted the absence of school privileges for his children, but, confident of the speedy incoming of neighbors, of schoolhouse, and teachers, he began to do his part toward securing this desirable state of things, by felling the tall trees, burning the stumps, and tilling the ground.

Unfortunately, shortly after he had settled his family on the margin of the woods, his wife was stricken with a disease which incapacitated her in part for ministering to the wants of her household. There was little hope that she would ever again be well. Thus the ill occurrence fell like a dark shadow upon the unusually happy family.

A perplexing circumstance in the case was the fact that the only physician sufficiently skilled to be intrusted with its treatment, lived in the city at the head of the Sound, forty-seven miles away.

Nor was this the only obstacle in the way. Between the trim log house and the hamlet of Orting stretched ten or twelve miles of uncleared country. The only thoroughfare through this was a winding trail for horses and pack mules. Over the remainder of the distance lay a rough

wagon road. To traverse this was torture for the soundest traveler.

One night, having thought long over the question of what could be done toward his wife's recovery, Mr. Arms decided to make an immediate trip to the city for the purpose of consulting Dr. Murdock on the subject. Accordingly, at an early hour next morning he set out for Orting, whence he would proceed to the Sound by rail.

Dr. Murdock advised the immediate removal of the sufferer to the city. Otherwise, to visit her as often as he ought would be both impracticable and exceedingly expensive. Mr. Arms' own judgment had predicted this result, and yet he was greatly distressed thereby.

"In effect," he reasoned, "it is but dooming Annie to years of helplessness and suffering; for how is it possible to bring her to the city? The twenty miles of railway travel she might endure, perhaps, and possibly the few miles of tortuous wagon road, with its cruel jolting over stumps, ruts, and stones. But that twisting trail!—to traverse that would be torture. It could be accomplished only upon the back of horse or mule, and certainly Annie could ride neither."

With these apparently insurmountable difficulties in the way, and perceiving no possibility of their removal, Mr. Arms arrived at Orting on his way home. Barely had he stepped off the train, when he was greeted cordially by a little company of farmers of the region, all of whom knew him.

A variety of reasons had brought these men to the village. They had come for mail, for domestic supplies, to take a look at the always interesting railway train, to meet distant neighbors, and to reassure themselves that they were still a part of the great world of mankind living outside the foot-hills of the Cascades. They had come from all directions, on foot, on horseback, in vehicles, some of which were worn as threadbare as was the rider's clothing. Some of them were men of tender sympathies, and shared a neighbor's sorrows as readily as his joys.

Soon the train rolled on its way. The little company of farmers stood beside the track. One of the number observed Mr. Arms' dispirited manner, and said to him quietly: "Neighbor, I hope you are not ill. Have you received bad news?"

These words and the speaker's kindly manner touched Mr. Arms, who then revealed the purpose of his visit to the Sound, and its discouraging re-

sult, remarking pathetically that the outlook for Mrs. Arms seemed hopeless.

For a moment his listeners stood silent and pitiful. Then one of them, a man whose very voice aroused cheerfulness, said: "Arms, take heart. A way will open to accomplish this. Things which seem impossible often happen."

"That's so," remarked another, whose path had been beset with difficulties. "It's the darkest just before day. The road's long that has no turnin'."

Thus most of them tried their hand at cheering their perplexed friend, while not one offered a solution of the problem.

Perceiving no practical outcome from the talk, and being eager to reach home, Mr. Arms said gratefully: "I appreciate your kindly interest, my friends, but just now I would give more for a smooth road from my farm to Orting than for any other useful thing I can think of."

Then, bidding them good-by, he hastened to the stable at which he had left his horse, mounted him, and soon was threading his way among the stumps and stones.

Barely had the rider passed out of sight when one of the little company down by the track, a man named Fry, electrified the others by saying: "Well, there ain't no good road, and won't be for a long time to come. So, as I take it, the best thing to do is to use that squirmin' trail and such road as we have. I've known great things to be done by means o' trails.

"See here, men," he continued, with startling earnestness, "that little woman's got to git to Tacoma. What do you say to our rallyin' the settlers, ten or twelve on 'em, and carryin' her on our shoulders from her home to this place? Nothin's easier."

"You're right, Fry, nothing *is* easier," replied one of the half dozen men.

"Goot land!" exclaimed an excitable German. "How you will do dat impossible t'ing? Dat kill Frau Arms, sure. I takes no part in such proceedings."

"What is your plan, Fry," asked a quiet man, who had been thinking.

"This," answered Fry, who was noted for his ability to plan. "Here are six men. Let us secure seven others, to make the thing easy for us. Four on us at a time will carry the crippled woman on our shoulders on a litter or plankin until we are tired. Then another four will len' a hand, an' so on. That'll give us a change o' men every couple

o' miles, and leave one man to lead the horse that'll have the honor o' carryin' her trunk, ye see,

"All on us will help carry the baskets containin' our luncheon. Men *must* eat, no matter how good a thing they're doin'. Arms can walk 'long side his wife, an' hold an umbrella over her head, to keep off the sun. Some one on us will carry a basket filled with nice things for the little lady to eat on the way. We'll provide this. She can't cook, you know. We can do this business handsome as can be, in one day. What do you say?"

"When do you propose to do it?" inquired one of the six, cautious as to making pledges.

"The very first day on which the sun rises clear, after to-morrow. It'll never do for that nice woman to git caught in a storm. I tell ye, men, if she can git well, and live to bring them five children up—smart as whips, every one on 'em—this thing'll be well paid for. Now what do ye say?"

"It's a terrible busy time o' year," replied one, "but I'll be one of the thirteen. I reckon it will be fulfillin' the last of them commandments that the law an' the prophets hang on."

"Well," answered another, "I live fifteen miles from Arms' house, but you may depend on me."

From other members of the party came similar responses.

"Very well," returned Fry, "my horse can do a day's work yit afore bedtime"—Mr. Fry never failed to call attention to the fine animal he rode—"I'll engage four of the men, if you, Reinhardt, will see Mason—I'm sure he'll go—and you, Caldwell, will see Ogden and Springer.

"And now Arms must be informed of this business. I'll overtake him an' let him know the cloud's goin' to lift. So good luck to ye. Day after to-morrer's the time, if the mornin's clear, and you hear nothin' unfavorable from me."

So saying, the self-appointed leader in the movement dashed off in the direction Mr. Arms had taken. The remainder of the party separated, collected their purchases, and departed to their homes, to arrange for their part in the unique service.

Some men are naturally executive, and such a man was Sidney Fry. He took delight in managing an affair. He was happy, too, when engaged in a movement that would help a human being on his way. Seldom did his own affairs rise up to exclude the interests of a friend. Hence, into this project for the benefit of Mrs. Arms he entered heartily.

Five minutes after parting with his neighbors he mounted his fleet courser and sped away to overtake Mr. Arms. The latter had accomplished some four miles of the distance homeward when he heard a vigorous voice behind him shouting:—

"Arms! Arms! stop! stop!"

Checking his speed and turning about, he found Mr. Fry and Ebony close upon him. Surprised, and somewhat alarmed, he cried, "Fry, what has happened?" and rode to meet him.

"There's a small uprisin' of the people," answered his pursuer, "but no harm'll come of it." Then coming up he disclosed the plan which had been devised to help him, and begged him not to object, since it offered the only possible mode by which Mrs. Arms could be conveyed to Orting.

"Your proposal amazes me," exclaimed his listener. "You forget the distance to Orting, and that a mere trail is the only passage over most of it. Besides, glad as I should be to see Mrs. Arms at the station, I can not let my neighbors perform the toilsome task of conveying her thither on their shoulders."

"Every man of us is glad to do it; we offer our services," answered Fry. "It is no remarkable thing for a man to walk seventeen miles in a day. The burden'll be but triflin' for four strong men. Can you have Mrs. Arms ready by day after to-morrer, if the mornin' is golden?"

Mr. Arms reflected a moment, querying if it were not really his duty, for Annie's sake, to accept the proposal of these magnanimous men, especially as the case was so urgent, and, as Mr. Fry said, it presented the only possible way by which she could reach the station.

"Yes, Fry," he said finally, and in grateful tones, "I will arrange for Mrs. Arms' removal. But I must withhold from her all knowledge of the matter until the last hour, so that, should the plan fail, she may be spared the shock of disappointment."

"That's just what I was goin' to suggest. Better not give her much time to put difficulties in the way neither."

"We'll make the litter after we reach your house. It can be done while you're gittin' Mrs. Arms ready. Perhaps she'll have an idea how she'd like it fixed. Joe Mathews' wife will stay with your children while you're absent, an' she'll do it splendid. Can you think of anything special you'd like to have done?" asked the projector of the trip.

"Not one thing, my friend," replied Mr. Arms,

deeply moved by his neighbor's kindness, and greatly wondering at the ease and certainty with which the man announced the details of the really difficult undertaking. "I am simply grateful to you beyond expression for this most generous and unexpected aid."

"Oh, it's all right, Arms! Some day you'll serve a fellow-man in great need. And now I'm off to engage some of the men we require. Expect us at seven on the first bright mornin' after to-morrer."

Thereupon the speaker turned Ebony around and trotted away. Having proceeded some two miles in the direction of the station, he reined his horse suddenly to the left, and plunged into the forest along a narrow pathway. Three miles distant, on a small clearing, lived a generous-hearted young farmer, who found the doing a good deed never a hardship.

Mr. Fry knew him well, found him, and told him the story about the "plankin." Soon he was pledged for the journey to Orting. Then, retracing his course, Ebony's master sought the owners of two other clearings nearer the station, and before he reached home—after midnight—his proportion of the bearers was insured.

At break of day on the second morning a cold, sullen gray sky overarched the entire Puget Sound Valley. As one after another of the covenanted men stepped to his doorway to note the weather indications, it was evident that Mrs. Arms must abide at home for the next twenty-four hours.

Happily, the third morning broke forth radiantly, dimming the late stars in the sky, awaking beasts, birds, and insects on all the wooded foothills, in all the smiling valleys. A half hour before the sun peered above the crest of the Cascades, mounted men from a dozen different points were speeding toward the little log house on the margin of the forest. One of them was the man who had said at Orting:—

"I live fifteen miles from Arms' house, but you may depend on me."

Beside her husband, on a long-bodied young bay animal of fine spirit, rode Sarah Mathews, her cheeks aglow from the effect of the crisp morning air. Sarah was the sister of Mr. Fry, who knew he incurred no risk when he informed Mr. Arms that the wife of Joe Mathews would care for his children during his absence.

The early arrival of several members of the party surprised Mrs. Arms, and brought from her husband a prompt explanation of the plan for convey-

ing her to the station. For a few moments the effect was severe. But, upon learning how complete were the preparations, and realizing the kindness of her neighbors in leaving their duties for her sake, she readily assented to the arrangement.

By nine o'clock a rude but comfortable palanquin, with a bedquilt for a canopy, awaited her service. Ten o'clock witnessed the tearful parting between the mother and her little ones. Then the procession moved off into the cool and fragrant woods. It was surprising with what carefulness, with what evenness of step, those toilers from the farms bore their precious burden.

"Here's a holler, men. Come into it easy." "Look out for that rock, boys." "Stoop a little under that tree." "Bear a little to the left now." "Here we have a hillock, come this way." "Come around that bush," were directions heard repeatedly from the vigilant leader. Had Mrs. Arms been traversing a macadamized highway, her discomfort could hardly have been less.

The novelty of the situation, the aromatic odors exhaled from the cedars, the soft breeze wafted under the canopy, the cheerfulness of the men—among whom were Danes, Germans, Americans—together with the new hope of recovery, inspired by the circumstances, incited in the invalid feelings of new life and energy.

So absorbed in their novel task had been Mrs. Arms' attendants that when Mr. Fry announced, "One o'clock, the hour for luncheon!" none of them realized that eight miles of the distance lay behind them. None were weary or hungry or cared to halt.

Each man's wife had provided for the hour, and the refreshments laid upon the glistening table-cloth sent by Mrs. Fry, were both tempting and abundant. As intended, sufficient remained for an excellent meal for the returning party next day.

At two o'clock the cortège was winding again through the wood, its members chatting cheerily.

"I fear you are growing tired," Mrs. Arms said repeatedly to those near her. "It grieves me to burden you."

"Waste not a particle of sympathy on us, Mrs. Arms," responded the young man first engaged by Mr. Fry. "To a man we enjoy this outing, this release from farm work. Spare us the pain of knowing that you worry."

An hour after the sun had dropped behind the mountains of the Olympic Range, the citizens of

Orting observed the strange party traversing their principal street. Near its farther end lived a friend of Mr. Fry. Toward this home the travelers were silently making their way. Therein the thoughtful leader had engaged hospitable shelter for Mr. and Mrs. Arms. This fact he managed to conceal from the latter until she was welcomed at the door.

Upon learning the cause of this nightfall invasion of their village, a warm supper and comfortable accommodations were provided immediately by the citizens for the men who had done this noble deed.

After their repast the great-hearted men called in a body to bid Mrs. Arms good-by, to wish her "a safe ride to the Sound on that flyin' plankin, the railroad car," to charge her "not to worry about the childern," and to express the hope that she would "return speedily feelin' as well as any livin' woman."

While detained in the city Mr. Arms found time to study the causes of its remarkable prosperity, and its prospects of growth in the future. He was strongly influenced by what he learned, and, despite his boasted preference for farming, he resolved to move his family thither without delay.

Four weeks later his farm was rented, his children were in school in the city, Mrs. Arms was in her own home, gaining strength daily under the skillful care of Dr. Murdock.

To-day Mr. Arms is one of the prominent and wealthy citizens of the place. Mrs. Arms, fully restored to health, is known for her deeds of charity, and will ever hold in grateful remembrance the twelve self-denying men who carried her seventeen miles on their strong shoulders.

CLEAN DAMP AND DIRTY DAMP.

SOME one made the pertinent remark about beds that people are afraid of *clean damp* but not of *dirty damp*. The meaning is that they insist upon having everything from the laundry thoroughly aired before it goes upon the bed, but that after it is in use on the bed, they fail to understand why the dampness and the foul exhalations should be dissipated every morning before the bed is made.

—*Sanitary Inspector.*

THE *Ram's Horn* says, "Make it right to sell whisky, and it cannot be proven that anything else is wrong."

SOFTENING WATER.

BY ROSE B. JACKSON.

It is not every one who knows that water can be softened by boiling it for five or ten minutes. It should be boiled hard enough to produce vigorous agitation. It should then be taken from the stove and allowed to stand for about ten minutes, when the particles of minerals formed by the heat and violent motion will be precipitated, and the water can be poured off clear and soft as spring water—even when the water boiled was full of minerals.

Where soft water can not be had, all water for cooking and drinking should be taken through this process. If desirable to have some of the water cold, it can be put in a refrigerator near ice, but ice should not be put into the water.

After the water has been poured off of the precipitate, it is well to agitate the water by some means, pouring it from a distance will do, thus incorporating air into it. This takes the flat taste, which is objectionable to some, away from the drinking water.

Some persons are very careful to drink soft water, but cook their food with hard water, and to my mind the latter is, if possible, more objectionable, as you get all that mineral precipitate in the food, while in drinking the cold water, the particles are held in such solution that the effect is not so bad. This is only a thought, however, and it may be that the motion of the water as it is carried through the vessels would separate and solidify the particles as badly as boiling does. But be this as it may, mineral water is bad for any purpose, and should be avoided.—*Journal of Hygeio-Therapy.*

SLEEP.

ALL our senses do not slumber simultaneously, but they fall into a happy state of insensibility one after another. The eyelids take the lead and obscure sight; the sense of taste is next to lose its susceptibility; then follow smelling, hearing, and touch, the last named being the lightest sleeper and the most easily aroused. It is curious that, although the sense of smell is one of the first to slumber, it is the last to awake. Hearing, after touch, soonest regains consciousness. Certain muscles and parts of the body begin to sleep before others. Commencing with the feet, the slumberous influence works its way gradually upward to the center of nervous action.—*Selected.*

THE COLD BATH IN ACUTE ARTICULAR RHEUMATISM.

EVERY physician is familiar with the appearance of a rheumatic joint, red, puffed, and glistening. The difficult and tedious task of reducing a rheumatic joint to its natural size and utility is also well known by most practitioners. Speaking from a personal standpoint, and also from experience, the application of ice water when properly employed is one of the most valuable of all methods, in the treatment of a highly inflamed rheumatic joint. To get satisfactory results the joint must be bathed regularly and systematically. In a very recent case in a young man with a very badly swollen knee I ordered it bathed in ice water for five minutes once every hour, to be thoroughly rubbed afterwards, and at the expiration of one week the joint had almost returned to its natural size. The application of ice water is so much more pleasant and agreeable to the patient than liniments, flannels, stupes, etc. Cold water acts as a sedative and anti-phlogistic to local inflammations.—*Charlotte Medical Journal.*

THERE is no philosophy of life but the experience of it; there is no knowledge of God until in some way we come completely into his hands. Sin, and need, and sorrow may drive us there, but only life itself, in all its length and depth and vicissitudes and final emptiness, can fully place us there.

MILK FROM TUBERCULOUS COWS.

IN a recently issued Agricultural Department report, on tuberculosis in cattle, by Theobald Smith, chief of the Animal Pathology Department, it is stated that investigations undertaken by the department show that the milk of tuberculous animals is not so frequently infected as supposed. Milk of animals in the earliest stages of the disease, and with perfect udders, does not contain tubercle bacilli. Only those showing signs of labored breath and emaciation should be gravely suspected, and their milk excluded at once from sale.—*Medical Record.*

DURING the last thirty years there has not been a single Apache Indian outbreak in Arizona which was not the direct result of intoxicating drink.—*Gov. L. S. Hughes, of Arizona.*

IF intemperance should break out among horses and cattle, there would be an extra session of Congress called in less than three weeks to stay the evil. But, pshaw! it's only men(?) that get drunk.—*New Orleans Advocate.*

UNIVERSALIZE vegetarianity as much as Christianity and you will have many more and much better Christians.—*Fr. Louis Parolt, in a letter addressed to Rev. Henry S. Clubb, President of the V. S. A.*

RETREAT NOTES

—We had the pleasure recently of a short visit from Drs. Buckel and Shuey, of Oakland, who remained with us for a few days.

—Mrs. Daily, who has previously been a welcome guest and health seeker at the sanitarium, is enjoying a few days' rest and recuperation with us again.

—During the last few months, the wand drill has been added to our gymnasium exercises, and has been used with much benefit in connection with the marching drill.

—The weather in St. Helena during the past few weeks has been bright and balmy, and our patients have found health and life in the accustomed walks among the hills.

—Among our recent guests we note Mr. G. P. Castle, of Honolulu, who, having come to California this summer to recover his health, is enjoying rest and treatment at the sanitarium.

—We are glad to report that Professor Nash is rapidly gaining the health and strength which he has long sought, and is rejoicing in the prospect of soon being able to return to his work.

—Mrs. Silverstein, of San Francisco, who has several times before made a short stay with us, has returned with her children, and expects to remain here until she has fully recovered her health.

—Miss A. C. May has recently been with us for a few days to pay a visit to her sister, who, we are glad to say, is making satisfactory improvement under the treatment and diet afforded her at the institution.

—Elder G. A. Snyder, who was at the sanitarium a year ago, has just returned, suffering from a fresh attack of some of his old maladies. We trust that he may, as before, soon obtain that precious boon, health.

—Among the guests who have arrived within the last month, we mention the following: Mr. Hermann Meese, of Oakland; Benjamin H. Randall, of Alameda; J. B. Rawdon, of Palo Alto; Miss Wheeler, of Sacramento.

—The weather at the sanitarium has been so summery during the past month, that our guests have been calling loudly for the use of the swimming tank. This is now filling, and will be opened to our friends in a few days.

—We are coming into the season of the year again when the few roses of the winter are supplanted by the many blossoms of the early spring. Our gardens are coming out bright and beautiful this year, and the grounds all about the building are such as to give a healthful, happy surrounding to the entire place.

—Capt. J. J. Brice, of the U. S. Navy, has been greatly benefited by his recent stay at the sanitarium. The captain has been in the service of the navy since before the war, and has recently returned from a trip to Alaska. He has received so much relief in his short visit here that he expects to return for further treatment.

—Mr. Milian Engh, of Chicago, has recently come to California for his health, and finds no better place to recover the same than on the hillside. His transportation from a blizzard which was prevailing in Chicago at the time he left, into our sunny clime, he said seemed to him like a dream. He has improved very rapidly.

—Mrs. A. J. Joslin, of Petaluma, who was mentioned as a patient at the sanitarium last month, has returned to her home fully recovered from the serious trouble from which she was suffering. Before her leave, her husband spent a few days at the sanitarium, and was greatly benefited by a short rest, and a few of our invigorating and toning treatments.

—Ottie Van Dorn, who has in the past served most acceptably in various departments of the institution, and more recently as clerk in the business office, has just returned from a somewhat protracted vacation. He has visited his home in Spokane, Wash., and returned well rested for his summer's work. All the sanitarium family extend to him a hearty welcome.

—Our large family of helpers, together with some of the guests, are enjoying regular socials every few weeks, which are an interesting feature of our home life. In these we aim to develop lines of musical and literary work, which will have a helpful and educative influence upon all who attend. Our last social gave the helpers especially a very pleasant recreation and rest from the continued duties which are placed upon them, owing to the large number of patients now with us.

—Mr. Wood, who has been with us for a long time, is rendering valuable assistance in the laboratory, which work was previously conducted by Dr. Heald. We have much better facilities for the analysis of the stomach fluids and other secretions of the body than we have had before. The examination of sputum and the microscopical work with the blood are being developed, so that our facilities for making careful and scientific diagnosis of the exact conditions of the body, are being built up.

—All our family are appreciating the increased efforts that are being made to furnish the tables in the dining-room with the best varieties of food, most thoroughly prepared. We have recently made divisions in the tables, giving certain tables the special advantages of certain lines of diet. Flesh meats are not used upon the special diet tables, but extra pains have been taken to give such a variety of food that there seems to be no loss but rather a gain. The food at these tables is especially appetizing, and is enjoyed by those whose condition is such that this kind of diet is best for them.

THERE seems to be some misunderstanding on the part of the public in regard to the prices of books published by the Wood-Allen Publishing Company, of Ann Arbor, Michigan. We quote below the prices of those we have noticed in our JOURNAL, for the benefit of our readers:

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A MONTH or two since a notice was given in our columns of the little work entitled the "Care of the Baby," published by W. B. Saunders, of Philadelphia. The price was stated as being \$1.00. We desire to correct this statement, as we have been more recently informed that the price is \$1.50. The information this little book contains is well worth its price to every mother.

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David praiseth God.

19 To deliver their soul from death,
and ^bto keep them alive in famine.
20 ^aOur soul waiteth for the LORD:
he ^cis our help and our shield.
21 For our ^fheart shall rejoice in
him, because we have trusted in his
holy name.
22 Let thy mercy, O LORD, be upon
us, according as we hope in thee.

PSALM 34.

PSALMS.

He prayeth for safety.

^a Prov. 24.16.	19 ^a Many are the afflictions of the
^b Ps. 37.19.	^c but the LORD delivereth
^c ver. 6.17.	him out of them all.
^d Ps. 130.6.	20 He keepeth all his bones: ^e not
^e John 12.36.	one of them is broken.
^f Zech. 10.7.	21 ^f Evil shall slay the wicked: and
^g John 16.22.	they that hate the righteous ^g shall be
^h Ps. 94.23.	desolate.
ⁱ or, shall	22 The LORD ⁱ redeemeth the soul of
^j be guilty.	his servants: and none of them that
^k 1 Kin. 1.23.	trust in him shall be desolate.
^l Ps. 71.21.	
^m or, Achish,	
ⁿ 1 Sam. 21.	
^o 12.	

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