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THE HYGIENIC SIGNIFICANCE OF THE DECALOGUE.

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THE man who desires to live to the full measure of human life must be prepared to yield obedience to every principle relating to the healthy development and activity of body, mind, and soul.

God says, "The soul that sinneth, it shall die." We may read this fiat in the book of nature as well as in Holy Writ. Death comes by transgression, and only because of it. We can hold disease and death at bay only by righteous lives, in all that pertains to man's physical, mental, and moral welfare. With this thought in mind, let us briefly survey that so-called decalogue, or ten commandments, inscribed on tables of stone by Jehovah, and given through Moses to Israel, and thus to the world. First of all, let us notice that the ten commandments did not originate in Mount Sinai; that they are not simply formal enactments, but great principles which are the natural outgrowth of man's relation to God, his fellow man, and himself.

One of the universal characteristics of divine things is their infinite depth. When one turns a telescope toward the skies, he is gazing into an infinite space. There is no end, no farther side. When he looks through a microscope, peering into a world of atoms, he finds likewise a cosmos of things infinitely inexhaustible. So with the great decalogue; the fundamental principles of which it is composed are infinitely broad and deep in their application.

Studied with this thought in mind, we find that the so-called moral law is a physical law as well, and that it contains all that pertains to man's well-being, physical, mental, and moral. It may not properly be designated "the moral law," except with the understanding that whatever pertains to man's well-being is moral. This body is a sacred thing, a temple in which burn the sacred fires of infinite power and infinite intelligence, a temple toward which we may properly assume the attitude of worship; it is a dwelling-place, an incarnation, a structure not built with hands, more precious, more noble, more marvelous, than any ever wrought by human skill. From this viewpoint let us now briefly consider the ten commandments: —

1. "Thou shalt have no other gods before me."

God made man to be his representative. As such, he made him master of all created things, of all the beasts and birds of the forest; of the flowers, the rocks, the rivers; of himself. God placed himself at man's command; in Isa. 43: 24 we find the complaint, "Thou hast made me to serve with thy sins." God serves in man that man may be godlike. God is pure, perfect, beautiful. Man made in his image to be godlike must

likewise be pure, free from disease, perfect in symmetry and strength, free from deformity, beautiful. True beauty is simply an expression of inward health, moral and physical. It is secured by recognizing the great Possessor of these attributes — God that dwells in man, and is ready to co-operate with him in every effort to attain to all that is noblest and truest and best. Man can achieve these attributes only in health. For man to make a lower and false standard for himself would be to place another god before the God that made him and dwells in him.

II. "Thou shalt not make unto thee any graven image, or any likeness of anything that is in heaven above, or that is in the earth beneath, or that is in the water under the earth: thou shalt not bow down thyself to them, nor serve them: for I the Lord thy God am a jealous God, visiting the iniquity of the fathers upon the children unto the third and fourth generation of them that hate me; and showing mercy unto thousands of them that love me, and keep my commandments."

Idol worship, first of all, degrades man. When the idol worshiper manufactures a god according to his own conception, he makes, not a representation of a perfect man, but a caricature, or a hideous combination of man and beast. The idol of the idolater represents his conception of the power to whom he owes allegiance, the god whom he recognizes as his ruler. God made man the image of himself. He says to man, "You are yourself, in the form in which I made you, the most perfect image of God which can be made; for you are the production of a divine workmanship. You can make nothing so perfect as yourself, hence, anything you make must be a counterfeit, a false representation; and for you to make such an image is to surrender your noble possession as the image of God, his representative, his witness on earth, and to place yourself in the attitude of inferiority to the counterfeit, to acknowledge yourself, with all your noble qualities and God-given attributes, inferior to the horrible caricature of your own construction." For man to make an image and bow down to it, is to debase himself physically, mentally, and morally, to surrender his privilege of seeking perfection of mind and body, to forget that God dwells in him, that he is the house and God the tenant, that he is, if in harmony with God the King, an ambassador; and that he should acknowledge no other master, but should stand in godlike independence superior to everything that drags him down.

Idol worship has always been accompanied by impurity and body-destroying practises, because it turns man's attention away from the fact that he is himself a temple of God and the image of God, and that to his own body should be rendered the respect and homage which in idolatry he gives to a stock or a stone. The man is asked also to consider that to forget to recognize God in himself and the obligation to preserve intact the temple which he is, is not only to suffer himself, but to bring suffering, degeneracy, and decay upon his posterity. His attention is called to the operations of the great law of heredity, which we see illustrated all about us, not only in individuals, but in nature; and we learn from this commandment that this law is not a mere fatuitous production of nature, but is God himself at work, not in cruelty, but in love, showing by this great object-lesson, this graphic portrayal, the consequences of sin. The way to happiness, physical as well as moral, is found only in the divine order. If the father eats sour grapes, the children's teeth are set on edge, not to satisfy divine vengeance, but in order that sour grapes may be recognized as sour and undesirable, no matter how tempting they may be in

AT THE FOOT OF YELLOW MOUNTAIN, NORTH CAROLINA.

appearance; and that man may be won by lessons of experience back to allegiance to his Maker. God does not say to man, "Be my servant, and I will treat you well;" but he says to man, "I have created you to be my temple. I am always with you and in you; and in every act of your life, whether good or bad, I serve. I am the only source of power or energy. If you sin against yourself or against another, I serve. All I ask in return for this service which I render you is that you walk in those ways which make your own peace and happiness; that you do those things which will preserve the temple in which I dwell, and will supply the most favorable conditions for the exercise of those divine faculties with which I have endowed you."

III. "Thou shalt not take the name of the Lord thy God in vain; for the Lord will not hold him guiltless that taketh his name in vain."

This commandment, like the preceding, teaches simply respect, regard, and recognition of God; translated into other terms it means that man shall recognize in himself the image of his Maker, and in his body the dwelling-place of the true God. In no way can man so definitely and positively show disrespect to God as in the abuse of his image, in the maltreatment of his own body. God has given man his own name. He has made him a son and an heir. He asks that he respect this name by preserving intact, through implicit obedience to all those principles which govern its healthful action and development, the beautiful representation of it which God has given him in his body. Profanity means more than simply a verbal use of the name of God. A far less venial profanity is that which desecrates the body, causing God himself to serve in that which injures, degrades, debases, the temple which he has made. Are there not those who would be horrified at the thought of uttering an oath, but who, at the dinner-table and in scores of other ways in their daily conduct, are guilty of profanity of the deepest dye, without recognizing the nature or even the fact of their sin? How sharply this principle strikes home to those who treat the body as a mere harp of pleasure upon which they conceive that they may play at will so long as pleasurable sensations can be induced, not recognizing that man's mission in this world is not to be simply a creature of senses, living on a level with the animal kingdom, but to be a witness for God in the exercise of the higher faculties with which infinite intelligence has endowed him, and which he can only do by conforming to all those laws, physical, mental, and moral, which God has established in his constitution.

IV. "Remember the Sabbath day, to keep it holy. Six days shalt thou labor, and do all thy work: but the seventh day is the Sabbath of the Lord thy God: in it thou shalt not do any work, thou, nor thy son, nor thy daughter, thy manservant, nor thy maidservant, nor thy cattle, nor thy stranger that is within thy gates: for in six days the Lord made heaven and earth, the sea, and all that in them is, and rested the seventh day: wherefore the Lord blessed the Sabbath day, and hallowed it."

Here again we have presented man's obligation to God. Man needs rest; he requires one day in seven in which to recuperate his physical energies and allow his nerve cells to gather a full store of force-containing material; to allow his store of oxygen to be replenished, and his body to recreate itself. But most of all, man needs the opportunity one day in seven to consider whence he came, and what he is, and his real mission in the world, in order that he may be persuaded so to shape his conduct as to accomplish the aim and purpose for which he was

made; and in so doing find in the healthful exercise of his functions and faculties that highest enjoyment which comes from perfect harmony with God.

V. "Honor thy father and thy mother; that thy days may be long upon the land which the Lord thy God giveth thee."

This command certainly has in it more than moral significance, in the ordinary sense of the word "moral," for we see every day how many men live long in apparent prosperity who have treated their parents with the greatest disrespect. The writer has in mind a wealthy man well along in years who has allowed both his parents to become inmates of a poorhouse. This man shows his parents no honor. On the other hand, does not the man who wastes his energy and destroys his body, thereby bringing himself to a premature grave, by alcoholic intemperance, for instance, dishonor his parents to a greater extent and in a more positive and absolute manner than he could in any other way? His parents gave to him a strength of mind and body which it was his duty to preserve intact, and to improve upon, and in turn to pass down the line of heredity so that the life given to him might be perpetuated. Modern study shows us that the father and the mother live in the child, that matter is passed over from the parents, not an abstract something, but an actual physical transfer, by which is secured in the perpetuation of the race an immortality, not only for the race, but for each individual who forms a part of a genealogical line. The man who by abuse of the temple of God so destroys it that the hereditary line is broken, is not only a suicide, but in a certain sense a homicide as well. In destroying himself he has likewise destroyed the many lives represented in him, and has brought dishonor and disgrace not only upon his parents, but upon all his ancestors. On the other hand, the man who honors the temple of God by living in harmony with him, and recognizes in a normal way all his relations in life, will, in the splendid manhood which he develops and the godlike life which he leads, bring credit and honor upon his parents, and a long and happy life to himself.

VI. "Thou shalt not kill."

The full significance of this command is rarely appreciated. To kill means to destroy life. The evident reason why man has no right to take life is that he did not give it, and has no power to restore it. For man to raise his hand against life, is to raise it against God; for is not God the fountain of life?

Every manifestation of life is God at work. The command does not say, "Thou shalt not kill thy neighbor or friend," but simply and broadly, "Thou shalt not kill." By what sort of sophistical reasoning is it possible for this commandment to excuse any one for taking life under any circumstances? Has one a greater right to slay his enemy than his friend? Can a fundamental principle of conduct be set aside for any selfish consideration? Has man the right to kill himself? — Certainly not; for man is not his own. He is an organized body which the Scripture calls a temple, in which the divine Ruler of the universe is manifesting himself. He has been made for a purpose, and has obligations and duties in the world which demand his life and energy. He has a mission which no one else can perform. For a man to destroy his own life is murder as truly as for him to destroy the life of another.

Can the reader persuade himself to believe that the commandment "Thou shalt not kill" means simply "Thou shalt not kill suddenly," as by a pistol, a knife, a rope, or any other violent measure? Recently the writer read in the Paris newspapers the statement that ten persons had on the day before committed suicide in

that city. These persons destroyed their lives by shutting themselves up in a room in which several small charcoal stoves were burning. They were drowned by carbon dioxide gas just as truly as if they had thrown themselves into the Seine and drowned in the water. Suppose these same individuals had so managed the process that death would have occurred at the end of one week instead of a few hours. Would it not have been just the same? Suppose a person takes into his body systematically a poison which he knows will surely shorten his life. Does he not commit suicide as surely as if he ended his existence by a bullet? May he not be even more culpable, since the man who violently ends his life generally does so in a moment of despair, when life seems not worth the living, or when his hand is stimulated by a frenzied brain? But the man who deliberately administers poison to himself, thus ending his life in a month or six years, meanwhile has ample time for consideration and reflection, hence is in a sense far more responsible for his conduct than the man usually called a suicide. Death administered by a slow poison is as certainly death as that which comes from a severed jugular vein or a bullet-pierced brain. Purposely produced, premeditated, anticipated death is murder, and is an infraction of the sixth commandment. What shall be said, then, of the thousands of men who are taking their lives by nicotine poisoning, knowing well that each cigar smoked drives a nail in their coffin, so to speak, but who excuse themselves by the false assertion that a man has the right to do what he pleases with his own body, that if he chooses to shorten his life he has the privilege? The majority of men who use tobacco confess that they know it will shorten their lives, but continue smoking nevertheless. So do women act with reference to tea, coffee, and unhealthful dress. In the same way men and women argue in relation to stimulating food, late suppers, and all sorts of fashionable dissipation. So do business men excuse themselves for the counting-house slavery to which they subject their clerks, their stenographers, and themselves, while it is plain to be seen that their bodies are becoming the prey to dyspepsia, consumption, and a host of ills which must inevitably shorten life. "Thou shalt not kill" means in essence, translated into practical phraseology, "Thou shalt do everything possible to hold death at bay. Thou shalt live in harmony with every known law of health. Thou shalt cultivate health for thyself, and neglect nothing which will promote the health of others."

VII. "Thou shalt not commit adultery."

The law of chastity is one of the most positive and invincible of all the laws of health. Impurity in any form whatever brings a certain penalty of physical degeneration and disease. Absolute continence is consistent with the highest health. The exercise of the sexual function involves personal sacrifice for the benefit of the race. The law of purity in the broadest sense has a vastly wider application than has entered into the comprehension of the average man. The fundamental principle upon which this commandment is based, demands purity of thought as well as abstinence from overt acts of impurity. It demands the exercise of the sexual functions only in harmony with the divine purpose for which they were instituted. The violations of the law of purity are visited by more severe and terrible punishments than those which follow the infraction of any other law.

VIII. "Thou shalt not steal."

The writer has encountered in the course of his career a large number of men of the criminal class, and never yet saw one whose face bore evidence of good health. The men who come before the judge for

trial for theft or other crimes are not rosy-cheeked, bright-eyed, healthy-looking men. They all show that their business is not a healthy one. Crime and disease are always associated. A criminal is so because he is diseased. His unbalanced mental state leads to perversion of conduct and judgment, which makes him criminal. If he is not a diseased or degenerate man when he begins a life of crime, he certainly becomes so before many years have elapsed. Physical health and moral health go together. Men are not sick without disobedience. Many deaths and many cases of sickness are charged to Providence, but the charge is false. A life which is righteous in the fullest sense of the word, is the healthiest one.

There are thefts of which the laws upon our statute books do not take cognizance, but which must be recognized in this law of laws. The man who destroys his health and shortens his life, thereby crippling his usefulness, robbing his family, his fellow men, the world, and God of the service for which he was prepared and was under obligations to render to them, is as truly a thief and a robber as if he had jumped a claim, broken a bank by speculation, pillaged a widow's garden, or embezzled the city's funds. He has taken what does not belong to him; namely, the service which he owed to others. He is in some respects a worse criminal than the common thief, for he has stolen that which he can not replace, which can not be replaced. He has committed a crime for which he must answer before the bar of heaven as surely as must the pickpocket or the highway robber for his crime.

IX. "Thou shalt not bear false witness against thy neighbor."

The hygienic application of the principles of this commandment may seem a little far-fetched. It may, nevertheless, be contended that talebearing and similar unneighborly conduct tends clearly to bring about a condition of mental unrest, worry, and annoyance, certain to engender disorders of the body which are likely to manifest themselves in chronic dyspepsia, insomnia, neurasthenia, and other hydra-headed maladies. The neighborhood hussy is always a miserable dyspeptic. The virago is always a neurotic. The man who lives at peace with his neighbor has ten times the chance for health that the man has whose hand is against every man, and who knows that every man's hand is against him.

"Ye are my witnesses," saith the Lord; and the same God saith, "Thou shalt not bear false witness."

The man who bears false witness against God is certainly violating the principle of this commandment, for his obligations to God are even greater than his obligations to his neighbor. The man who tells an untruth against God is certainly as great a liar as the man who swears falsely against his neighbor. How is man a witness for God? — God made man in his own image, in his likeness, possessed of godlike attributes, a symmetrical healthy body, an active well-balanced mind, with simple tastes, natural instincts, and opportunities for the endless development and unfolding of his powers. A man deformed and decrepit by his own neglect and abuse, made hideous to look upon by the disease which he has brought upon himself, a human being rolling in the dust, living a life of sensualism, making himself abhorrent by sinning against himself and against society, such a man or such a woman is bearing false witness against God. This deformed, repulsive object is not God's image; these perverted tastes and soul- and body-destroying appetites were never planted by God in his image. Such a life is a lie against God, a slander, an infamous calumny upon the character

of the Almighty. We are all bearing witness of some sort. Either it is a true testimony of our divine origin, of the divine indwelling, and a promise of a divinely triumphant destiny; or if not, then we are not speaking the truth of God and for God.

X. "Thou shalt not covet thy neighbor's house, thou shalt not covet thy neighbor's wife, nor his manservant, nor his maidservant, nor his ox, nor his ass, nor anything that is thy neighbor's."

Covetousness, or stinginess, is a vice that dries up the body as well as the soul. Who ever saw a miser who was not shriveled and scrawny and pinched? The haggard face, the long bony fingers, the sunken eyes, flaming with the unnatural light of disease,—these are the miser's earmarks as plainly as are the ruddy nose and the bleared eyes the signs of chronic inebriety. "The liberal soul shall be made fat." Prov. 11 : 25. Isaiah presents a wonderful picture of the happy relation of generosity to health. He says, "Is it not to deal thy bread to the hungry, and that thou bring the poor that are cast out to thy house? when thou seest the naked, that thou cover him; and that thou hide not thyself from thine own flesh? Then shall thy light break forth as the morning, and thine health shall spring forth speedily. . . . If thou draw out thy soul to the hungry, and satisfy the afflicted soul; then shall thy light rise in obscurity, and thy darkness be as the noonday: and the Lord shall guide thee continually, and satisfy thy soul in drought, and make fat thy bones." The covetous man dies of his covetousness as surely as the victim of a cancer dies of the malady which consumes his vitals. Covetousness dries up the springs of life, and works its own destruction.

The psalmist, considering this great law, most happily exclaims, "Thy commandment is exceeding broad." When grasped in their full significance and studied in the light of the physiological and hygienic facts which the science of the present day sets before us, we may find in the ten commandments an unerring guide, not merely during a brief life upon the earth, but to a future which might find a century or more of happy and healthy earthly experience simply an introduction to a life infinitely extended under conditions more favorable for the development of that perfection in character and conduct for which the decalogue affords the one only perfect standard the world has ever known.

THERE shall never be one lost good! What was, shall live as before;
All we have willed or hoped or dreamed of good, shall exist;
Not its semblance, but itself; no beauty, nor good, nor power,
Whose voice has gone forth, but each survives for the melodist,
When eternity affirms the conceptions of an hour.
The high that proved too high, the heroic for earth too hard,
The passion that left the ground to lose itself in the sky,
Are music sent up to God by the lover and the bard;
Enough that He heard it once; we shall hear it by and by.

— *Browning.*

AMONG THE MOUNTAINEERS OF THE SOUTH.

BY ALICE MAC GOWAN.

THE mountaineers, and the poor whites generally, of the South, have for the last twelve or fifteen years furnished a great deal of "literary material;" but much as has been written about them, accurate and inaccurate, nothing, so far as I know, has yet been put forth with regard to their domestic hygiene, or perhaps I should more properly say their lack of domestic hygiene.

The peasantry of most countries have evolved some crude health theories of their own. We owe the modern Russian bath to the Russian peasant. Even the North American Indians had savage but thoroughly effective methods of training and developing their athletes; and many tribes made use, in connection with their religious ceremonies, of an earth-and-sod "sweat-house" beside some stream, following a prolonged sweat in this steaming oven by a plunge and swim, which performance constituted a thorough and heroic treatment of near kin to the Russian bath. The old-time negro aunties and mammies make, in the main, good, if somewhat superstitious, sick nurses; but I believe the mountaineer is rather conspicuously lacking in care or thought for his physical well-being. He has neither knowledge of, nor interest in, those things which foster and develop it, nor inclination to turn aside a single step to avoid those which injure and destroy it.

In the first place it is very difficult for an outsider really to come to know anything of the home life of these mountaineers. They are as exclusive as aristocrats; indeed, in their own fashion they are aristocrats. They do not freely unfold themselves and the details and singularities of their daily lives to the casual hotel visitor in the neighborhood, who comes to look at and classify them. Consequently, the observations made from hotel verandas, or from the visits of curiosity paid to the mountain cabin, and afterward recorded in magazine articles and stories, are usually worthless as real studies.

I have always spent more or less of my summers in the mountains of the South, and felt myself pretty well acquainted with Southern mountaineers; but when, several years ago, I desired to write a series of sketches about them, it was planned that I make a horseback trip (no other mode of locomotion was practicable over the route proposed, a continual crossing of mountain ranges, where there were neither rail- nor wagon-roads) through the wildest mountain region of North Carolina and East Tennessee. I realized that this would give me knowledge and understanding of these people, obtainable in no other way; for the mountaineer, hospitable as the Arab, will welcome courteously and entertain freely, out of his poverty, any guest or traveler who really stands in need of his hospitality, but to the casual curiosity seeker he is taciturn, evasive, and slippery to the last degree. It certainly speaks volumes for the chivalry of these people that such a trip as proposed should have been considered, by those competent to advise, a safe one for me; and that I actually did make it, riding in all something more than a thousand miles through this "Land of the Sky," stopping at little mountain cabins, many miles from any possibility of communication with the world as we know it, meeting individuals of the mountaineer species, often far from human habitation, and never receiving an uncourteous word. More, I was a young woman and alone, and these facts,

which would have told against me in a more enlightened and sophisticated civilization, were my warrant here; so that everywhere I was taken in and made one of them. I was given their poor best. So poor, indeed, this often was, that I thought my health must surely suffer from the diet, but it did not. I gained — very slightly, yet appreciably — in weight, and tremendously in strength and spirits throughout the entire journey; and this it is which causes me — recalling vividly as I do my alternations between semistarvation and the enforced consumption of most wretched food — to look rather narrowly into the health situation of my *quondam* friends and entertainers.

On Little Rock Creek, North Carolina.

To begin with the diet: At first inspection it certainly appears to be as bad as it well could be. Meat is a staple. In the late fall and winter we find game in most cabins, but in the summer it is pork — salt pork — and salt pork three times a day. Right here it is suggested to my mind that the hog upon which the mountaineer feeds must surely be a less objectionable and injurious article of food than his brother of the fat valleys and the rich communities. He is the mountain hog, the razorback of the funny man and the paragrapher, from off whose serried bristles so many sneers, sarcasms, and profitable gibes have fallen harmless. He rarely sojourns in a sty, and is never fat. He infests the clean, leaf-carpeted mountain woods, gets exercise enough to keep his form down to a frugal and wholesome slenderness, and lives largely upon nuts, roots, and mast. Of course he is a hog, and therefore an unclean beast; but I should imagine him to be a considerable improvement — from a hygienic viewpoint — on his lowland kin.

To return to the mountaineer's table. Hot breads are used altogether, soda biscuit and corn pone being the usual forms. Coffee, when obtainable, is drunk by the entire family, from the year-old baby up; and the main vegetables — green beans and turnips, which latter I never heard called otherwise than "sallet" — are uniformly cooked with so much fat pork as seriously to diminish their value.

You do not wonder now that the mountaineer looks cadaverous and illy nourished. That he does not look worse, and is really strong, must be partly owing to the fact that his rather dense biscuit are generally made, not from the fine, white flour of ordinary commerce, but from coarse, dark flour, almost equal to whole

wheat, which is ground for him at the little mountain mills, of which I passed such numbers, perched on every roaring mountain stream. Then, too, unleavened corn pone, made from coarse, sweet, water-ground meal, the meal of southern corn, containing less carbon in proportion than northern corn, and more of nitrogen and phosphorous than the yellow corn of the North, is eaten three times a day.

This bread, made of nothing but meal, water, and salt, is baked very hard, — at least as to the outside, — and is a fair health food, certainly very much better than ordinary white flour yeast bread.

The pork is indefensible; it can do no good, and undoubtedly does much harm. The weakness of the coffee, like that of some natures, is its only excuse. The drinkers of it get very little coffee, a good deal of boiled water, and, as molasses is used instead of sugar, and milk very seldom added, there is little else in it that is harmful. This absence of sweets is one of the good points in the mountaineer's dietary. A little brown sugar is bought by those pretty well-to-do, and possibly some white, but sweet dishes are not made. Those among the better class nearly always keep bees, and their children are given no more injurious sweets, as a rule, than some honey or molasses on their bread.

Sweet milk is rarely used in any form, and the buttermilk, usually kept in a spring-house, where the running water and freely admitted air make conditions at least superior to the ordinary refrigerator, is perhaps an improvement.

In the matter of stimulants the mountaineer is a great offender. Men, women, and children all chew tobacco. Each tiny cabin has its "patch" of the broad-leaved, stately plants, and the product is gathered and rudely cured for home use. I have seen little fellows of five, six, and seven years hanging to their mothers' skirts, begging for "a chaw," just as other children ask for fruit or sweets. There are also variations of this habit. Almost every woman, from the age of ten or twelve, "dips" snuff, and the majority of the old women smoke a pipe.

Then comes the use of alcohol. Corn whisky and apple brandy, locally and affectionately known as applejack, are both freely made in the mountain stills, and are comparatively cheap. The men, more extensively than the women, indulge in these drinks, and of course it is only the former who make a practise of getting dangerously drunk whenever a good opportunity offers; but the whole community uses enough to impair health.

I believe that their universal mental stolidity is the explanation of their ability to consume such quantities of alcohol and tobacco without much more serious re-

sults. What would destroy a man of active brain and sensitive, high-strung emotional nature, seems to have only a remote and eventually injurious influence upon them.

As to personal cleanliness, they know nothing of it in the sense in which modern hygienists teach it. Many old people, women, I believe,— the men are a little better off, for they do sometimes go swimming,— boast that they were never wet all over in their lives. Any of them will tell you that it is highly injurious to bathe growing children and to change their clothes too often; that it is "powerful weakenin' on chil'en." They are especially bitter against the "mad" practise of bathing sick persons. Their houses, while often wearing a specious air of tidiness, are seldom kept actually clean.

Another thing which must impress the outsider is the utter lack of cheer in the lives of these people. They are a grim, joyless, unsmiling set, and, like the mountains they inhabit, silent, somber, aloof. Now, when the therapeutic value of a cheerful spirit is better understood, this moroseness in itself is seen to be against their more rounded and pleasing physical development. That the unquenchable joyousness, the thorough, invincible optimism of the negro, does much for him physically, no one who has at all studied the race can doubt; and conversely, the sullen, the almost despairing, apathy of the poor whites has its inimical effect upon their physical as well as mental health.

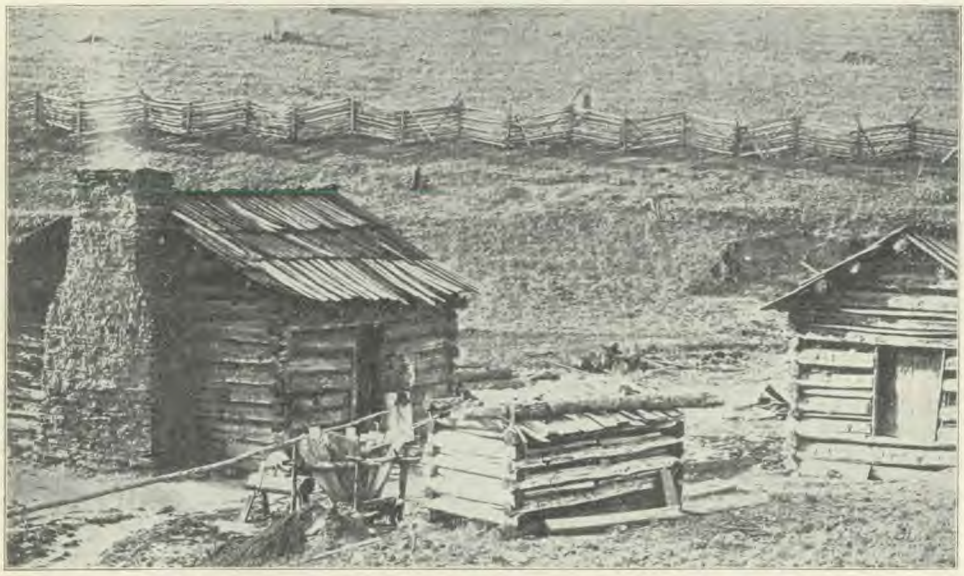
The homes of these people are as primitive and as empty of all modern comfort and convenience as can well be imagined. A physician once told me that in attending a case of serious illness in the family of a mountaineer of rather more than average intelligence, he had occasion to use a spoon for the measuring of some medicine. A general embarrassment was manifested when he asked for the article; and the numerous children were called in from all directions. "We did have a spoon, I know," said the housewife, "but them young 'uns 's been usin' it to dig out in the trash pile with, an' no knowin' where they got it by now."

Ill fed, ill-clad, ill-washed, and ill-housed as these people are, one would expect them to look worse than they do. It is true that the women are old at thirty, and often crones at forty or forty-five; that the men are lank, sallow, shambling fellows, though a large proportion of them are strong and hardy, and not infrequently live to be very old; that a longevity beyond that of the city dweller is the rule, in spite of the vendetta, and the excellent aim of the mountain sportsman.

One reason, and I am disposed to say the most important, of their hardiness is that they never lack pure air. Dwelling always in salubrious spots, they live mostly, even in the depth of winter, in the open. Their tiny cabins are not much more homes to them than a den is home to a wildcat. The washing is always done out of doors, down by some "branch" or stream. Much of the cooking, too, is often done in the open air, the women squatting barefooted on the ground while they make bread or prepare vegetables. All of the cabins of sufficient size to have two rooms — or "pens," as the mountaineer himself is likely to call them — are built with an open space between, roofed and floored, which is called a thrashing-floor. Here the family really lives, in all but the bitterest weather.

According to the rules of health, each person should have his own bed and his own sleeping-room, but these people sleep six and eight in a room; nightclothes are unknown, and their shoes — when shoes are worn — are about the only portion of the day clothing which it is considered really important to remove at

night. But the cabins themselves are open enough in construction to be little more hindrance to the fresh air than the tree their arboreal ancestors inhabited, and the door stands wide open, winter and summer. If you are cold, draw up to the log fire; stoop a bit, look up the short, wide stone chimney, and you can see the blue sky. If you are still chilly, or complain that you are freezing on one side and baking on the other, get your shawl or jacket, for that door will never be shut. I must believe that it is through that always open door that such health as they have comes. It is a tremendous lesson upon pure air and the value of thorough ventilation. If it can do so much for these people who habitually break most of the other rules of health, what could it not do for us who try, according to our light, to live as we should, if we habitually breathed and breathed deep (their mountain climbing assures that) of really pure air?



GOOD-BY!

SWEET is childhood — childhood 's over,
Kiss and part.
Sweet is youth; but youth 's a rover —
So 's my heart.
Sweet is rest; but by all showing
Toil is nigh.
We must go. Alas! the going,
Say "good-by."

— *Jean Ingelow.*

CONSUMPTION AMONG CATTLE.

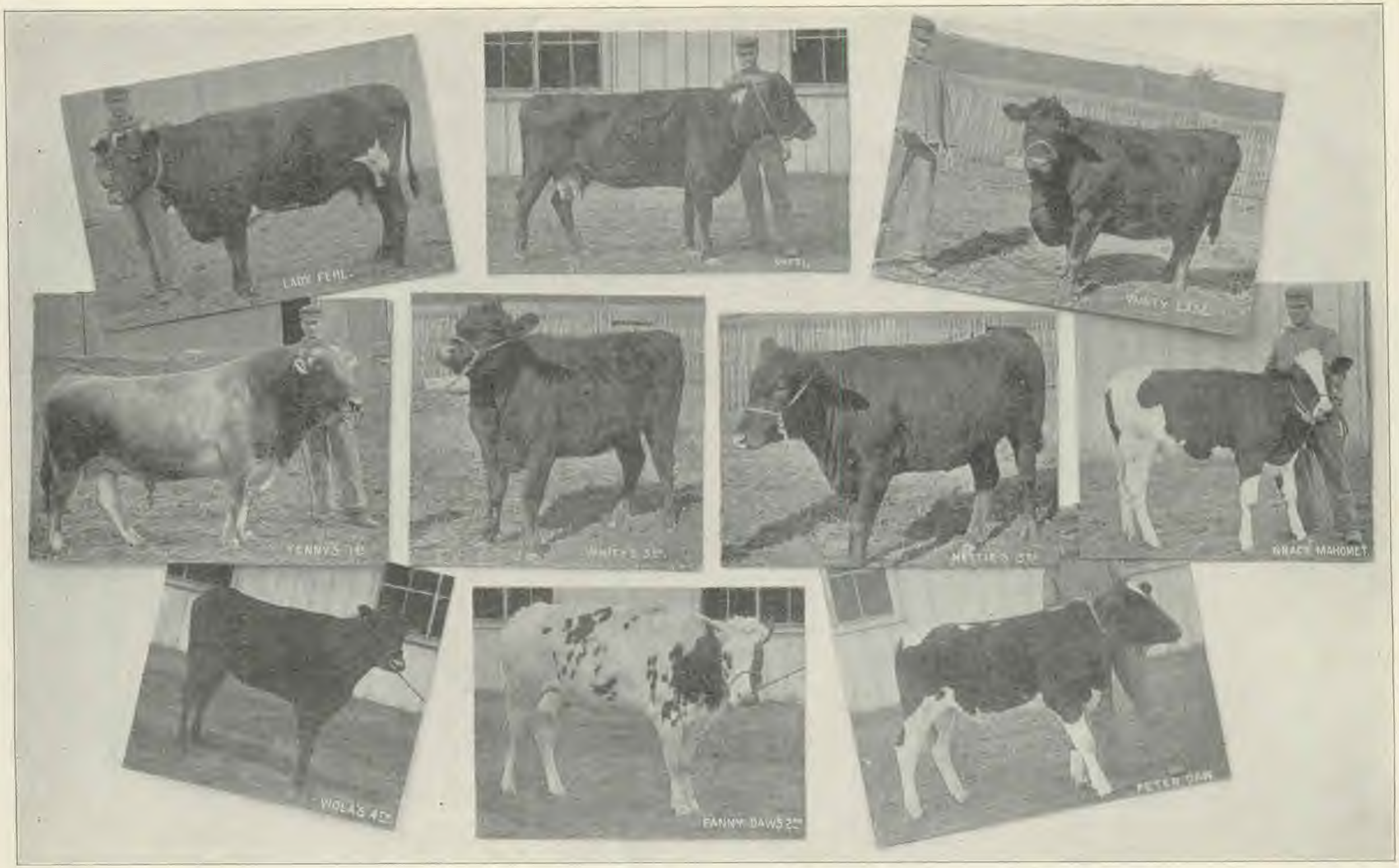
BY CHARLES E. STEWART, M. D.

CONSUMPTION, or tuberculosis, has undoubtedly existed among animals for a considerable length of time, and its presence in the animals which supply food material for man is certainly largely responsible for the rapid increase of a similar disease in man.

The introduction of tuberculin has made it possible to detect the disease in cattle in its earliest stages. This substance, a product of the germ which causes tuberculosis, when injected into an animal suffering from this disease, causes an increase of two or more degrees in the animal's temperature. The reliability of this test has been demonstrated frequently by killing the animal affected, and making a careful post-mortem examination; it is a rare thing to find the disease absent in an animal whose temperature has increased two or more degrees after the introduction of the tuberculin. The results of these post-mortem examinations show that the disease in animals is not confined to the lungs, but often manifests itself in the liver, the lymphatic nodes of the neck, the thorax, the intestines, the spleen, the udder. In fact no part of the system seems to be proof against it. The value of this test is just beginning to be recognized, for wherever it is systematically employed, the extent to which this terrible disease has gained a foothold is readily determined.

It is only within the last few years that attention has been called to the large number of cattle affected with tuberculosis. It is quite a rare occurrence to find a herd of any considerable size in which the disease does not exist. In many cases half of the whole herd is diseased, and in some instances large herds of forty or fifty have more than ninety per cent. of their number thus affected. If only one animal in a herd is diseased, the milk from that whole herd is unsafe to use; for the milk from one tuberculous cow will contaminate the milk of the whole herd if all is mixed together. That the milk of tuberculous animals is unsafe to use, has been abundantly shown in numerous cases where those who had the care of diseased animals contracted the disease from the use of the meat and milk. By inoculating or feeding other animals with milk from tuberculous cows it has been demonstrated that the disease can be transmitted by this means. Animals fed on tuberculous flesh will also contract the disease.

In response to an invitation sent out by the Ohio Agricultural Experiment Station, the writer attended an examination of cattle which were killed after being tested by the tuberculin test. Nearly two years ago a fine herd of one hundred cattle belonging to this station was tested, and forty reacted. In order to prove the value of the test, twenty were killed, and a post-mortem examination held, which confirmed the test in every case. The other cattle which reacted to the test were kept isolated from the healthy ones for the purpose of determining whether or not the prolonged administration of tuberculin had any curative properties, and also to test what effect both sterilized and non-sterilized milk had when fed to perfectly healthy animals. Some of these cattle had received the tuberculin treatment for fifteen months, others for twenty-two months, previously to their being killed. The post-mortem examination of these cattle confirmed the results of the tuberculin test, and showed that the prolonged administration of tuberculin has no curative prop-


LADY FERN.
GRACE MAHOMET.
FANNY DAWS 2nd
PETER DAW

erties. The disease in these animals was, as is usually the case, found in various parts of the body. This is shown by the following report of the findings of the veterinary surgeon who conducted the examinations: —

Lady Fehl. — On autopsy, tubercles were found in the retropharyngeal, mesenteric, bronchial, and post-mediastinal glands (encapsuled in the bronchial glands), in the lower lobe of each lung, and on both pleural surfaces. An abscess was found under the diaphragmatic peritoneum.

Patti. — On autopsy, tubercles were found in the portal and bronchial glands; several tubercles in each lung, and an abscess the size of a hen's egg in the liver.

Vanity Lass. — The autopsy, revealed tubercles in the retropharyngeal, mesenteric, and portal glands, and several abscesses in the liver. One hind quarter of the udder was diseased.

Tenny's 1st. — On autopsy both retropharyngeal glands were found tubercular; the mesenteric glands were hard and congested; the portal glands were indurated, but without caseation or pus, and there was an old encapsuled abscess in the liver.

Vanity's 3d. — The mesenteric glands were enlarged and indurated, but no other abnormal condition was observed.

Nelly's 3d. — Tubercles were found in the retropharyngeal glands.

Grace Mahomet. — The portal glands were found enlarged and indurated, but without caseation or pus. On the small intestines there were found great numbers of small, pea sized, caseated foci, containing green-colored, caseous masses, probably of parasitic origin.

Viola's 4th. — The autopsy revealed no indication of tubercular disease, but the intestines were slightly infested with the nodules found on several of the younger cattle killed in this test.

Fanny Daw's 2d. — On autopsy, the same conditions were found as in the case of Viola's 4th — an entire absence of tubercular deposits, but a few nodules on the intestines.

Peter Daw. — The autopsy showed enlarged and indurated mesenteric glands, with several small nodules in the intestines, filled with greenish, caseous matter, such as were observed in several of the younger animals.

The illustration on the opposite page shows these animals after they reacted to the tuberculin test.

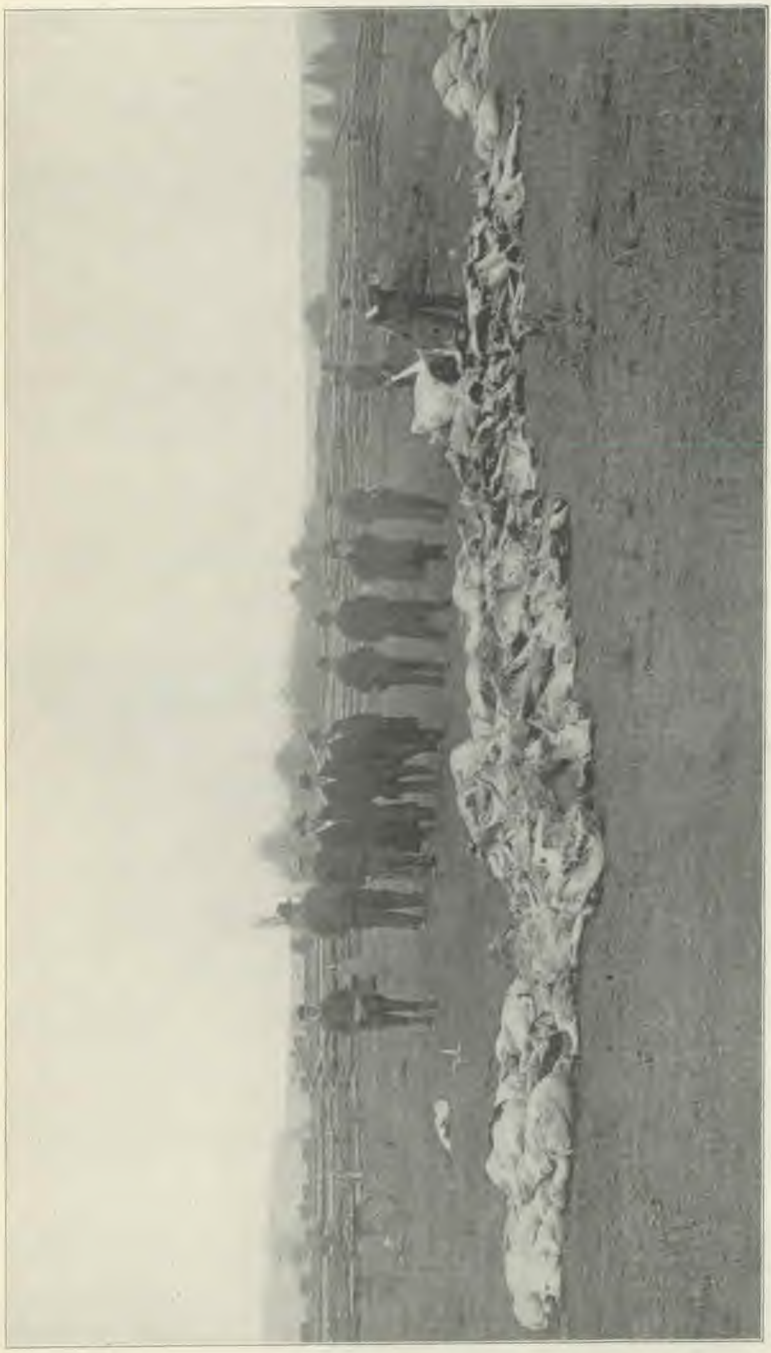
In several of these animals the disease was quite extensive, and large areas of tissue were involved. In some places, such as the liver and the lungs, large abscesses containing as much as a pint of pus were found. The lymphatic nodes of others were greatly enlarged, and filled with a cheese-like material which would sooner or later have broken down and formed pus.

The most interesting and practical part of these investigations was the result obtained by the feeding of four pigs on milk from the tubercular animals. Two of the pigs were fed on the milk just as it came from the cows; the other two were fed on milk said to have been sterilized. A post-mortem examination of these animals showed each to be extensively diseased with tuberculosis. It is not to be wondered at that the ones fed on the untreated milk were diseased, but when all were found to be tubercular, the veterinary surgeons concluded that the milk either had not been thoroughly sterilized or that the animals had contracted the disease from some other source.

The conclusions drawn from these observations as expressed by those in charge were that the tuberculin test is of great value in that it will enable the stock-raiser to detect the disease in its earliest stages, and thus give him a chance at once to fatten the animal and get the meat on the market before it becomes so thoroughly saturated with disease that it is no longer fit for food. Looking at it from a financial standpoint, it is advantageous for the one who owns the infected animals, but very dangerous for the unsuspecting purchaser who eats the meat. If this plan is followed, thousands of animals in the first stages of tuberculosis will be slaughtered, and sold to consumers, who will in many cases contract the disease.

Recently the Queen of England had her herd of forty cows tested, with the result that thirty-six reacted, whereupon Her

Majesty ordered the whole herd slaughtered. A post-mortem examination was conducted by members of the Royal College of Veterinary Surgeons, with the result that all that reacted were found to be tubercular, while the four which did not react were found to be in a healthy condition. This incident, with many others of a similar character in England, has aroused the people of that country, and at present a movement, in which the Prince of Wales is a prime agent, is on foot to make a thorough investigation, and to do everything possible to suppress the disease. A short time ago, one of the veterinarians of Michigan, whose business it is to investigate disease among cattle, told the writer that in a herd of fifty-two cattle which had recently been tested in the eastern part of the State, twenty-eight reacted; a post-mortem examination made in each case proved that the tuberculin test was true. The accompanying illustration shows these animals after being



slaughtered. One thing that must be borne in mind is that the disease can not be detected by the appearance of the animal, for in the majority of cases the animal looks well and shows no outward sign of its condition. The two apparently healthy animals shown below belonged to this herd, and were found to be diseased.

In Michigan it is reported on good authority that sixteen per cent. of all cattle that have been examined are tubercular. A much higher percentage of disease is said to exist farther east. Three years ago the chief veterinarian for the province of Ontario made the statement that twenty-five per cent. of the cattle of the province were consumptive.

Recent investigations of cows supplying milk to Chicago show that these cattle are extensively diseased. Concerning an investigation which was made in the latter part of May, we quote from the Chicago *Tribune* as follows: —

"Twenty-five cows, known to have been milked a week ago for the Chicago market, were slaughtered and dissected by the State board of live-stock commissioners at the abattoir of B. Wolf, Forty-first Street and Union Avenue, yesterday morning, and were found to be infected with tuberculosis. Under the circumstances which led to the condemning and slaughtering of the animals, the commissioners believe they have not only substantiated the efficacy of the tuberculin test, by which the presence of tuberculosis in the bodies of cattle can be ascertained without necessitating post-mortem examinations, but also that they have proved that tuberculosis has a more universal hold on cattle, especially on cows, than is generally realized.

"As a result of the day's demonstration, they declare that the correctness of the assertion that two thirds of the cows that furnish milk to Chicago consumers are victims of tuberculosis is unquestionable, and that prompt steps for checking the further progress of the disease are necessary.

"That milch cows can be in virulent stages of tubercular growth without its being apparent was shown when the twenty-five subjects of the test were driven into the slaughtering stalls. All of the cows appeared to be in fine physical condition. The only ground on which they were suspected as victims of tuberculosis was the fact that their temperatures had risen to a high degree when they were subjected to the tuberculin test. The remainder of the herd of sixty-one, from which the infected animals were taken, had shown no increase of temperature after hypodermic injections of tuberculin, and had been declared sound.

"It was hardly expected that all of the twenty-five cows would be found to be so thoroughly infected with tubercular clusters.

"The first cow dissected had sound, hard muscles, and showed no superficial symptoms of consumption or any kindred disease. Its head was severed from its body, and Dr. Lovejoy began the post-

mortem examination. Through an aperture made with a knife he removed a gland swollen to the size of two fists. This gland contained about a pint of semi-liquid tubercular matter. The substance was of a creamy color, and contained yellow, mushy grains. The substance was declared to be pure tubercular material, the lymphatic fluid having been entirely expelled by it from the gland. The whole carcass was infiltrated with the germs of tuberculosis.

"In the third subject the bulk of the tuberculosis was found in the liver. It was spread over this organ in white deposits which resembled small fungi.

"In the lungs of other carcasses the disease showed itself in the form of incrusted combs. Only in one carcass was it found that the tuberculosis had embedded itself in large nodular, soft deposits in the flesh. In characteristic cases the disease was found to have attacked the glands and lungs, where it met with the least resistance, and there to have shown tenacious vitality.

"In no case was it found that the udder had been infected, although this, it was stated by the examiners, in no wise lessened the danger of a secretion of the tubercle bacilli with the milk.

"The average quantity of tubercular matter found in each cow was about a pint. The total amount removed from the twenty-five cows — about three gallons — if allowed to dry to a dust and be scattered by the atmosphere, could destroy, it was stated, all the cattle in the world.

"The cows which were subjected to test and examination were taken from a dairy that has been sending two carloads of milk to Chicago daily.

"The deductions relative to cows and dairy products reached by Dr. Lovejoy and other veterinarians are as follows: —

"The presence of tuberculosis in cows can not be determined by their physical appearance.

"The fact that about every third cow is infected, and that dairies mix milk, makes nine tenths of the milk that comes into Chicago subject to suspicion.

"Butter and cheese being mediums congenial to the growth of tuberculosis, these products are likely to transmit the bacilli.

"Tuberculosis is making unimpeded progress, and is destined to develop to such an extent that in a few years only a small proportion of cattle will be without it.

"The germs of tuberculosis have greater vitality than any others, and retain a vital state when dried. They propagate in rags and rubbish, as well as when embedded in organic matter.

"The tuberculosis in cattle and the tuberculosis in humans are essentially the same, and the germs readily transplant themselves from one body to another.

"Private citizens should form societies for the education of the unscientific on the subject. Medical societies should disseminate literature on the subject of tuberculosis."

A few days later another test of Illinois cows was made, the result of which we quote from the Detroit *Free Press:*—

"Governor Tanner, at the stock-yards to-day, witnessed the slaughtering of twenty-seven cows in a test conducted by the State board of health and the State board of live-stock commissioners. Twenty-five cows were found to be in an advanced stage of consumption, and the other two had well-developed cases. This herd came from a dairy farm in Sangamon County that supplies the governor's household with milk, and he expressed himself very forcibly on the subject. 'That test demonstrates,' said he, 'the danger that constantly confronts the public, and proves that the live-stock commissioners should be invested with power to examine every herd in the State, whether private or not. Dr. Lovejoy tells me that this herd is the worst that has been met yet. Why, they were simply rotten with disease, which must certainly spread the germs of tuberculosis.'"

That the consumption of animal foods is largely responsible for the enormous death-rate attributed to tuberculosis can not be denied. How can it be otherwise when such large quantities of diseased milk and meat are consumed? In his presidential address, Dr. Joseph M. Matthews stated before the American Medical Temperance Association, which convened at Columbus, Ohio, last June, that "from carefully prepared statistics it is found that of the deaths between the ages of fifteen and sixty years, from all causes, one third are victims of tuberculosis; that this disease kills four and a half as many people as do smallpox, scarlet fever, typhoid fever, and diphtheria combined. It is estimated that at any given time in Germany alone, 1,300,000 persons are affected with tuberculosis, and Dr. Osler says that 1,200,000 in America have the disease at all times. Every fifth person has the disease. More than thirteen thousand die of tuberculosis in the State of New York every year. In every American city the proportion of deaths is equally as great."

There never has been a time when the public has had brought before it in so realistic a manner as at present the facts relating to this malady. Newspapers and medical journals are heralding far and wide the news that this dread destroyer is at work in our midst. This is what should be done, but unless each and every individual decides to do all in his power to protect himself and others from becoming infected, the results will be meager.

This disease is one which can be stamped out by proper methods of living and proper hygienic conditions. Pure food, plenty of fresh air, and exercise are antagonistic to all disease-producing germs. Then let us make it our chief object to keep our bodies in such a condition of health that even though we are surrounded on all sides by these messengers of death, they can have no effect upon us.

THE EFFECT OF ALCOHOL UPON THE FUNCTIONS AND STRUCTURES OF THE STOMACH.

BY W. H. RILEY, M. D.,

Superintendent of the Colorado Sanitarium, Boulder, Colo.

(Continued.)

IN a valuable paper on the influence of alcohol on the chemical processes of digestion, Professors Chittenden and Mendel have reported a large number of experiments with reference to determining the effect of alcohol upon artificial digestion. We can not go into detail with reference to this lengthy report. We may say that with very few exceptions all solutions containing two per cent. and more of alcohol retarded digestion in a very marked degree. The stronger solutions, of course, were more marked in their effect. In a few instances the digestive processes seemed to be increased by solutions where one per cent. or less was present, but in more instances it was retarded, so that in all those experiments, even with solutions containing so small an amount as one per cent. of alcohol, the digestive process was in most instances retarded. These experiments of Professors Chittenden and Mendel were made with solutions of alcohol in water, and

with nearly all of the alcoholic liquors, such as whisky, brandy, rum, gin, beer, wines, etc. To illustrate, we report here a few of these experiments: —

EXPERIMENT I.

Proteid, fluid egg-albumin, 10 c.c. (20 c.c. albumin solution contain 1.6398 grams dry albumin); 0.03 grams pepsin; .2 per cent. hydrochloric acid.

Period of digestion, 6 hours and 55 minutes, at 38°–40° C.

Alcohol.	Undigested albumin.	Proteid digested.	Relative proteolytic action.
0 p. c.	0.1850 gr.	88.8 p. c.	100.0
6 "	0.2708 "	83.5 "	94.0
12 "	0.5473 "	66.7 "	76.0
18 "	0.6703 "	59.2 "	66.6

EXPERIMENT III.

Proteid, fluid egg-albumin, 10 c.c. (10 c.c. albumin solution contain 0.8199 gram dry albumin); 0.03 gram pepsin; 0.02 per cent. hydrochloric acid.

Period of digestion, 5 hours and 10 minutes, at 38° –40° C.

Alcohol.	Undigested albumin.	Proteid digested.	Relative proteolytic action.
0 p. c.	trace	100 p. c.	100.0
1 "	0.0100 gr.	98.8 "	98.8
3 "	0.0130 "	98.5 "	98.5
5 "	0.0250 "	97.0 "	97.0
8 "	0.0699 "	91.5 "	91.5
10 "	0.0875 "	89.4 "	89.4

EXPERIMENT VI.

Proteid, blood-fibrin, 2 grams; 0.016 gram pepsin; 0.2 per cent. hydrochloric acid.

Period of digestion, 2 hours and 15 minutes, at 38°–40° C.

Alcohol.	Undigested fibrin.	Proteid digested.	Relative proteolytic action.
0 p. c.	0.3676 gr.	81.7 p. c.	100.0
10 "	0.5970 "	70.2 "	85.9

EXPERIMENT XXVII.

Proteid, blood-fibrin, 15 c.c.; 0.009 gram pepsin; 0.2 per cent. hydrochloric acid (15 c.c. albumin solution contain 1.2219 grams dry albumin).

Period of digestion, 4 hours and 5 minutes, at 38°–40° C.

Whisky.	Undigested albumin.	Proteid digested.	Relative proteolytic action.
0 p. c.	0.5552 gr.	54.6 p. c.	100.0
1 "	0.6239 "	49.0 "	89.7
3 "	0.6573 "	46.2 "	84.6
6 "	0.6883 "	43.7 "	80.0
9 "	0.7459 "	39.0 "	71.4

EXPERIMENT XXXVIII.

Proteid, fluid egg-albumin, 15 c.c. (15 c.c. albumin solution contain 1.3395 grams dry albumin); 0.006 gram pepsin; 0.2 per cent. hydrochloric acid.

Period of digestion, 7 hours, at 38°–40°C.

Brandy.	Undigested albumin.	Proteid digested.	Relative proteolytic action.
0 p. c.	0.3962 gr.	70.5 p. c.	100.0
1 "	0.4379 "	67.4 "	95.6
3 "	0.5012 "	62.8 "	88.0
6 "	0.5218 "	61.1 "	66.6

By noticing these experiments carefully it will be observed that even where so small an amount as one per cent. of alcohol is used, as is reported in Experiment III, the digestive process is retarded to a slight degree, and in Experiment XXVII, one per cent. of whisky retarded the digestive process to a very marked degree. The same is also true with reference to brandy, one per cent. of brandy very noticeably retarding the digestive process.

The results of this lengthy series of experiments of Professors Chittenden and Mendel with reference to the influence of alcoholic solutions and liquors upon the digestive processes prove very conclusively that alcohol does hinder the artificial digestion of albuminous or proteid substances. In fact, the work of a large number of investigators with reference to the effect of alcohol upon artificial diges-

tion is unanimous, and the verdict of all is that alcohol, even in very small quantities, at least two or three per cent., and in many instances one per cent., retards the digestion of albuminous food.

With reference to the second line of investigation; namely, where experiments have been conducted on the lower animals, usually the dog, these results are in perfect harmony with those in which the digestion has been carried on artificially, and the concensus of opinion is that alcoholic liquors retard the digestion of food in the stomach of the lower animals; as, for instance, in the stomach of the dog, and that the more alcohol there is present in the stomach of the animal during digestion, the greater is the retardation of the digestive process. Bikfalvi, in his experiments on dogs, found that very small quantities of alcohol retarded the digestion of food.

Last month we called attention to the results of the experiments of Professors Chittenden and Mendel on the effect of alcohol in retarding the digestion of albuminous food in the stomach of the dog. These experiments are worthy of comparison. In nearly every instance where alcohol was used, the time of digestion was prolonged, and the length of time seemed to vary in proportion to the amount of alcohol injected into the stomach of the animal.

(To be continued.)

Metamorphosis.

Says a Vassar teacher: "To compare the usual mode of dress with that which affords freedom of motion, one has only to look at a lot of girls on the way to the gymnasium. They drag along; they have no spirit or spring in them; they are in their ordinary clothes. Look at the same set coming on to the gymnasium floor in their light toggery; they skip and dance and run in the liberty of their unrestrained and untrammeled motion; they are different beings."

Mittie's Proposal.

Little Mittie had lived all her life on a farm, where she had ample opportunity for hearing the discussion relative to fattening and beefing a cow which had become too old for a profitable milker. She is hardly to be blamed for making a practical application of her knowledge — it is a way children have. When an elderly and undesirable relative announced her intention of making her permanent home with them, and Mittie's mother was much worried over the prospect, the little girl came out with the inspired suggestion, "I'll tell you, mama, let's feed her up and beef her when we get her here."

Those who think flesh eating and its accompaniments are not blunting to youthful sensibilities may find food for reflection in this true story.

Protection for the Babies.

The French government has passed a law forbidding any one, parents or others, to give solid food of any kind to a child under one year of age, unless by special prescription of a physician. The charge would be, "guilty of attempt to kill." It is the frequent complaint of physicians that ignorant or careless parents kill their infants by giving them solid food. It is recited, says the *American Journal of Health*, that a mother whose year-old baby died, exclaimed: "I don't know why she died. She was perfectly well this morning. Why, she ate three fried eggs!"

EXERCISE FOR NEURASTHENICS.

NEURASTHENIA is a fashionable name for a very common condition. It is not, properly speaking, a disease, but rather a name for a group of symptoms which may have their origin in a variety of causes. Neurasthenia, or nervous exhaustion, is a state of the body in which the store of energy in the nerve centers is less than normal. It may affect chiefly the spine or brain, and the spinal cord may be involved. All degrees of nervous exhaustion exist, from the condition which renders the patient slightly irritable and lessens his self-control, or diminishes his disposition to engage in his usual pursuits, to a state in which the patient is bedridden or mentally unbalanced.

In neurasthenics there is an unbalanced condition of the entire body; not only the nerves and brain suffer, but the stomach, liver, and other organs are affected. It may fairly be said that in neurasthenia not only are the nerve structures at fault, but the symptoms which they express are merely nature's method of complaining of the morbid conditions existing in the stomach, liver, and other organs. It is chiefly through the nerves that nature expresses the abnormal conditions which affect the various parts of the body. The majority of symptoms involve nerves, hence it is improper to call a disease a nervous disease simply because the most prominent symptoms are expressed through the nervous system.

A very common symptom of neurasthenia is a general lassitude and languor. The patient complains that he has no energy, can not engage in his customary pursuits — "does not care whether school keeps or not," as he says. Even those things for which he formerly had the most profound interest are distasteful to him. He compels himself to go his round of daily duties only by the exercise of great force of will.

Another form of this diseased condition is that in which there is excessive irritability of the brain and nerves. The patient is, perhaps, oppressed with morbid fears, does not sleep well at night, has no hope, may be in the depths of despair,— thinks he will surely die,— attaches undue importance to trifling symptoms, may be afflicted with morbid fears of the most absurd character, as the fear of special places or particular persons. The symptoms of which such patients

complain are too many even to be enumerated here.

Another very common symptom of neurasthenia is "fidgets"—the patient is uneasy, can not sit still, is discontented, desires continual change, but is never satisfied when the change has been made. He also usually exhibits great lack of self-control. The inhibitory power of the brain is lessened, as the result of which the patient exhibits a hasty temper, and says unwise things, often becoming involved in serious difficulties in consequence. The reflex actions of the body are not as fully under the control of the will as they should be. Such people are easily startled; if they are ladies, they are likely to scream at the slightest sound, and are, perhaps, hysterical.

We have not space here to go into this subject more extensively. As regards the cause of neurasthenia, it must be said that the disease is most frequently due to a nutritive disturbance arising from irritation of the sympathetic nerve, the principal causes of which are indigestion, prolapsed stomach, liver, kidney, or other abdominal organs, either as the result of lack of development of the abdominal muscles combined with sedentary habits and a bad position in sitting, or as the result of constriction of the waist by corset wearing, belts, etc.

The majority of neurasthenics attribute their condition to overwork, overstudy, too close attention to business. We feel certain that excessive care and worry may give rise to neurasthenia through the impairment of general nutrition, but we have never yet seen a case in which any amount of healthful work has given rise to neurasthenia, or, indeed, to any other morbid condition. Work is healthful, and does not produce disease. Even great exhaustion as the result of either physical or mental labor, if unaccompanied by worry or other cause of disease, is quickly overcome by rest. Neurasthenia is most frequently the result of too little work, especially too little muscular work. Muscular work has a remarkable influence in maintaining a healthy nerve tone and antagonizing the deleterious effects of mental and nervous strain under unfavorable conditions.

John Wesley was a very active brain worker, but, notwithstanding, preserved good health to an advanced age, through the physical habits which he cultivated from early youth. Mr. Wesley declared that he owed his excellent health to the fact that when he went to London to school, his father charged him, in his parting instruction, that he should run three times around Charter-House Square every morning before breakfast. This practise he adhered to during his entire school life, with the result that he was thereby kept in excellent health, and a good physical foundation was laid for the busy life which he afterward led. By request, a friend recently measured the distance around Charter-House Square, and reports it to be four hundred and forty-five yards, or a little more than one fourth of a mile. Three times around the square would be three fourths of a mile. A vigorous run of three fourths of a mile, if practised regularly for six months, would convert many a pale, puny, listless schoolboy or girl into a rosy-cheeked, bright-eyed, vigorous youth or maiden. Exercise is the best of all tonics, is worth even more than a schoolmaster, as a means of sharpening the wits.

In the great majority of neurasthenics we find the chief source of waste of nervous energy to be the strain of prolapsed abdominal organs pulling upon the delicate fibers of the abdominal sympathetic. Pain through the shoulder-blades, the back of the neck, and in the loins is often due to this cause. Not infrequently nervous patients have said to me, "I often

feel as if I must hold myself up with my hands." I have repeatedly seen patients at once relieved of a long list of nervous symptoms by the simple application of an efficient supporter by which the prolapsed organ was held in place.

Exercise is especially beneficial to this class of neurasthenics by developing the abdominal muscles and thus securing a permanent retention in position of the prolapsed organs. In some cases the prolapse is so great, and the relaxation of the abdominal walls of so long standing that the permanent wearing of the supporter is necessary. These cases, however, are comparatively rare. The persevering employment of suitable exercises will, in the majority of cases, result in the development of the abdominal muscles to such a degree as to make it possible to dispense with the abdominal bandage.

The great advantage of exercise for neurasthenics is that it raises them to a higher level. Exercise is vastly better in these cases than tonics, nervines, or drugs of any sort. The increased amount of oxygen taken in by means of exercise produces upon the system more beneficial tonic effects than any other substance known. Better blood, better digestion, better brain, better nerves — these are the things essential for the cure of a neurasthenic, and exercise affords one of the most efficient means by which the necessary transformation can be effected. The man whose brain and nerves are irritated and whose energies are paralyzed by poisons absorbed from fermenting and decomposing food in the stomach must be relieved of this source of irritation before he can be cured either by exercise or by any other means. Exercise, through its influence upon digestion, affords one of the most efficient of all means of accomplishing this. Abundance of out-of-door exercise combined with an aseptic dietary — a diet which excludes meat, cheese, and other substances capable of undergoing ready decomposition in the stomach and intestines — will often within a month work a change in a case of this sort which seems little short of marvelous.

The influence of a meat diet in these cases may readily be inferred by an experiment made by an eminent London physician upon the brain of a monkey. Having removed a portion of the skull, he applied a solution of creatin, one of the constituents of flesh, an extract of beef, to the brain. He found that within a very few minutes the brain became paralyzed; it was impossible to stimulate it even by electricity in such a manner as to cause the usual contractions of muscles which occur when the brain is thus stimulated. The poisons produced by the decomposition of animal food substances in the alimentary canal naturally give rise to a similar condition of the brain and nerves. In some cases, especially where there is dilatation of the stomach, as was shown by Glenard, milk has a similar effect.

Exercise has another advantage in the case of the neurasthenic in that it improves the volitionary control of the patient; in other words, it wakes him up — brings him to himself. The exercise of control over his muscles, under the direction of the trainer, reacts in a most beneficial manner upon him mentally and morally as well as physically. We have frequently seen, under the influence of systematic exercise, a weak-willed neurasthenic who had hardly energy enough to arise and dress himself in the morning, and who needed constant prompting to secure proper attention to his daily round of duties, develop into a vigorous, active, energetic man, full of spontaneous activity and ready to enter upon life's duties with zest and efficiency.

Not only gymnastic exercise, but horseback riding, and especially bicycle riding

are of great service as a means of exercise for this class of patients. The bicycle has to be managed, it must be brought to time and made to obey orders; it is somewhat "skittish," and likely to throw the rider unless kept under proper control, so it must be carefully watched. This takes the patient's mind away from himself, and in this respect does him an invaluable service. Most neurasthenics are very prone to dwell upon their cases, and in a most despairing way. The old-fashioned "constitutional" is the worst form of exercise for a neurasthenic. Strolling leisurely along, he has abundant time to think about his nerves, his brain, his stomach, his liver, and the various symptoms which manifest themselves in connection with these organs. If no other form of exercise is available and walking must be depended upon, he must be made to walk much faster than his usual gait, and should have a lively companion to walk with him so that he will have to exercise volition upon his legs and keep his mind upon his walking in order to maintain the proper rate of motion.

Different classes of neurasthenics, of course, require different degrees and different kinds of exercise; so do those of different sex and different age. As a rule, those neurasthenics who have become such through sedentary habits resulting in dyspepsia, and those who are neurasthenics from idleness require a considerable amount of hard muscular work. Their system needs to be stored with a higher degree of vital activity. Such may become fatigued, even slightly exhausted, without injury.

Neurasthenics who have been made such from worry and anxiety, who are irritable, who can not sleep, who suffer from wandering pains, neuralgias, and other painful symptoms, must be exercised more gently, and in many cases must begin a course of treatment with rest in bed and passive exercise until by a gain of flesh and blood their nutrition is sufficiently improved to support the demands made by active muscular effort.

By the last-named class of patients, fatigue must be very carefully avoided. Active exercise, when begun, must first be very moderate in amount; difficult exercises are inappropriate. Such as afford an agreeable diversion must first be employed, until a considerable degree of vigor has been gained. Light calisthenics, carriage riding, and boating, being careful, however, to avoid too hard work at the oars, are most appropriate modes of exercise.

J. H. KELLOGG, M. D.

OUTING OR BUSINESS DRESS.

THE question of how to dress in a way most convenient for the business woman or the one seeking pleasure or recreation in out-of-door life has been a most perplexing problem, and has been carefully studied by many a woman longing to be freed from the bondage in which custom and fashion have placed her.

Many costumes have been designed by persons interested in this line of work, all of which have been useful, and many of them an improvement over the ordinary mode of dress; but it has been a difficult matter to meet the demands of all classes interested in such work.

The first thing to be considered in plan-

ning a costume of this character is the material. This should be such as will best meet the needs of the person who is to wear the garment. Among those who are in need of such a dress we find the business woman, the pleasure seeker who wishes a convenient costume for cycling, rowing, and similar pursuits, the college girl, and those engaged in domestic work of various sorts. It is needless to say that the material should be durable, and of such a nature that it will look well and retain its shape after being tried by hard wear and disagreeable weather. Among the most desirable materials, both for durability and neatness, are cravanette and heptonette, which are water-proof, but without the air-tight feature of rubber or mackintosh. They look very much like serge, are soft, and equally as comfortable. They can be obtained only in dark colors, as black, brown, gray, and blue, and may be used for jackets, coats, capes, or for dresses of ordinary length. The cost of these materials varies with the width, running from $1.75 to $3.00 a yard. This is not so high a price as it seems when we consider the width of the material and that it requires but a few yards for a dress. Other materials, such as denim, crash, or linen may be used, and afford neat and durable garments. These should be made without lining, as they are thus more easily laundered.

Having selected a suitable material, the question of making is the next most important one. The "Woman's Practical Business Dress," we believe, has in itself all the necessary requirements of grace, utility, convenience, and neatness. The quantity of material is so closely calculated that there is not a useless fold in the skirt nor the least unnecessary weight, nor yet does the dress in any way appear scanty. The most perfect freedom is allowed the limbs, and the garmentis so constructed that in windy weather it does not hinder one's movements by winding about the limbs. This we consider a very important feature, and one which should appeal to the good judgment of every woman. By reason of its peculiar construction it is unlike any other garment of its kind ever before offered to the public.

Very few garments are required with this costume, the union undersuit, and one light divided skirt being all that is necessary besides the outer jacket or wrap. The skirt of this costume is not intended to be longer than about five inches from the floor, for from its nature it can not be held up like the ordinary skirt; thus a greater length would be an inconvenience. The length may be varied somewhat to suit the taste of the wearer, but should always be sufficiently short to clear the filth of the street. Leggings may be made of the same material, and give a neater appearance to the costume. Bicycle shoes, if preferred, may be worn instead. With this costume neatly made, the wearer presents a dignified, graceful, and modest appearance. For outing dresses of any kind, rubber facings are most desirable. The dress may be lined or not, as desired, but the lighter it can be made, the more convenient it is. If made from very soft material, it should have a deep facing to give it stiffness.

The water-proof garment now generally worn has many advantages. It is made with a water-proof skirt and cape; a cambric underskirt is worn next to the union suit. The water-proof skirt is so arranged by means of hooks that it can be fastened under and over the dress skirt and petticoat, enclosing them, and protecting them entirely from slush, mud, or rain.

ABBIE M. WINEGAR, M. D.

SWIMMING AND ITS RELATION TO HEALTH.

THE ideal of Greek art was reached in the modeling of the human figure. We know that all true artists, whether they express themselves in painting or sculpture, model from life. The height of Greek plastic art was reached in the representation of the living human figure as then known in its perfection. At the present time we do not have such bodies to model from, and therefore our plastic art has never reached the Greek ideal. It is of vital interest to know the cause of this perfection in both the Greek and the Roman physique of ancient times. It is far more than a problem for beauty-loving artists; it behooves every health-loving individual to inquire into the cause of this physical symmetry of the old Greeks and Romans; and look ye, dismal army of dyspeptic, spinal-curvatured, hollow-chested, one-sided, weak-limbed victims of imperfect physical education, and find one secret that will help to lift you out of your miserable condition into one of health and usefulness.

When the ancient Romans wished to express extreme contempt for a man's ignorance, they exclaimed: "He can neither *swim* nor write!" These few words are pregnant with meaning to those desirous of learning. In Roman estimation swimming came first, because, forsooth, of what avail is writing to a drowning man? They esteemed swimming as the best exercise to develop strength, courage, and beauty of body, and considered it indispensable to good education. They believed in the symmetrical development of the body, and swimming is the very "cream" of exercises for bringing about this desired end. As a means to the prevention and cure of disease it has not received nearly its just share of attention. There is hardly a chronic ailment which it would not benefit. First and foremost among its inestimable advantages is that it is an absolutely symmetrical exercise; that is, the entire muscular system is employed in its use, in the same manner with both sides of the body. The limbs, the chest, the abdomen, the back,—in short, the whole body is thoroughly exercised in correct swimming. It is at the same time the safest of exercises in that there is no danger of straining any one muscle from overuse, of developing one side or one limb more than another, or of injuring internal organs,—all evils likely to occur in most other exercises, especially such as are practised with weights. Far be it from me to underestimate the gymnasium and what it has accomplished, but swimming combines everything that the gymnasium offers, and accomplishes its work in a much shorter time. Especially is this the case where the various instruments necessary in gymnasium work render its practise tedious to many.

Let us examine the movements required in swimming. First, the position of the swimmer in the water: He should lie flat on his chest and stomach, the legs perfectly straightened, heels touching, the arms extended full length before him, palms touching, fingers and thumbs close so that the hands will form good oars by which to push back the water and thus propel the swimmer. It requires very little motion of the right kind merely to keep on the surface of the water, and it ought to be the duty of every parent or

guardian of a child to instruct the little one as soon as possible in the simple art of sustaining itself in the water. Untold accidents would thereby be prevented, and the now dreaded liquid would no longer be regarded so much in the light of an enemy to life.

God intended us to swim; in proof of which assertion I would cite the numerous instances in which man in primitive conditions sustains himself in the water without difficulty the first time he is thrown into it by accident or by the design of an enterprising parent. The South Sea Islanders are all magnificent natural swimmers, and as much at their ease in water as on land. Thus we see that civilized man has to a great degree lost the inestimable benefits of the water so abundantly provided by the Creator. Swimming with us, instead of being the natural exercise for practical, every-day use, has degenerated, if I may so express it, into an art or a science which most of us acquire only after long practise. Let not this statement, however, discourage any one from attempting to learn swimming, as one can enjoy its immense benefits long before he becomes an expert.

To revert to the movements necessary in swimming: After assuming the correct position, let the beginner practise first the arm movements. The chest should be well lifted, and should never be quite difflated of air; I can not too strongly emphasize the necessity of deep, full, regular breathing with every motion in swimming. If the chest is well lifted and the abdomen drawn in, the body forms a bow which is canoe-like in its buoyancy. Now separate the arms by turning the palms away from each other and spreading out the arms until they form a straight line with the shoulders. Keep the fingers firmly against each other all the time. A deep inspiration should accompany this movement. Now bend the elbows until the hands meet under the chin, the fingers pointing forward, having turned the palms until they meet again; then extend the arms forward and the original position is reached.

These movements are made in three counts. Rest position is the starting-point, and is always reached on count three. On count one, the arms are spread as first described; count two, hands under the chin, palms touching; on count three, the arms slant forward with energy. It is very important that at this last count there should be a pause for rest. If the swimmer breathes well, he can lie on the water absolutely motionless for a short time and take a rest between strokes. This rest is the secret of the easy, graceful, enduring swimmer. It is a fact that when a thing is done easily and gracefully, it is done right. This is a natural law, and applies to any physical exercise. A good swimmer is always a graceful swimmer.

The leg motions are especially valuable for those who have inactive digestive organs. They induce a thorough, yet not violent exercising of the abdomen, and undoubtedly assist in the restoration of prolapsed viscera to a proper position. Practise this motion, at first bracing the body on a board or against any firm place by leaning on it with the hands. Lie perfectly flat, chest well lifted, breathing deeply with the movements of the limbs. First movement, flex the knees by drawing them up under the abdomen, not simply bending the knees and throwing the feet up, a mistake made by all beginners and poor swimmers. Second movement, kick the feet out toward each side with force, straightening out the limbs and bringing the heels together. At this point the body is perfectly straight, hands touching, heels touching. Upon the force and decision of the shooting forward of the arms from under the chin,

and the kicking back of the legs from under the abdomen depends the length and effectiveness of the stroke. A good swimmer should make a stroke as long as his own body. The best way to teach a person to swim, is to give him at first what may be called a "dry" lesson; that is, have the movements performed out of the water first, then suspend the subject by a rope fastened to a belt around the waist and let him practise the movements separately in the water, being very particular about the breathing and the rest at count three. In combining the leg and arm movements, the arms start at one, the leg motions coming in with counts two and three.

When well done, swimming is an art. It is not to be learned in a week, but any one may have all the physical benefit of the exercise by practising in shallow water with a life-preserver at first and gradually weaning himself from this, learning to support the body in the dreaded water, which is really the greatest means to health and life we have.

Many make the great mistake of remaining in the water too long. A weak person should not stay in more than five minutes the first time, gradually increasing to fifteen minutes, which might be the limit for any one below normal vitality. The writer never occupies more than twenty minutes in fresh water or half an hour in salt water, and the entire time is spent in vigorous swimming, accompanied by breathing that fills every cubic inch of lung capacity. Years of this exercise have developed a chest far above the average in breathing power, and assisted wonderfully in the development of the entire muscular system.

The mental effect of swimming, on invalids able to practise it, can not be surpassed. The exercise is so absorbing and interesting that "peristaltic woes" are forgotten for the time, and those who have slack appetites and slow digestion will receive marked benefit therefrom.

Swimmers have a poise and carriage of body, a self-control, and a courage gained so largely by no other exercise. It is of course best to learn in childhood or early youth, but I counsel every one, no matter what his or her age may be, if able to do so, to pursue the art of swimming even "if it takes all summer." Never hold the breath when learning to swim, or raise the arms out of the water, or struggle. Try to believe that you are lighter than water, and that unless unnatural actions prevent, it is bound to hold you up, just as it would a small vessel built on right principles.

In closing, I would lay special stress on the importance of swimming for women. Take off your corsets and heavy skirts, never to put them on again; beautify your figure and put life into your flabby muscles by a daily practise of swimming.

Stay in the water until the exercise has put you into a glow, then drying rapidly, finish the good work by a short walk in the sunshine, after which lie down for a short time. Do this steadily a few months, and you will be a new woman in the right sense of the word.

ADÈLE LEONTINE SINGER.

VEGETABLE SUBSTITUTES FOR FLESH-FOOD.

THE dietetic value of meats, milk, and other animal foods consists principally in the nitrogenous and fatty food elements with which they supply the system. These important food elements are essential to

life and health, and if, for any reason, the use of animal foods wholly or in part is discarded, there must be made a substitution of the same elements secured from other sources, else the diet will become an impoverished one. While many food substances contain a proportion of one or both of these elements, the chief source of supply, aside from animal foods, is nuts and leguminous seeds. In leguminous seeds, when mature, we find a higher proportion of nitrogenous material than in any other foods, either animal or vegetable, as is shown by the accompanying table of analyses. For this reason they are well adapted as substitutes for flesh-foods and for use in association with articles in which starch or other non-nitrogenous nutrients are the predominating principle; as, for example, lentils and rice, this combination constituting the staple food of many millions in India, China, and Japan. Even milk, as well as flesh, may be dispensed with, and is little used by semicivilized and savage tribes.

ANALYSIS OF SOME COMMON FOODS.

	Water.	Albumin.	Starch.	Free Fat.	Salts.	Total Nut. Value.
Lean Beef	72.0	19.3		3.6	5.1	28.0
Lean Mutton	72.0	18.3		4.9	4.8	28.0
Whitefish	78.0			2.9	1.0	22.0
Garden Peas	10.3	24.6	52 6	3.5	2.6	83.3
White Beans	15.0	26.9	48.8	3.0	3.5	82.2
Lima Beans	9.0	21.9	60.6	1.6	2.9	87.0
Lentils	12.3	25.9	53.0	1.9	3.0	83.0
Peanuts	6.5	28.3	1.8	46.2	3.3	70.6
Chestnuts	7.3	14.6	69.0	2.4	3.3	89.3
Almonds	6.2	23.5	7.8	53	3.0	87.3
Eggs	74.0	14.		10.5	1.5	26.0
Wheat(Mich. White)	12.8	11.6	71.0	1.3	1.6	85.5

The nitrogenous matter of legumes is termed legumin, or vegetable casein, and its likeness to the animal casein of milk is very marked. The Chinese make use of this fact, and manufacture cheese from peas and beans. Legumes were largely used as food by the ancient nations of the East. They were the "pulse" upon which the Hebrew children grew so fair and strong. According to Josephus, builders of the pyramids made their chief diet of legumes. They are particularly valuable as strength producers, and frequently form a considerable portion, at the present day, of the diet of persons in training as athletes. Being foods possessed of such high nutritive value, legumes are deserving of a more extended use than is generally accorded them in this country. In their mature state the legumes, with the exception of beans, are seldom found upon the ordinary bill of fare, and beans are too generally served in a form quite difficult of digestion, being combined with excessive quantities of fat, or otherwise improperly prepared. Peas and lentils are in some respects superior to beans. They are less likely to disagree with persons of weak digestion, and for this reason are better suited to be a staple article of diet.

All legumes are covered with a tough skin, which is in itself indigestible, and which, if not broken by the cooking process or by thorough mastication afterward, renders the entire seed likely to pass through the digestive tract undigested, since the digestive fluids can not act upon the hard skin.

Even when the skins are broken, if served with the pulp, much of the nutritive material of the legume is wasted, because it is impossible for the digestive processes to free it from the cellulose material of which the skins are composed. If, then, it is desirable to obtain from legumes the largest amount of nutriment, and in the most digestible form, they must be prepared in some manner that will reject the skins.

Persons unable to use legumes when cooked in the ordinary way, usually experience no difficulty whatever in digest-

ing them when divested of their skins. The hindrance which even the partially broken skins are to the complete digestion of the legume, is well illustrated by the personal experiments of Professor Strümpell, a German scientist, who found that of beans boiled with the skins on, he was able to digest only sixty per cent. of the nitrogenous material they contained. When, however, he reduced the same quantity of beans to a fine powder previously to cooking, he was enabled to digest 91.8 per cent. of it.

The fact that mature legumes are more digestible when prepared in some manner in which the skins are rejected, was doubtless understood in early times, for we find in a recipe of the fourteenth century, directions given "to dry legumes in an oven, and remove the skins away before using them."

Green legumes, which are more like a succulent vegetable, are easily digested with the skins on, if the hulls are broken before being swallowed. There are also some kinds of beans which, in their mature state, from having thinner skins, are more readily digested, as the haricot variety.

The legumes are best cooked by stewing or boiling, and when mature, require prolonged cooking to render them tender and digestible. Slow cooking, when practicable, is preferable. Dry beans and peas are more readily softened by cooking if first soaked for a time in cold water. This preliminary maceration also has a tendency to loosen the skins, which later, during the boiling or stewing, slip off whole, and being lighter, rise to the surface, when they may be removed with a spoon. Soaking likewise aids in removing the strong flavor characteristic of these foods, which is objectionable to some persons. The length of time required for soaking will depend upon the age of the seed; those from the last harvest needing only a few hours, while such as have been kept for two or more years require from twelve to twenty-four hours' soaking. Always cook in soft water, as hard water less readily softens and dissolves the elements of these as well as other seeds.

Dry, unsoaked legumes should be put to cook in cold water. After the boiling-point is reached, they should be allowed to simmer gently until thoroughly done. An hour or two more time will be required than for well-soaked legumes. Boiling water may be used for legumes which have been previously soaked. The amount of water required will vary somewhat with the heat employed and the age and condition of the legume, as will also the time required for cooking; but, as a general rule, two quarts of soft water for one pint of seeds will be quite sufficient. Salt should not be added until the cooking is done, as it hinders the process.

A perfect diet must also contain a certain proportion of fat. From long usage, the animal fats — milk, cream, and butter — have come to be looked upon as the one source of supply for this food requisite. But it is a wonderful fact that the Creator has provided in the vegetable world, in the nuts or shell fruits, a substance analogous in composition to milk, and still better adapted to human consumption than is cow's milk. The cream of the coconut, ingeniously extracted, furnishes a satisfactory substitute for cow's milk to the millions of inhabitants in tropical countries. The cow tree of South America provides a liquid so rich in fatty matter that it might properly be termed a vegetable cream. All nuts contain fats in a state of emulsion, and also a large percentage of nitrogenous material. By carefully crushing and mixing with water, a solution closely resembling milk may be made from nearly all kinds of nuts. The amount of fat and albuminous

substance contained in such a rightly proportioned preparation is almost identical in nutritive value with that of ordinary milk. If such vegetable milk made from coconut and other nuts having a high percentage of fat, is allowed to stand, a cream will rise. Nut milk may be used in the preparation of foods in the same way as cow's milk, and is preferable for many reasons.

Nuts are an especially valuable food, since they contain both nitrogenous and fatty material, but they often prove difficult of digestion because they are not sufficiently finely pulverized by mastication as ordinarily eaten. Most nuts have such firm flesh that to render them digestible they require very careful mastication, or the reduction in some manner to a finely pulverized state before being eaten. Some nuts, as peanuts, are quite indigestible in the raw state. Different nuts reduced to a fine meal and thoroughly cooked are now manufactured into a variety of palatable, wholesome, and easily digestible products which serve as an excellent substitute for meats and butter, and may be prepared in numberless tasty and appetizing dishes. Recipes for the preparation of some very good dishes of this sort are given in this number.

ELLA EATON KELLOGG.

RECIPES.

Browned Corn-meal Biscuit.—Spread a cupful of corn-meal rather thin on square tins, and heat in the oven until lightly browned, stirring it frequently with a spoon to prevent an uneven browning. While still hot, add one-fourth teaspoonful of salt if desired, and about two cupfuls of boiling nut cream, beating the whole very thoroughly. The amount of liquid will vary with the quality of the meal and the consistency of the cream. There should be only sufficient to make a stiff batter that will retain its shape. Drop in spoonfuls on slightly oiled tins, and bake until well browned on both sides.

Peas Purée.— Dried peas for culinary use are obtainable in two forms,—the split peas, which have had the tough envelope of the seed removed, and the dried green or Scotch peas. For the purée soak a quart of Scotch peas in cold water overnight. In the morning drain, and put them to cook in boiling water. Cook slowly until perfectly tender, allowing them to simmer very gently toward the last, until they become as dry as possible. Put through a colander to remove the skins. To this pulp add sufficient cream or nut cream to make of the consistency of a purée. Season with salt, and serve hot with croutons. If liked, the purée may be flavored with onion or celery, or both.

Purée of lentils and of beans may be prepared in a similar manner.

Mashed Peas.— Cook and prepare a quart of Scotch peas as directed above. Season the peas pulp with salt and a half cup of cream or thick nut cream. Beat thoroughly, and turn into an earthen or graniteware pudding dish. Smooth the top with a knife blade, and bake in a moderate oven, until *dry* and *mealy* throughout, and nicely browned on top. Serve hot like mashed potato, or in slices on individual platters with a tomato sauce. Navy-beans cooked and prepared in the same way are excellent.

Broiled Protose.— Remove the protose from the can, slice rather thin, and parboil the same as beefsteak. Serve hot with a dressing prepared by cooking together for a few moments two cups of cooked lentil pulp, one and one-half cups of strained stewed tomato, a tablespoonful of nut butter, and one-third cup of

Seasonable Bills of Fare

By Mrs. E. E. Kellogg

BREAKFAST No. 1

Peaches with Fruit Wafers
Wheatose with Baked Sweet Apple
and Cream or Nut Cream
Grape Toast Breakfast Rolls
Fruit-Coco

BREAKFAST No. 2

Melon
Peach Granola
Browned Corn-meal Biscuit
Nuttose and Tomato Stew
Zwieback with Malted Nuts
Fruit Bread
with Stewed Apple

DINNER No. 1

Peas Purée
Baked Potato with Broiled Protose
and Gravy
Baked Green Corn
Pulp Succotash Breaded Tomato
Whole-wheat Bread
Baked Quince Fresh Fruit

DINNER No. 2

Potato Soup
Lentil and Nut Loaf
Squash Sliced Tomato
Currant Puffs
Browned Granose Biscuit
Sliced Peaches

protose made into a pulp by being put through a vegetable press.

Stewed Protose.— Slice the protose, then cut in pieces not over an inch square, cover with boiling water, and cook in a double boiler for two hours or longer. The longer and more slowly it is stewed, the richer it will be in flavor. A small onion, a sprig of parsley, or a few bits of celery may be added just long enough before the completion of the cooking to impart their flavor to the stew if desired. Season with salt, and serve hot.

Stewed Protose and Mashed Beans.— Cook and mash beans, season with salt. Stew protose as directed above, and serve on individual platters with a spoonful of mashed beans. Garnish with lettuce or parsley.

Stuffed Potatoes.— Remove the pulp from baked potatoes, mix with one-third mashed protose, and season with a little finely chopped onion and salt. This should be kept hot while mixing. Fill the potatoes with the mixture, and serve at once.

Savory Macaroni and Nuttolene.— Mix together one quart of rather moist, coarse bread-crumbs, one teaspoonful of powdered sage, and one teaspoonful of salt. Have one cup (before cooking) of macaroni cooked, and one-half pound of nuttolene or protose cut into very small dice or chopped fine. Put a layer each of the crumbs, macaroni, and nuttolene into a baking dish until all are in. Pour over the whole two cups of water (or more if the crumbs are dry), sprinkle the top lightly with fine crumbs, and bake slowly from three fourths of an hour to one hour. It should be moist enough when done not to require any sauce, but may be served with any sauce desired.

Pulp Succotash.— Score the kernels of some fresh green corn with a sharp knife blade, then with the back of a knife

scrape out all the pulp, leaving the hulls on the cob. Boil the pulp in milk ten or fifteen minutes or until well done. Cook some fresh shelled beans until tender, and rub them through a colander. Put together an equal quantity of the beans thus prepared and the cooked corn pulp, season with salt and sweet cream, boil together for a few minutes, and serve. Kornlet and dried Lima beans may be made into succotash in a similar manner.

Baked Green Corn.— Select nice, fresh ears of tender corn of as nearly equal size as possible. Open the husks, and remove all the silk from the corn; replace the husks, and tie them around the ears with thread. Put the corn in a hot oven, and bake for thirty minutes or until tender. Remove husks before serving. It is excellent eaten with nuttolene or nut butter.

Breaded Tomato.— Fill a pudding dish two thirds full of freshly stewed tomatoes, season with salt, a little minced celery or onion, and sprinkle grated crumbs of good whole-wheat bread over it until the top looks dry. Bake until nicely browned, and serve hot with a dressing of cream or nut cream.

Baked Quince.— Rub the quince well with a coarse cloth to remove the fur; fill a medium-sized earthen pudding dish with the fruit, add one-half cup of water, and bake in a moderate oven three or four hours or until perfectly tender. Remove the skins, slice the fruit, and put in layers in a glass dish, sprinkling each layer with sugar. Set away, and serve perfectly cold.

Lentil and Nut Loaf.— To one pint of rather dry lentil pulp add one cup of grated Brazil-nuts and sufficient stale bread-crumbs to make a stiff mixture. Season with salt and sage if desired. Press into a bread tin, and bake in a slow oven one hour longer.

Stewed Beans with Nut Butter.— Look over and wash one pint of dried haricot-beans. Put into cold water, and parboil for half an hour. Turn off the water, and put them to cook again in boiling water, with an ounce of nuttolene or a tablespoonful of nut butter. Stew slowly for two hours or until tender, making sure that they are quite juicy when done. Add salt to season, one or two teaspoonfuls more of nut butter rubbed to a cream in a little water, the juice of one lemon, and an ounce of parsley chopped very fine. Boil together three or four minutes, and serve. Celery may be used in place of parsley, or both may be omitted, as preferred.

Baked Beans.— Soak best white beans overnight in cold water. Put them to cook in fresh water, and let them simmer gently until tender, but not broken. Let them be quite juicy when taken from the kettle. Season with salt. Put them in a deep crock, and set in a slow oven. Let them bake for two or three hours, or even longer, until they assume a rich reddish brown tinge, adding boiling water occasionally to prevent their becoming dry. Serve moist, or turn into a shallow dish, and brown before sending to the table.

Baked Beans with Nuts.— Prepare and cook the beans as directed above. When tender, season with two tablespoonfuls of nut butter or peanut pulp, add one lemon cut in thin slices, the seeds and skin having been removed. Turn into a bean-pot, and bake from two to four hours. Enough water should be added from time to time, if required, to keep the beans juicy.

Sliced Peaches.— For each person to be served take three large-sized peaches. Put them in a pan, and cover with boiling water, letting them remain in the boiling water not longer than one minute. Turn off the hot water, and pour ice- or the cold-

est water obtainable over the fruit, letting it remain until the fruit is perfectly cold. The skins may now be easily removed. If the peaches are not wanted at once, put them on ice, or in a cold place. Slice just before sending to the table.

HYGIENE OF THE EAR.

MOST of the organs of the body are so placed that man is not given immediate control over them; nor is it necessary for him to care for each one separately. There are, however, general laws to which we must conform,—laws established by the Creator,—and if we co-operate with him, he will keep all parts of this wonderful machine in healthful action.

It is our duty to keep the external ear in a clean condition, but nature has provided her own cleaning apparatus for the ear passages. At the entrance of the auditory canal are numerous fine hairs which serve to keep out dirt and insects. The lining membrane of the canal contains small glands, which secrete a thick, yellowish, oily wax that is very bitter. Because of this bitterness, no insect will of itself invade this canal. What becomes of the wax?—It dries up in the form of small, whitish scales, which peel off from the surface, and, aided by the action of the jaw, drift out of the ear. This is nature's way of keeping this passage clean.

In health the canal is never dirty, and becomes so only by our frequent attempts to keep it clean. It is for this reason that some people who love cleanliness, and others who are more or less fastidious in their habits, often suffer most from ear troubles. Many well-meaning mothers do more harm than good by trying to clean the wax out of their children's ears by artificial means. The child invariably cries or makes some demonstration of pain when this is attempted. Twisting the corner of a towel or a handkerchief and turning it round in the ear is one of the worst methods of trying to remove the wax, and does a great deal of harm. Not only is the wax not removed by this method, but the canal membrane is irritated by the friction, and often becomes inflamed.

It is a dangerous practise to introduce ear spoons, ear sponges, pins, hairpins, toothpicks, etc., into the ear to remove the wax. There is as much wisdom as humor in the old adage, "Put nothing into your ear smaller than your elbow."

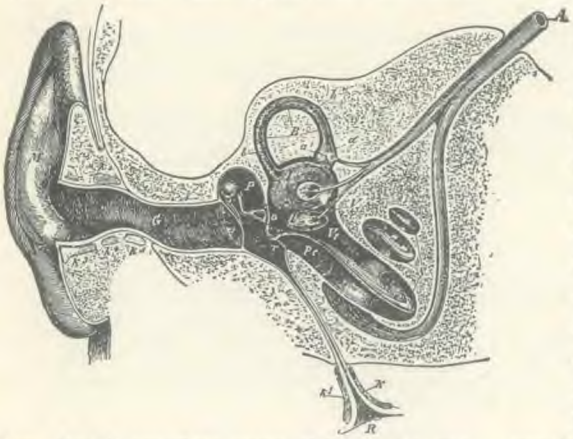
If an insect gets into the auditory canal, drop in a little sweet-oil, which will either drown it or cause it to crawl out. The ear should never be probed to remove a foreign body. Do not be afraid that it will get into the brain, or even into the middle ear.

Washing the auditory canal with soap and water is also injurious, as it moistens the wax, thus increasing its quantity, and forming a better surface for the collection of dust and dirt. Washing should extend no farther than the finger can reach.

No cold water or any other cold liquid should be put into the ear. Bathing or swimming, when the ears are submerged, is no doubt one of the causes of ear trouble. It is a well-known fact that dogs that are in the water a great deal become deaf. Cotton should be put in the ears if one intends to dive while in swimming. If out in a cold, piercing wind or in a driving snow-storm, the ears should be protected. It is best, if possible, to face the wind. If cotton is placed in the ear at such a time, it should be removed as soon as possible.

When there is an unhealthy condition of the auditory canal, as a result of measles or scarlet fever, the accumulation of wax can easily be removed by dropping a very little warm sweet-oil into the ear, let-

ting it remain until the wax is softened, and then douching out the ear with, preferably, a fountain syringe, using from half a pint to a quart of water at a temperature of about 105° or not warmer than 110° F. The hand syringe is also excellent, but it requires more skill in its use. If there is a chronic discharge from the ear, following measles, scarlet fever, or a cold, the ear can be douched, and then packed with boracic acid powder.



Some people, when they contract a cold, insert cotton in the ear as a protection. The cold is cured, but the cotton is often forgotten, and sometimes remains for years before it is discovered by an aurist. Cotton soaked with laudanum or chloroform should never be put into the ear; for these drugs have a strong affinity for water, drying the canal and drum membrane, and, acting somewhat as a caustic, produce irritation.

Avoid violent blowing of the nose in an acute cold; for this may cause the inflammation to extend into the Eustachian tube, impairing the hearing, and perhaps resulting in deafness.

Never box the ears. Such a practise is both wicked and cruel, in that it drives the air with such force against the drumhead as often to rupture it, resulting in defective hearing. Supposed inattention in children is often the result, not of a lack of attention, but of a lack of hearing. When such a person expects to be spoken to, he may hear distinctly; whereas, if unexpectedly addressed, he may seem very dull. This indicates that there is some fault in the hearing.

Leading from the middle ear to the throat is a small tube a little more than one inch long, called the Eustachian tube. Every time we swallow, this tube is slightly opened, and the air enters it, thus equalizing the air pressure on both sides of the ear drum. The air within the tube is quickly absorbed, and the increased pressure from without presses in the ear drum, locking the little bones of the middle ear, and preventing their moving freely; if the tube leading into the throat is permanently closed, and air prevented from entering, deafness is the result. Catarrh of the throat causes about ninety-five per cent. of all cases of deafness. The mucous membrane about the opening of the Eustachian tube, as well as the lining of the tube itself, becomes thickened, and this closes it, preventing the entrance of air. Normally the tube is not always open, but only while swallowing, which is due to the action of a little muscle attached to it just as it enters the throat. In a severe cold when the nose is blown, there is a sensation of fulness in the ears, which is relieved only by swallowing, it being necessary to swallow several times before the air is drawn out. It is a bad practise to blow the nose violently at any time, and especially during a cold, for infecting mucous is thereby forced in the middle ear, producing earache, suppuration, and even deafness.

F. M. ROSSITER, M. D.

ANSWERS TO HOME CLUB QUESTIONS FOR AUGUST.

PHYSICAL DEVELOPMENT.

1. An increase in the tissues of the heart, increasing its size.

2. The respiratory area is about two thousand square feet of surface in the lungs.

3. A blue appearance due to an improper aëration of the blood.

4. Edema is what is ordinarily termed "dropsy." It is a transfusion of the fluids of the blood into the surrounding tissues.

5. Pertaining to the chest cavity or its organs.

SCIENTIFIC COOKERY.

1. To promote growth, to supply force, to produce heat, and to furnish renovating material.

2. A certain proportion of all the different food elements is necessary for a perfect and well-balanced diet, at all times, but less of heat-producing foods is required in warm climates and warm seasons than in cold.

3. Fruits, nuts, and seeds; because they contain all the requisite food elements in good proportion and of a quality the most wholesome.

4. Because they are so difficult to keep in wholesome condition, because they are so liable to be a vehicle through which disease may enter the system, and because other foods, more wholesome and quite as nutritious, are easily obtainable.

HYDROTHERAPY.

1. When there is danger of taking cold.

2. In warm weather, when there is no need to avoid reaction.

3. The saline rub is invigorating, while the witch-hazel is sedative.

4. An alcohol or a vinegar rub.

5. By an alkaline rub.

PHYSIOLOGY AND HYGIENE.

1. The process of incorporating food into the cells.

2. From the lymph.

3. Because it is the medium of exchange between the blood and the tissues.

4. Because the body needs a time in which it can devote its entire activity to the storing of energy with which to enable it to perform its required duties.

THE BLACK PLAGUE.

BY MRS. S. M. I. HENRY.

(Continued.)

"MISFORTUNES never come singly, you know, Mrs. Featherby."

"I should say not; and they come in troops to this house. The things that have happened here are enough to make one want to run away, if it was n't for the good wages."

"I said as much to Mister Featherby, and he said that you had just captured Misfortune and locked her in, with your shut blinds and doors; that if you 'd open up and live like Christians, she 'd get out quick. But you know he has his own way of looking at things. He thinks Mrs. Haverly 'll lose her mind, and the child also, if she goes on in this blackness of darkness, as he calls it, much longer. And as the children's guardian — though poor Gordie 's gone, of course — he feels responsible for Nannie. He says he can't understand how anybody can endure the dark like Mrs. Haverly does; but I can: I can just see how she can't endure the sunlight, so much of it as we are having this summer, too. I told Mister Featherby that if he and Jimmie should die, I thought I would shade down the windows a little at our house; but, the dear old crank, he said that he can't understand us women; that, as for him, when Misfortune comes

in, all he asks is that she will leave the door open for sunshine to follow."

"That sounds fine, Mrs. Featherby, 'specially when one knows that hearty, whole-souled way that he would say it in. I can just imagine, and he is one to live up to it, too! I like that kind of a man."

"So do I, Mrs. Hanna. I've liked that kind better 'n better for thirty years. He does live up to it. We've had our share, but somehow trouble never seems to stick to us. It sort o' rubs off like mud when it gets dry. But there is a difference in circumstances."

"Indeed there is a difference, Mrs. Featherby. Just think of this great big house built and fitted up for so much company and such high times, with all the money there was to keep it up in style, and then Mister Haverly dying right out of hand, as you might say, before Nannie was born; and then Gordie — such a bright boy, so noble and good; and now Nannie, struck down so sudden, right at the time of the funeral, and then having the measles that Dr. Graham is so afraid will settle in her eyes if the room ain't kept dark; though for my part I think her eyes are all right now. Of course I didn't have any way of knowing much about her while Nurse Mason was here, only as I heard her coughing nights. That whooping-cough coming on after the measles is just dreadful. Dr. Graham says it will run into consumption if she isn't kept very careful; and, judging by the way it hangs on, I should think it might."

"I know it, Mrs. Hanna. It's awful pitiful. We've talked about it lots o' times, and I've said, 'How strange it is that one thing should follow another in this way!' And then, Mister Featherby, he always catches me up with another of his notion, she said that that was the way things always did, — follow one another. Then he quoted Solomon. He's great on quotations, and this one did come in pretty apt. His quotations generally are apt, for that matter. This was it, that time: 'As the bird by wandering, as the swallow by flying, so the curse causeless shall not come;' and in this case of Nannie's sickness, he says it began with that funeral; that that was enough to frighten the child into fits, leastwise unless it had been brought on gradual, like the Lord brings midnight. I thought first he was putting it pretty strong, and said so. Then he said, 'Just suppose the Lord should drop a section of real black midnight, not more than ten minutes long, right down into some brilliant midday, with a lot of strange, spectral shapes and sounds, such as we had never seen before, what effect would it have on us grown folks?' and I tell you I had to agree with him that it would make strong men act either very ridiculous or very religious. I owned up to it. Then he went on, and said that such a sudden drop into Hades — that was his word for it — for a high-strung, susceptible child like Nannie, who had been used to runnin' and jumpin' with a dog like Rover, and a nurse like you, all day in the sunshine, was enough to give any such child a shock that it wouldn't get over right off. He says it made the cold chills run over him."

"Well, as to that, what can you expect of a funeral? For my part, I thought that one was just beautiful. As for the cold chills, if anybody had 'em, why, of course, that only proves how effective it was. When one invites folks to a funeral, they expect them to feel with 'em just a little bit, at least. I supposed that was what such doings are for. Everybody can't do things just as they would like to, as Mrs. Haverly can; but I think it is awful nice, if one's friends must die, and one must have such things as mourning and funerals, that they can be able to do it up in a way to make other folks sympa-

thize with 'em. If I 'd 'a ' had her money, I should 'a ' had just such a funeral when my Tommy died. I did do the best I could. It cost me two hundred and twenty-five dollars, and I hain't got it all paid for yet. Every dollar I earn keeps him in mind, for it has to be taken into calculation to see if I can spare it to go to help pay up that funeral debt. I borrowed the money of my brother, but I 'm bound to pay it just the same. Sometimes it brings it all back to me how he used to provide for me, so that I have to run off somewhere to have a good cry. *Then* I like a dark corner or some lonely place. But I generally find all outdoors with Nannie and Rover lonely enough for me. I like the wild common flat lands, and the woods, and Rocky Cove. You know Rocky Cove, don't you? That is my best place, with the wind and the sea roaring through it like a lion. You understand, Mrs. Featherby?"

"Yes, Mrs. Hanna, I do. I also understand that a funeral must be a funeral, since sorrow is sorrow. It is all right to feel bad on such an occasion, to go off into the wilderness, and all that. I am very much disposed to do it myself; but I don't think it is the best thing that ever was for health and spirits. I have learned to be glad that the good Lord gave me a man like Mister Featherby to keep me in mind that when David had tears for his meat it was because he sinned, and that when he was willing to stop sinning, and repent, his eyes were delivered from tears. The Lord gives tears as a medicine to those who can't be cured and kept in health without 'em; but he wants to turn everybody's mourning into joy, and to give everybody 'the garment of praise for the spirit of heaviness.'"

"Yes, Mrs. Featherby; that is beautiful to believe if one only could, but — O, I wish I could!"

"Well, then, 'Let some light in,' would be Mister Featherby's advice. You see, one can't believe very well in the dark. If you could just open some of these shutters, now, it would help your faith, Mrs. Hanna; and Mr. Featherby thinks, and I agree with him, that as far as Nannie is concerned, 'specially since it came out that the child would have you to take care of her and nobody else, that you can do just as you have a mind to, — you can let the light into her part of the house, and take her out of doors — and *that* is what she is dying for ——"

"But her eyes, Mrs. Featherby! Doctor Graham says she ought not to be exposed to the light, and must be kept close on account of that cough of hers."

"Doctor Graham! Her eyes! Mister Featherby would say it 's enough to make her blind as a mole to live in the dark as she 's doing. Don't you known what that doctor is after? Mister Featherby does, and I agree with him. We don't ever like to speak uncharitably of anybody, but Doctor Graham just makes his big income off of a few rich families, Mrs. Hanna; and Mrs. Haverly is too good a customer to let off."

"Why, Mrs. Featherby!"

"I tell you it is so, Mrs. Hanna. I know what I am talking about. I got it *straight;* that is, Mister Featherby did. I won't tell just how he got it, though he told me, of course, and I got it from him. It 's the truth. That doctor 's found out just how he can keep a few rich folks as one would a herd of thoroughbred cows, and draws from them as regular as one does milk, an' for the same purpose; so he prescribes darkness for a child like Nannie, besides all his drugs; though Doctor Graham is rather noted for not using much medicine, for he has found out that folks last and pay longer on such treatment as his nurses give without so much drugging as some doctors do. That is all right as far as it goes, but

such treatments! anything that will keep folks from getting well! I hope I ain't too uncharitable; but such doings is criminal, and when one sees crime, they are bound to call it by its right name, or, as Mister Featherby said once, be guilty of compounding a felony. If I were in charge of Nannie as Mister Featherby is, I should do something; but he has his own way o' dealing with everybody. He 'll do right when he gets around to do anything, but meanwhile you can begin."

"Begin? What can I do? I dare n't risk her eyes!"

"You can darken her eyes if you think you must, with a shade, and take the rest of her into the light and air. As for her cough, this fresh, sweet air, and the right kind of treatment will help that. You know I was a trained nurse; worked at it for years after I married Mister Featherby, and I 've had some chance to observe, and I also know something about the principles that are involved. She 'll get down to the T. B. level if you don't look out."

"T. B.! what is that?"

"T. B.? — Oh, short for tuberculosis."

"Horrors! you don't mean it!"

"Indeed I do; and there will be another funeral worse than the other; and then — well, I believe with Mister Featherby that another of the same sort would land Mrs. Haverly in Bedlam, if she does n't get there anyhow, and that would be too bad, for she 's a good woman of her kind.

"Now I have said what I did n't know as I should get at this time, but one thing has led to another until it is out. I 've had this in mind to say to you all along, for you are the only one to say it to. Mister Featherby recommended you to be the nurse of that child because he knew we could say things to you. We 've known each other a good long while, Mrs. Hanna, and I was sure you 'd know good sense when you see it, and so Mister Featherby and I agreed: 'What do we know things for, if it ain't to use 'em?' You know me well enough to know that I would n't come over here and say what I have, without reason."

"Yes, I do, Mrs. Featherby; and I have had a sort of dim understanding of some of these things myself; but I did n't feel the responsibility, 'specially while Nurse Mason took care of Nannie. I thought I was only a hired servant; at least until the dear child rebelled, and would have me in spite of anybody. Then, of course, when Mrs. Haverly stepped in and said Nannie *should* have me if she wanted me, I felt as though I was just a *little* more."

"Of course; and you ought to be a good deal more. To be just a hired servant would be a very low level to work on. The way things have turned, makes you responsible for a good deal. That child's life is practically in your hands."

"I have thought of that, too, and it has made me almost afraid. I have n't liked a good many things, but could n't see what I could do only just to obey and let things go on."

"You can open the windows in her room and give her some air. You can shade her eyes, let the light in, and just see what she will do. You need n't say a word. Let her have a chance to act out nature, and she 'll do it just as a potato sprout would; see if she don't."

"I don't see how it could do any hurt to anybody to try that, or be actually disobeying orders."

"What a timid soul you are. Of course it can't. The only thing it can hurt is that doctor's bill, and that is not worth letting the child die and Mrs. Haverly go insane for."

"I should say not. Well, I 'll try it anyhow, and see what I can do. Of course, it ain't expected that any of the

servants will live shut up, and I 've had my rooms open all the time; but I have kept the door into Nannie's shut. Only since Nurse Mason left, I 've had it hooked back open as usual, and, of course, the fresh air has gone into her room. She has rested better, I 've noticed that, and she has begun to improve a little by the change from Nurse Mason to me. Everybody noticed that; and since you have said what you have, with some other things that have come into my head, I can't help but think that Doctor Graham is a little anxious. I could n't quite understand *that*, but I do now."

"Well, you just leave your door open all day. That is all you need do. That east and south corner — nothing could be better. Nobody can find any fault with that, since you have her to take care of.

"And now there is another thing. I may just as well unload myself of all that me and Mister Featherby has talked over since that day. Don't you know those black dresses are an awful cloud over that child?"

"At first, yes; but she don't mind that now. We had a regular fuss with her at first. Madame Neil and I were in despair about ever getting her dressed for the funeral. But when she got able to be about after she had the measles, she never seemed to notice."

"Poor young 'un! It is cruel to have her get so she did n't notice, for 'tain't natural."

"Well, she 'll have to wear those dresses, Mrs. Featherby. I am not equal to attacking Mrs. Haverly on any point, much less that. I 'll leave my room door open, and make a shade for her eyes. That can't make any trouble, and I 'd like to see what the child would do if your notion is correct; but I can't go any further, leastwise not now."

"Well, one thing always leads to another, Mrs. Hanna, and I guess we can trust nature. As for my notion, as you call it, that is Mister Featherby's; but I believe it is sound sense. He says that the shock Nannie received just threw her whole system open for measles or anything else to come in, and that they must be got out by the same way they came in; or, that is, that the door must be opened for nature to get back and take her old place in that child's life, or she 'll die."

"Well, Mrs. Featherby, I see light in what you have said, as my good old mother used to say about everything that struck her just right. I 'd 'a' done all these things for a sick child if I 'd 'a' been free to follow my own bent, and I 'll begin to-morrow morning, and go on just as fast as I can. I can't have her die. I hain't nursed her ever since she was born, for nothing; she 's more to me now than she is to her own mother."

"We know that, Mrs. Hanna, and we love the child, and feel responsible; for you know when Mr. Haverly was dying he called for Mister Featherby, and said to him, 'John, you 've been a good steward, a regular father to me, and now I wish you to watch over all the interests that I must leave behind me, — the boy, and the child that is to come, especially, whatever Mrs. Haverly may think of doing. Keep an eye on my children, and be a father to her if she will let you.' She has n't been very willing to be fathered, but yet she always treats Mister Featherby with great respect — we must say that — and me, too; but I 'm careful not to intrude. I leave her for Mister Featherby to talk to. Of course being guardian of the children and manager of all the estates makes him very responsible, and makes her respectful; though as to that, she would be anyhow, for she is a lady. As I started to say, we know what you are to that poor child, and we don't intend to have her die out of your hands if anything we can do will help it. That 's

why Mister Featherby and I thought I ought to come and chirk you up this afternoon; and if you get into a place that you can't get out of alone, you just drop us a hint, for we don't intend to let things go too far in any wrong way without stepping in, you understand?"

"Yes, I understand. If I didn't, I wouldn't dare even leave my door open. One thing, too: I understand about Nannie as I haven't before. Every night when I am putting her to bed she says in such a pleading way, 'You won't shut your door, will you, Mrs. Hanna?' and I have noticed that she begins to breathe better every time after it has been open a while. I have wondered about it, too, for it 's night air, you know. And another thing I 've wondered at — she coughs more days than she does nights; and I believe now it 's the close air that makes it."

"Of course it is. Well, you go on now, do your part, and Mister Featherby 'll stand by you."

That night Mrs. Hanna retired with her mind and heart very active. After a while she arose and went into the room where the child was dozing rather restlessly, and lifted one of the windows a little, making a direct draft through, placing a screen to turn the air entirely away from the bed. The tears came to her eyes as she saw how quickly and automatically the machinery of the little body responded to this life-giving current. The child turned toward it at once, threw her chest out, and with unconscious eagerness drew it in.

"You shall have all you want of it, you poor lamb," was Mrs. Hanna's sobbing reply to this silent appeal, and as she laid herself down again, it was to weep glad tears that she had heard and heeded the voice of Life. For the first time in many a year she prayed for strength, and thanked God for duty.

The child had a good night, but her cough wakened her early, and called Mrs. Hanna to her help. In leaving her room she looked back to make sure that the shades were up, so that that southeast corner might not fail in its part of the day's program. She had gathered faith in it through the night, so that the morning found her imbued with inspiration from the Voice that had spoken again and again during a long, waking vigil, and she was determined to give the child a chance.

It was with altogether new thoughts and feelings that she made her comfortable that morning, and she went down to prepare her breakfast, with some appreciation of even the part which food might have to play in this work. Things were brought to mind to which she had never before given a second thought, and which led to an entirely new combination of food elements on that breakfast tray. She could not help smiling as she recalled Mrs. Featherby's remark that one thing follows another, for her mind was full of germinating suggestions.

Longer than usual was required for preparing that breakfast, and when she returned with it, she was at first startled to find the bed and room deserted, for not once before had the child arisen of herself. She had waited to be carried.

But while she stood an instant holding the tray, there came from the farthest southeast corner of the adjacent room the sound of a little hacking cough so pitiful with its pathetic baby intonation that she could not endure it with composure. The story that it, with the vacated bed, told, melted her heart, and setting the tray on the table she gave way to bitter sobbing, which was not to be suppressed even when a weak little voice called out to her,—

"What makes you cry, Mrs. Hanna? Just come out of that dark hole. There 's an awful nice warm sunny place in here. Come quick 'fore I drink it all up. It 'll make you laugh just like everything."

(To be continued.)

WHY PEOPLE HAVE CANCER.

BY DAVID PAULSON, M. D.

THE belief in the hereditary transmission of cancer has a deep-seated foothold in the popular mind, but most careful observations have failed to give it sufficient support. Dr. Daniel Lewis, professor of malignant diseases in the New York post-graduate school, has come to the conclusion, after carefully looking into the history of hundreds of cases, that the children of cancerous parents have no special susceptibility to the disease, unless the same causes that favored its development in the first place continue to operate to the third and fourth generations.

An individual becomes susceptible to cancer in the same way that slime gathers on the top of a stagnant pool, that moss forms on the bark of a dying tree, or that tubercular germs flourish in the human system when its vitality is low. Whether an individual shall become a victim to cancer, tuberculosis, or rheumatism depends largely upon which of these his vicious habits of life have specially trained and prepared him for. The causes of such diseases as tuberculosis and cancer are as plentiful as matches, and we ourselves by our physical sins of omission and commission are storing up the powder-magazines which make these matches so dangerous when some circumstance, over which we perhaps have no control, touches them off.

The grim harvest of cancer cases is increasing mightily year by year, and logically this suggests that there must be an increased sowing of the same. Dr. Roger Williams, in the *London Lancet*, calls attention to the fact that the cancer death-rate has kept pace with the consumption of meat: "Statistics show that the consumption of meat has for many years been increasing by leaps and bounds, till it has now reached the amazing total of one hundred and thirty-one pounds a head per year, which is more than double what it was half a century ago, when the conditions of life were more compatible with high feeding." Think of filtering through the human system the waste products stored up in this amount of flesh; think what a potent factor it must be in preparing the soil for the inroads of this disease. While fifty years ago cancer was responsible for but one death in one hundred and twenty-seven, it now claims one victim for every twenty-two deaths! Dr. Williams speaks thus of this increase: "The proportionate mortality from cancer now is four and a half times greater than it was a half century ago. In this respect its position is unique, for no other disease can show anything like such an immense increase." Roswell Park, the eminent surgeon, after studying statistics upon this subject, intimates that if cancer continues during the next ten years as it has in recent years, it will then claim more victims than consumption does at the present time. There is no doubt that with careful examinations and better methods of diagnosis many cases of this disease are now recognized that were ignored several decades ago, thus tending to render the figures upon which Dr. Park bases his estimate somewhat unreliable; but no one will deny that cancer is alarmingly on the increase, as also are other diseases which prey upon a weakened organism. Dr. Frazier, after collecting extensive facts on this same subject, finds that the intemperate are especially bright and shining targets for cancer, and also those living amid unsanitary surroundings.

Dr. Pryor, of Buffalo, in a recent article

on this subject, remarks: "The fatal disease, cancer, appears to be increasing with such rapidity that the mere mention of the fact is enough to cause apprehension and alarm, and to stimulate a desire to learn more of the cause and nature of the malady." It would seem as if nature were hanging out this dread signal, which should echo the words of the Scripture in the ears of every one sowing for disease: "Turn ye, turn ye, for why will ye die?"

So long as the consumption of alcohol, tobacco, flesh, tea, coffee, and spices continues to increase among men, just so long will cancer specialists become more and more numerous, and patent-medicine men will pay for more and more space in the advertising columns, calling attention to the "New Sure Cure" which has been discovered not only for this, but also for various other diseases that follow in the trail of health-destroying habits.

AT MRS. GREEN'S.

BY MRS. M. P. A. CROZIER.

"THE children ain't very healthy," said Mrs. Green to her neighbor, "and our doctor bills are considerable, off and on; seems as if we could n't lay up anything! Here 's my little Willy, now. I don't know what ails him, but I don't feel as if he was long for this world." And she snatched up and kissed a little shaver whom she pulled out from behind her rocking-chair, and who had a "chunk" of salt pork in one hand and a piece of new bread in the other. These he had stolen from the pantry.

"Oh, you little rogue!" said the mother, "you are so greasy you ain't fit to kiss; but I can't help it, Miss Day," looking at the two-year-old. "Mothers don't mind, you know. It 's strange, ain't it, how we love the little fellows?"

Willy dropped the pork and bread on his mother's clean white apron, threw both arms around her neck, and said, "Me love mama."

"He 's such an affectionate child," said Mrs. Green, "'t would kill me to lose him."

"He does n't look well," said Miss Day, "I would n't dare let him eat such things."

"Would n't you? Why, he loves hot bread, and has eaten fat pork ever since he was six months old."

"Does n't your doctor object to it?" asked her neighbor.

"Oh, he never asks me anything about his eating; he just leaves the medicine and tells me how to give it. I believe this ain't a healthy neighborhood, Miss Day, though your folks seem well enough, for all there were so many deaths in the house before you came."

"I think we found out why it was," she replied.

"What?" was asked.

"Dirt."

"Oh, well, I 'm sure that ain't the trouble in *my* house! I 'm sure I scrub enough to wear one's life out. I always wash my floor on my knees twice a week. My kitchen stove is another thing; I black that every day."

"Yes, your floor is beautiful, Mrs. Green, and the stove makes a nice contrast with the white boards."

But Miss Day had noticed a musty smell in the house when she entered that she could not account for — everything looked so clean. Now she began to think that there was no cellar under the floor, and

that the scrubbing water must run through the cracks on to the timbers and ground, and make them moldy, and so musty smells were all the while coming up and spreading through the rooms. So with all the neatness, the house was not really clean.[1]

Miss Day also noticed some other things in Mrs. Green's home, such as a woodbox half full of decaying chips, and thought maybe there was a whole garden of yellow mold growing up among them. But she was not a health officer, and did not dare to express her opinion.

"It is a pity," she said to herself, "that such a good woman, and one who knows so much, too, about some things, should be so ignorant about others so important." She did not wonder that little Ida had just been having chills. "I don't see," she said, still to herself, "why doctors don't do their duty, and instead of telling people they have malaria, just come out plain and tell them what it means!"

THE EDUCATION OF APPETITE.

BY MRS. E. E. KELLOGG.

IT is a well-recognized fact that physical health and strength depend very largely upon the character of the food eaten. It is no less true, although not so generally known, that disposition and character are largely influenced by diet. Appetite, like all natural instincts, is susceptible of education, although in the majority of cases it is left to a chance development, which leaves the child subject to, rather than ruler of, his appetite. Depraved appetites are often inherited, but are quite as frequently created through lack of thought and training. To be eminently successful in the right education of appetite it is necessary to begin at the very outset of life. Picture, if you will, the first epoch of the life of the average child. Eating is for some time the chief activity of his babyhood. During this period of helplessness, every expression of pain and discomfort is too commonly met by his anxious caretaker with proffers of food, until the gustatory sense, habitually gratified to appease the demands of all the other senses, becomes the regnant propensity. The immediate result of this treatment is the inauguration of disordered digestion, manifested by an abnormal craving for the pleasurable sensation produced by eating and drinking. The ultimate outcome of such management is that it teaches the child to crave animal sensations, and establishes a dom-

[1] A singular confirmation of this idea of danger was reported to the Michigan State Board of Health by Dr. Vaughan, of the University of Michigan. The case was one of tyrotoxicon poisoning from the use of bad milk. A condition of things beneath the floor was found similar to that described.

Dr. Vaughan soon made up his mind that the sickness was probably due to the bad and unwholesome condition of the house, which was fifty years old, and nearly rotten. One floor was nearly rotted away, and was covered by a newer one. The house had settled a good deal; there was no cellar; the land in all directions sloped toward the house, so that the building was constantly on damp soil, as there was no artificial drainage. The sweepings and moppings for years had accumulated in the cracks of the floor, so that when the floor was taken up, a nauseating odor arose. The farmer sold cream to a creamery in the neighborhood, the proprietor of which had received the documents of the Michigan State Board of Health on cholera infantum and poisoning by cheese, milk, etc. He induced the farmer to keep his milk away from the house and in a cool place until the cream was collected and taken away. The milk consumed by the four members of the family was kept in a small closet, or pantry, in the house, where they frequently went and helped themselves to milk. They had been sick in the same way a number of times before this violent outbreak which resulted in the death of two of their number. Dr. Vaughan made experiments as follows: He placed fresh milk in the pantry for a short time, and then found enough tyrotoxicon had developed in the milk to make a cat sick. He took some of the earth under the pantry floor, and placed a small quantity of it in some fresh milk, soon after which tyrotoxicon was obtained from the milk, while none could be obtained from another sample of fresh milk which stood by the side of the milk in which the earth had been placed. This seems to demonstrate that the soil contained the germ of decomposition which produces the poison.

inance of appetite, a love of gratifying the senses for the sake of the sensation, which, indulged in one direction, will be hard to restrain in others, and which will cast its influence over his entire life.

The abnormal appetite created by deranged digestive functions opens a door through which, if unguarded, a whole train of evils — gluttony, intemperance, and impurity — may enter later in life.

The habitual use of stimulating or unwholesome and indigestible foods, or any habit which results in the impairment of the integrity of digestion will tend to undermine the resisting power of the will through lowering the vital tone of the body.

Children allowed to eat at all times, to overeat, to eat without need, and simply because they enjoy the taste, being thus taught self-gratification rather than self-control, are thereby placed in strong bonds under the dominion of their lower natures. Is it to be expected that the child who through years of wrong education has been in bondage to appetite will be able to arise and shake off its shackles, and keep under the body, and bring it into subjection when the years of youth and maturity are reached?

Wrong tendencies, as well as right ones, are continually strengthened by exercise. The desire to gratify inclination and satisfy taste does not lessen with the increase of years. Froebel says, "Impressions, inclinations, appetites, which a child may have derived from his food, the turn it may have given to his senses and even to his life as a whole, can only with difficulty be set aside when the age of self-dependence has been reached. They are one with his whole physical life, therefore intimately connected with his spiritual life."

In how strong a light do these facts place the responsibility of parenthood! At the same time they emphasize the mother's wondrous privilege to intercept temptation and build up bulwarks against evil by the establishment of correct habits of eating and drinking, controlled by the real needs of life. Froebel offers these suggestions to the mother: "Always let the food be simply for nourishment; never more, never less. Never should the food be taken for its own sake, but for the sake of promoting bodily and mental activity. Still less should the peculiarities of food, its taste as a delicacy, ever become an object in themselves, but only a means to make it good, pure, wholesome nourishment, else in both cases the food destroys health. Let the food of the little child be as simple as the circumstances in which the child lives, can afford, and let it be given in proportion to his bodily and mental activity."

The sense of taste was provided by the Creator, not for mere animal enjoyment, but to enable us to distinguish between wholesome and unwholesome foods, and as an aid to good digestion. When it is divorced from its natural and physiological purpose, it becomes a source of mischief.

Says an eminent writer: "The child is taken, when his training begins, in a state of naturalness, as respects all the bodily tastes and tempers, and the endeavor should be to keep him in that key; to let no stimulation of excess or delicacy disturb the simplicity of nature, and no sensual pleasuring, in the name of food, become a want or expectation of his appetite. Any artificial appetite begun, is the beginning of distemper, disease, and a general disturbance of natural proportion. Intemperance! the woes of intemperate drink! how dismal the story when it is told; how dreadful the picture when we look upon it. From what do the father and mother recoil with a greater and more total horror of feeling than the possibility that their child is to be a drunk-

ard? Little do they remember that he can be, even before he has so much as tasted the cup; and that they themselves can make him so, virtually, without meaning it, even before he has gotten his language! Nine tenths of the intemperate drinking begins, not in grief and destitution, as we so often hear, but in vicious feeding. Here the scale of order and simplicity is first broken, and then what shall a distempered or distemperate life run to more certainly than to what is intemperate? False feeding genders false appetite, and when the soul is burning all through in the fires of false appetite, what is that but a universal uneasiness? and what will this uneasiness more naturally do than betake itself to the pleasurable excitement of drink? What is wanted is a sensation — the soul is aching for a sensation; for it is one of the miseries of food that the tasting pleasure is soon over and the cloyed body turns away in disgust; one of the excellencies of drink, that the sensation is a long one, and may be easily drawn out so as to cover whole hours of duration. Food, sleep, friends, the self-enjoyment of character, — what an excellent and easy substitute it is for them all! Thus, for example, when a very young child, taken by the captivating flavor of some dainty or confectionery, has refused to restrain itself, and has kept on, as by a kind of spell, repeating the sensation again and again, till the organs, dried and cloyed by excess, refuse to give it longer, you will see that a wonderful uneasiness follows, asking, What sensation next? and really there is nothing that can fill the vacant space, or quiet the uneasiness. One toy or another will be seized and thrown into the fire. The plays that before satisfied look insipid, and do not please. The world goes ill because there is nothing good in it, and a general cry finishes the overdone pleasures of the day. And here you have in small, as in a single view, just that misery of distemper and uneasiness which is wrought by the bad feeding of childhood, and prepares the vice of intemperance, even before it appears.

"The finer sentiments and wits of children are smothered also and deadened by this same animalizing process. The children make a dull figure at school. Their feeling is coarse, their conscience weak, their passions low and violent. Their higher affinities, those which ally them to God and character, appear to be closed up. A certain degree of selfishness is likely to be developed somehow in children, for sin of every kind is selfish; but the lowest, meanest, and most utterly degraded type of selfishness is the sensual, that which centers in the body, and makes everything bend to bodily sensation. And yet the early feeding and growth of children tends, how often, to just this and nothing higher. Saying nothing of genius and great action, impossible to be developed in this manner out of the finest organization, what sensibility is left for Christ and God when the body has become the total manhood? And exactly this it will most certainly be, if first it becomes the total childhood.

"It should not be a permitted practise to quiet the child in states of irritation, or stop it in crying, or pacify it in fits of ill-nature by dainties that please the taste. What is this but a schooling and drawing out of sensation, by making it the reward of just that which is most totally opposite to self-government? It must be a very dull child that will not cry and fret a great deal, when it is so pleasantly rewarded. Trained in this manner to play ill-nature for sensation's sake, it will go on rapidly in the course of double attainment, and will very soon be perfected in the double character of an ill-natured, morbid sensualist, and a feigning cheat besides.

"Simplicity also, as opposed to luxuries, condiments, and confections, is a condition of all right feeding for infancy and childhood, which ought to approve itself to the most ordinary measure of parental discretion.

"In a wise, physical nurture, it is a matter of great import also to regulate the times of feeding, for this induces the sense of order, which is closely allied to a habit of self-government. If the nursing child is simply stuffed to its last limit, at any and all hours, then it is put in the way, not of intelligent feeding, which is interspaced by rest, but of always being filled to its limit. The feeding must, of course, be as much more frequent in infancy as the demands of a more rapid consumption require, but there should be times, and a degree of order established as soon as possible; otherwise the stuffing method will go on into childhood and boyhood, and by that time the bodily habit is in total disorder, carrying the tempers and general character with it. The breakfast before breakfast, and the dinner before dinner, and the casual snatching and feeding at all hours between bring the child to the table with a scowl upon his face, and a nervous, morbid look of disgust, which declare, as plainly as possible, that there is nothing good enough prepared for him; and, quite as plainly, that he is a poor, misgoverned and spoiled child. He is overtaken by all the woes of sensuality, and yet has gotten almost none of its pleasures; for he is always kept, by his irregular, ungoverned feeding, so close up to the line of possible appetite that peevishness and ill-nature are the spice of all his sensations, and his body and soul are about equally distempered by the morbid irritations and dyspeptic woes that have come upon them. What a preparation is this for the calm, sweet, thoughtful motives of religion, and the gentle whispers of God's truth in the heart!

"It should also be understood in the training of children how great mischiefs are likely to follow when much is made of the pleasures of the table. If the feeding is the great circumstance of the house and of the day, if the discourse turns always on the peculiar relish of this, or the wonderful delicacy of that, and the main stress of life in general on the bliss of good living, it will not much avail that the parents have a certain wish to see their children grow up in religion. A stranger falling into such a family will be amazed to find how pervasive and spirit-like this most unethereal, undiffusive kind of bliss may be. The smack of appetite will seem to be in the atmosphere of the house. It will be as if the gastric nerve of the family were become the whole brain. A certain coarseness of feeling and character will appear in everything. The grain will be coarse, both of body and soul; and the general expression of manners, faces, and voices will be such as indicates a reduction of grade in all the finer impulses of society, intelligence, and duty. The family affections themselves will seem to have fallen back to make room for the valued bliss of the appetite.

"It is a much greater point, in this connection, than is commonly supposed that children should be trained to good manners in their eating. Good manners are a kind of self-government which operates continually to keep the body under, and hold the sensualizing tendency of food in check. Animals have no manners, and the higher gift of manners is allowed to man to keep him from the coarseness and lowness to which his animal nature would otherwise run. In this view, good manners are even a sort of first-stage religion, for the reduction of the body. If the child is practised carefully, at his food, in deferring to superiors and seniors; in the restraint of haste or

greediness ; in the proprieties of positions, and the handsome use of tools ; in the limitation of his feeding by his wants, and a good-natured submission to restriction when restriction is needed for his good, he will not grow sensual in that manner, but his mind will be all the while getting sovereignty over his body. Good breeding and civility are, in this view, indispensable. The Christian training of children without any care of their manners in these respects is only the training, in fact, of barbarians and savages, in the houses of such as call themselves Christian people."

THE OLD HOMESTEAD.

"SOME Common Sources of Impurity in Country Houses" is the subject of a paper by Harvey D. Bashore, M. D., in the *Sanitarian*. Of cellars and wells he speaks as follows : —

"Cellars in country houses furnish another source of impurity, not only by being pervious and damp, but by being the receptacle of decaying wood, vegetables, etc. Then, too, the absence of sunlight — a characteristic of cellars — favors bacterial growth. The housewife keeps her cellar dark because in summer it will be cooler, and in winter the so-called windows are boarded up to keep out the cold. Cellars should be kept as clean as any other part of the house, and should have proper-sized windows to let in the sunlight. The sun is one of the greatest germ destroyers we have, and is superior to all other germicides in that it costs nothing.

"So much has been said about the country well that it needs only a word in this purview. The country people love their 'old wells.' They always tell you: 'Why, nobody ever got sick from our well!' I came across just such a well within the last few months. Three generations back this old well furnished water for the same family, and no one, in fact, ever became sick from it. At last the old folks died, and the second generation started on its way with a large family of sons and daughters. Still no one became sick. The third generation became men and women, and still resided at the old homestead; then, at last, after so many years, the old well began its deadly work. One after another of the family was stricken with typhoid fever until four were ill at one time, and that homestead will never be the same it once was, for there are two vacant places, and this old well, which before had 'never made any one sick,' yielded on chemical examination 17.0 parts of chlorin per 100,000 — not far removed from dilute sewage.

"The allurements of the 'Old Homestead' seem very enticing on the stage or on canvas, but under the exacting eye of the sanitarian, with his increased angle of vision, 'things are not always what they seem.'

"The vine-clad porch, with its wistaria and fragrant honeysuckle, where 'mother used to sit,' resolves itself into a damp, musty, sunless nursery of the chronic rheumatism which made 'mother's life a burden.' The old well, with its 'pure, sweet water,' has become a vast test-tube of colon bacillus at least, if none other, and the delightfully pure air, redolent with the perfume of flowers, has become an air surcharged with moisture reeking with the gases of decomposition, from a befouled soil, and a cellar soil and air saturated with the moldy débris of decayed vegetables. Such is not rarely the true story of the 'old homestead.'"

A Queer Taste.

According to a Parisian journal, says an English exchange, there exists in the gay capital what are called *buveurs pétrole*, or "petroleum drinkers." True, the baneful and disgusting habit is only peculiar to the Bastile quarter as yet; still, it is spreading with alarming rapidity, and is an unforeseen and additional monster in the list which the temperance societies will have to deal with. When the discovery was made, it was thought that the habit was the direct result of the increased tariff on alcohol which had lately been imposed, and which, of course, in proportion affected the price of even the laborer's cheap and nasty *petit verre;* but it transpires that such is not the case, inasmuch as the habit existed long before the surtax on alcohol was thought of. Moreover, it appears that the "pétrolies" have a marked preference for this illuminating medium, possibly because, as it is asserted, "there is no headache in the bottle." Nevertheless, it is an acquired taste, like that for tomatoes. The species of intoxication produced by this new drink differs somewhat from that of ordinary alcoholic beverages in that the "pétrolie" is exceedingly morose, though less inclined to brutality. His sleep is calm and natural, and upon awakening he seems none the worse for his little tipple, apparently enjoying his usual health. As to its ultimate effect upon his system, doctors in this, as in all other cases, agree to differ. Some declare it to be harmless if used in moderation, it being a capital vermifuge and antispasmodic, while others say that in all proportions it is dangerous; for it is palpably conducive to derangements in the organism, and creates the germs of moral maladies.

"WHERE DOES THE NIGHT GO?"

"WHERE does the night go?" asks the baby,
"Where does the night go, when it 's day?"
And the merry brown eyes are deep with wonder,
And the mischievous hands have forgotten their play.
Where does the night go? little dream-rover,
Where does the night go, when it 's day?
Over the roofs, and the fields, and the river,
Over the hilltops and far away!
The night and the stars, they went together;
And the baby's dreams, they, too, are gone;
And they'll not come back till my little dream-rover
Is snug in her nest with the curtains drawn!

—*Edith M. Thomas.*

EDITORIAL.

THE FOOD VALUE OF THE TOMATO.

THE tomato is sometimes subject to controversy as to whether it is a fruit or a vegetable. The truth seems to be that the tomato is a fruit in the herbarium, and a vegetable in the market. Dietetically, it seems to occupy a sort of middle position. It is acid like a fruit, but at the same time is composed of so large an amount of woody structure, or cellulose, that it must often be excluded with the same class of cases in which coarse vegetables are proscribed.

The tomato unquestionably possesses a high dietetic value, and has been especially recommended for use in cases of blood impoverishment, a suggestion which perhaps rests upon the fact that it contains a considerable amount of iron. The presence of iron may easily be detected by applying to the cut surface of a tomato the ordinary tests for this reagent. As a food for supplying iron, the tomato is far superior to any of the combinations of iron so commonly used as a means of enriching the blood. It has long been known that these inorganic compounds can not enter into the composition of the blood. It is possible, however, that they may sometimes be useful; for, as has recently been suggested, while they do not enter into the composition of the blood, they serve to neutralize acid substances which form insoluble salts with the iron of food, and thus prevent its absorption and assimilation. In other words, they act as protectives of the nutritive iron compounds of food.

The tomato may serve a similar purpose, not only by supplying the sour of iron, but, by the introduction of a larger amount than is needed, providing for the conservation of the amount actually required.

These suggestions rest almost wholly, it must be confessed, upon a theoretical basis, so can not be relied upon too much; but it is unquestionably a fact that the tomato is a most valuable fruit, and that, when properly cooked, it is well received by all stomachs capable of receiving any food at all, except perhaps, in cases of chronic gastritis, and its use may be advantageously encouraged

DINNER-TABLE DISSIPATION.

PROBABLY comparatively few of those who are addicted to harmful and vicious dissipation at the dinner-table are really aware of the fact that they might properly be charged with gluttony. Gluttony is eating for the pleasure of eating, without regard to the taking of food to satisfy the necessities of the body or to preserve life. The question with the vast multitude of people in civilized lands is not, "Do I need to eat?" but, "Can I eat?" It is not, "Does my blood need nutrient material to nourish it?" "Do my muscles need material with which to support the demands made upon them for energy?" "Do my nerves need recreation, or a supply of material from which the nerve cells may be provided with energy?" "Does the ever-consuming fire within my body need fuel to maintain animal heat?" The more common question is, "Can I obtain pleasure from the taking of food?"

Nature usually employs a sufficient safeguard against repletion by taking away the appetite when an excessive amount of food has been ingested. Man, however, contrives to circumvent nature, and refuses to take the hint that no more food is needed, by creating an artificial appetite by the use of mustard, pepper, pepper-sauce, and various other condiments, and by stimulating the palate by means of highly seasoned dishes and palate-tickling combinations in great variety.

A vast multitude swallow at meals not simply what the body demands, but until the stomach is full, continuing to eat until the sense of satiety becomes so great as to render food obnoxious. The sense of fulness in many cases passes away when the stomach is relieved of a part of its burden, and in some countries and with many people it is quite the fashion to crowd more food into the stomach so long as there is any room for it, without considering whether the body at large has had time to utilize or consume the food substances passed into it.

In uncivilized lands, the great majority of men and women find the battle of life so hard, and subsist upon a dietary so simple that food is taken only in such quantities and at such times as necessity really demands. In more favored countries, where wealth has been accumulating for many centuries, and where the average man lives like a prince compared with the primitive people in uncivilized countries, eating has come to be more and more a matter of pleasure and luxury. The ancient Britons, like both the ancient and modern Greeks and Romans, subsisted upon two meals a day; in fact, this was the custom until comparatively recent times in the British Isles, and still is in India, South America, Japan, China, and most countries of the globe. Fully a thousand million of the world's inhabitants take regularly but two meals a day, and these quite as simple as those of the Greeks who lived and still live chiefly upon maize, corn, vegetables, and beans, with olive-oil, or ripe olives preserved with a little salt. In American homes three meals a day are the custom. In England, food is always on the table, and is served regularly five or six times during the day. On board a Channel steamer, recently, between Flushing and Queensboro, the writer noticed a ruddy old Englishman who seemed to be able to occupy himself in no other way than by eating. Every half-hour at least he slipped into the dining-room, and called for something to tickle his palate. Now it was a ham sandwich, then a glass of beer; his next visit, cheese and crackers, then a cup of tea. At half-hour intervals bread, orange marmalade, fried eggs, stewed oysters, sardines, and sundry other comestibles were made to do duty in the production of gustatory sensations. The whole business of life with this man seemed to be to eat; his one pleasure, apparently, consisted in tickling his palate. He was obese, sodden, and his face wore a gross, swinish expression.

Comparatively few, perhaps, go to such extremes in gormandizing as in the case referred to; but, nevertheless, it is the primary question in quite a large proportion of homes, when the bill of fare is at hand, "What will taste good?" "What will be relishable?" "What will a person wish to eat when he feels no necessity for food?" The majority of persons in civilized lands feel the necessity for stimulating the appetite. This is the natural result of the use of food so difficult of digestion that the digestive powers are weakened and the stomach exhausted, while the food is taken at such frequent intervals that the overworked stomach has not time to accumulate sufficient energy to enable it to make a natural demand for food, expressed in the normal sensation of hunger. The sensation which many people call hunger is not natural hunger, but the result of exhaustion and irritation of the mucous membrane of the stomach — the "all-gone" feeling of which many people complain at night if the evening meal is omitted. It is not due to a real necessity for food, but to the contact of the irritated surfaces of the stomach — a sensation seldom felt by many people for the reason that the stomach walls so infrequently have an opportunity to come in actual contact. Eating in such cases affords relief for the reason that the irritated surfaces are separated, food acting like a poultice in holding the diseased surfaces apart.

The habit of eating simply for enjoyment is the root of a vast multitude of evils. It leads to the use of many articles of food for no other purpose than to produce a new tickle, a novel sensation. It is said that the ancient Romans, after having exhausted their ingenuity in creating new combinations, went so far as to resort to extraordinary means of producing new gustatory delights; for example, one old Roman glutton spent a fortune in preparing a meal, the chief attraction of

which was a soup concocted from the tongues of twenty thousand thrushes, while another sought to give to his eels a gamey flavor by baiting the eel-pots with the flesh of slaves slaughtered for the purpose. Modern gluttons dip live lobsters into boiling water to give them an attractive red color. One does not have to go back many centuries to find the custom prevailing in England of baiting bulls in order to render the flesh more tender. The flesh of the bull worried and tortured to death in a bull-fight in Mexico, finds a ready market among the gormands of the republic, while the putrefying flesh of the hunted-to-death stag is considered an equally relishable dainty by the *bons vivants* of our American cities.

The man who sets his face against the popular gluttonous practises of the day is made the butt of ridicule as much as were the ascetics, who were the dietetic reformers of ancient Greece; but an asceticism capable of producing such a noble philosopher as Pythagoras, such a moral reformer as John the Baptist, such a poet as Milton, such a scientist as Newton, must have in it a potency greater than that which actuates the faddist or the whimsical dreamer. To-day there are needed, more than at any time in the world's history, men and women who are willing to be voices crying in the wilderness of erroneous habits, death-dealing luxuries, and false notions respecting human life, human duty, and human obligations.

BRAXY MUTTON.

We have been hearing a great deal lately about "embalmed beef," "carrion beef," etc.; for example, a Mr. Thomas Dolan, who claims to have been for several years a superintendent in Mr. Armour's abattoir, made the following statement to the newspapers a few weeks ago, to which he swore as being correct: —

"I have seen cattle come into Armour's stock-yard so weak and exhausted that they expired in the corrals, where they lay for an hour or two, dead, until they were afterward hauled in, skinned, and put on the market for beef, or into the canning department for cans. It was the custom to make a pretense of killing in such cases. The coagulated blood in their veins was too sluggish to flow, and instead of getting five gallons of blood, which is the amount commonly taken from a healthy steer, a mere dark red clot would form at the wound; in other words, the Armour establishment was selling carrion.

"In cases where tuberculosis became evident to the men who were skinning the cattle, it was their duty, on instructions, to remove the tubercles, and cast them into a trap-door provided for that purpose. The order went out to dispose of all evidences of disease whenever these evidences manifested themselves to the naked eye. I have seen hundreds and thousands of cattle pass inspection that should have been consigned to the destroying tanks. I have witnessed men tearing off with their naked hands large tubercles growing along the ribs, intestines, lungs, and vital parts of slaughtered steers.

"No disease known to medical science has clutched so many victims and made them helpless invalids as tuberculosis; and yet in Mr. Armour's packing-house in Chicago they are canning it to-day by the billions of germs. The inspectors knew it, the packers knew it, the very men working in the stock-yards knew of the danger of tuberculosis, but they had received orders to wipe out the growths, remove them so the inspectors could or would not see them, and the unhealthy cattle were hung up in the refrigerators, subsequently to be carved, and sold to the innocent public as sound and healthy food.

"I have seen as much as forty pounds of flesh afflicted with gangrene cut from the carcass of a beef in order that the rest of the animal might be utilized in trade. It was at that time, and is still, regarded as wasteful to discard any portion of a steer that can possibly be used. The mere fact of its having been condemned does not destroy its worth

to the packers, who save everything but the squeal.

"I write this story of my own free will and volition, and no one is responsible for it but myself. It is the product of ten years of experience and intimate association with the things and places and men herein contained. It is the truth, the whole truth, and nothing but the truth, so help me, God."

There is no means of knowing whether or not the statements made by Mr. Dolan are correct. It is hard to believe that Mr. Armour would be willing to trust his reputation in the hands of the laboring men who work for him, many of whom he has probably never personally met, and whose tongues he could control no better than Dolan's.

The point which interests us is the fact that so many people should be disturbed by Mr. Dolan's statement and others of like nature which have been going the rounds of the press; such, for example, as that made by the health commissioner of one of our large cities, to the effect that if all diseased animals slaughtered in that city were rejected, the price of beef would be one dollar per pound.

The difference between diseased meat and that commonly consumed is by no means so great as is ordinarily supposed. The Scotch Highlanders, living almost wholly upon oatmeal, when they do occasionally indulge in meat eating, choose the so-called "braxy mutton;" that is, the flesh of a sheep that has died of some malady or been accidentally killed. The Highlander receives as compensation for his labor, in addition to his small annual or monthly salary, the privilege of eating those animals which die of themselves. Notwithstanding the general prevalence of this custom in certain parts of Scotland, it is asserted on good authority that it is rare that any special disease can be traced to this practise.

It must not be concluded from this, however, that braxy mutton is a wholesome food, but rather that the difference between the animal that dies of exhaustion, or by accident of some sort, or fatty heart, or Bright's disease of the kidneys, or inflammation of the liver, or some allied malady, and the animal that dies in the ordinary way is not so great as is commonly supposed. Every animal that is killed for use as food, even under the most favorable conditions, is in a pathological condition when it dies, and its flesh is absolutely unfit for food. The tissues of animals are always saturated with poisons which are on their way out through the lungs, liver, kidneys, and skin. It is only through the incessant activities of these excretory organs that the blood is kept measurably pure so that the life processes can be carried on in a normal way. No matter in what way or by what means an animal is killed, these poisons are retained in the body, and not only these, but others which are formed by post-mortem tissue activity and putrefactive processes, so that the tissues become thoroughly saturated with poisons of a most injurious character. It is true that these poisons are not usually immediately fatal to life, although it is by no means an extraordinary thing for speedy death to follow the eating of the flesh of a dead beast; but by the habitual use of meat the kidneys and liver are so taxed beyond their normal capacity that they finally fail to do their work of purifying the body, and such maladies as chronic rheumatism, diabetes, gout, Bright's disease, paralysis, nervous exhaustion, and a host of other diseases appear which have in recent times been shown to be due to general systemic poisoning rather than to obscure causes.

It is well enough that the public should know that flesh-food of any sort may with propriety be looked upon as wholly unfit for food, and little, if at all, preferable to the "carrion" beef described by Mr. Dolan, or the braxy mutton of the Scotch Highlander.

MAN'S DIET NATURALLY SIMPLE.

WITHOUT doubt two of the chief causes of the universal dyspepsia among civilized people are the enormous multiplicity of dishes, and the almost innumerable combinations of food substances of various descriptions. Physiologists long ago discovered that the stomach possesses the power to produce gastric juice of diversified quality as well as varying quantity, in adaptation to the different kinds of food substances brought in contact with its mucous membrane. The stomach seems to possess a wonderful intelligence, whereby it adapts its secretions to the work especially required of it; for example, it is well known that the quality of gastric juice necessary for the digestion of animal substances differs from that required for the prompt digestion of vegetable foods. In other words, there is such a thing as a carnivorous gastric juice, and likewise a vegetal. The gastric juice especially prepared for the digestion of vegetable foods is not so well adapted to the digestion of proteid substances, such as beef, mutton, and chicken, and vice versa. It is evident, then, that for the most perfect digestion it is necessary that the diet be adapted to the gastric juice which is to digest the food.

The same principle applies with even greater force to the stomach. The wonderful adaptation of the stomach to the foodstuffs which it is to receive, has led to the general classification of all animals into two classes, herbivorous and carnivorous; land animals, which subsist upon coarse vegetable food, having a complicated apparatus and a long alimentary canal. From this fact has arisen the general supposition that vegetable food is more difficult of digestion than animal food, and hence requires a more elaborate and complicated mechanism. But a more extended study of the digestive apparatus of animals shows that this conclusion is not borne out by the general facts of biology and comparative anatomy; for example, while it is true that mollusks, polypi, oysters, and allied animals subsist almost universally upon decaying or disintegrating animal substances, it is nevertheless true that the *tubularia gelatinosa*, the digestive apparatus of which is so simple that it can scarcely be called an apparatus at all, subsists wholly upon the flowers and seed of the water-lentil.

Another fact of large importance and most conclusive significance is that while, as a rule, the digestive apparatus of vegetable feeders among animals is more complicated than that of flesh feeders, among the fishes and animals which inhabit the water the very opposite is true. While the ruminants among warm-blooded vegetable feeders, as the cow and the sheep, require four stomachs for the digestion of their natural dietary, according to Professor Græber the porcupine has fourteen gastric cavities, which enable it to deal with the varied substances upon which it subsists. The vegetarian tadpole has no stomach at all,— nothing but a coiled intestine,— while the herbivorous dugong and lamentin have but one stomach. On the other hand, the carnivorous cetacea, such as the dolphin and the whale, have three or four, and in some instances are said to have had as many as five stomachs, and the *squalus peregrinus* has a still larger number of stomach cavities.

Letourneau draws from these interesting facts the conclusion that a study of the vegetable foods produced on land and in the sea, and which constitute the foods of the land and the aquatic herbivora, reveals this difference: The apparatus of land animals is extremely diversified. The sheep, for example, finds in its pasture a great variety of grasses, besides leaves, twigs, thistles, and herbs of many descriptions, differing immensely in their dietetic properties and in the demands which they make upon the animal's digestive apparatus. The porcupine, with his more than a dozen stomachs, indulges in a still greater diversity of foodstuffs. On the other hand, the vegetal products of the sea are few in number and exceedingly simple in character, while the animal forms are extremely diversified and widely different in character, as is seen in the contrast between the gelatinous and almost structureless polypi on the one hand, and the sea-porcupine, formidably

armed with its horny spines, on the other. It is very evident, thinks Letourneau, that the complicated structure of the digestive organs of the herbivora among the land animals, and the carnivora among the aquatic, is due simply to the diversified character of the foodstuffs upon which they subsist.

It is very clear, then, that when we find an animal with a single stomach, this animal is not intended by nature to subsist upon a highly varied dietary. Its bill of fare should be as simple as the structure of its digestive organs. Applying this principle to man, whose digestive apparatus is almost as simple as that of the carnivora, we are brought to the conclusion that man's dietary must necessarily consist of comparatively few and simple articles; at any rate, the substances which he ingests, though possibly differing in name and in non-essential elements, should be as little diversified as possible in essential characteristics.

With these facts and principles in mind, let the reader peruse the accompanying bill of fare, an exact copy of the menu of a leading hotel in one of the great centers of our perverted civilization.

MENU

Blue Points on Half Shell Green Turtle, *Au Quennells*
Cream of Oysters, *a la Maryland*
Small Patties of Clams
Boiled Oregon Salmon, *ge noise*
Broiled Halibut Steaks, *a la maitre d'hotel*
Pomme Dauphine
Lettuce Queen Olives Young Onions
Boiled Capon, *Bechamel*
Celery Branches Radishes
Prime Beef, *Yorkshire Pudding*
Young Turkey, with dressing, Cranberry Sauce
Suckling Pig, stuffed, Apple Sauce
Wax Beans Baked Sweet Potatoes Green Peas
Supreme of Grouse, *a la Richelieu*
Breaded Escallops, Tartar sauce
Spanish Puffs, *a l'anisette*
Mashed Potatoes Sweet Corn German Asparagus
Punch San Salvador
Roast Mallard Duck, Red Currant Jelly
Haunch of Venison, Game Sauce
Prairie-Chicken and Quail, Larded, Wine Sauce
Fried Mushrooms
Salad *Italienne* Fresh Lobster Chicken *en Mayonnaise*
Sardines, glazed with Lemon
Boned Turkey, *en aspic*
Boiled Plum Pudding, Brandy Sauce
Sliced Apple Pie Lemon Meringue Pie Mince Pie
Cake *a la reina* Boston Cream Puffs Chocolate *de Clure*
Angel Food Charlotte Russe
Claret Wine
Vanilla Ice-Cream
London Layer Raisins Dates Smyrna Figs
Mixed Nuts Fruits
Paragon, Roquefort and American Cheese
Bent's Water Crackers
Java Coffee Green Tea

Now let us pause a moment to consider a few of the details of this marvelous conglomeration of things which are intended to be thrust upon the human stomach for disposal. Besides the few articles naturally adapted to the simple digestive apparatus of the genus homo, there is to be found green herbage enough to constitute a full bill of fare for an ox with his four-horsepower digestive machine; there are animal foods enough more than to tax to the fullest degree the five-storied stomach of the cetacea; and besides things fit only for the compost heap or the tanner's vat, there are various rotting stuffs only adapted to the gustatory tastes and the gastronomic powers of a hyena or a turkey-buzzard. To be able to wrestle successfully with this hotchpotch of indigestibles, a man ought to be provided with the fourteen stomachs of a porcupine, the Herculean gizzard of an ostrich, supplemented by a chemical laboratory and a rendering establishment.

Certainly it is time for the American public to pause and take a square look at its stomach. Hold the weakling up, look it full in the face, and query, in political phrase, "Where are we at?" A just answer would be, "We are at war with everything that is righteous and rational and all that is wholesome and sanitary in matters dietetic, and pitching headlong into that awful limbo of dyspepsia, where the walls are festooned with skeletons and deformities and human caricatures of every shape and stripe, where the sky overhead is an ever-changing panorama of wry faces and grinning torture fiends, horrid nightmares, and ghosts and hobgoblins of maladies past, present, and to come.

The world needs, more than anything else just now, a Moses to lead an exodus from the Egypt of gormandizing and stomach torture, and to head a return to nature in the happy and holy land of obedience to the divine order in eating, in drinking, and in recognition of the body as the temple of God.

ANSWERS TO CORRESPONDENTS.

Saccharin for Coal-Tar.— A. L. L., Massachusetts, asks if saccharin derived from coal-tar is injurious for sweetening foods.

Ans.— Yes.

Treatment and Diet for Irritation of the Spine.— H. H. C., California, asks our advice as to treatment and diet for an irritated condition of the spine, accompanied at times by severe pain in the back and head and by insomnia.

Ans.— Rest in bed, fomentation to the spine, a neutral bath — full bath at from 92° to 96°, for half an hour.

Waste Material in Food — Wind in Bowels — Catarrh.— A. R. P., California: "1. I notice that GOOD HEALTH has several times stated that peas, beans, and foods having skins on them should have the skins removed. Is it not necessary to have a certain amount of waste material in our food? 2. Is it a natural condition for one to pass wind through the lower bowel? What causes it? 3. Is dampness in the atmosphere unfavorable for catarrh?"

Ans.— 1. Yes, but in cases where the stomach is dilated, or unable to empty itself readily,— a condition sometimes called constipation of the stomach,— such coarse articles as skins are likely to femain in the stomach, encouraging disturbance and promoting infection.

2. No, it is caused by unnatural fermentation and putrefactions in the body.

3. Dampness alone will not produce catarrh. By proper care of the body and preservation of the health, the skin and mucous membrane may be kept in a state of health in any climate.

Excessive Perspiration.— F. W. R., Kansas, asks for the cause of and a remedy for excessive perspiration about the groins. He bathes daily, and is careful as to diet.

Ans.— Sponge the parts with very hot water twice daily.

Rash — Bitter Taste in the Mouth.— N. M., Michigan: "1. What is the cause of a fine rash that comes out on the scalp mostly on the back of the head, and sometimes on the back of the neck, below the hair? The trouble is of long standing. 2. What will cure it? 3. What causes a bitter taste in the mouth in the morning?"

Ans.— 1. An unhealthy state of the skin, perhaps a deteriorated state of the body. The rash is probably due to infection with germs.

2. Thoroughly shampoo the scalp; apply a little zinc ointment.

3. An infected condition of the stomach. Adopt a fruit diet for a day or two, then take fruit only for breakfast.

Electricity.— Mrs. J. R., New York, asks if electricity applied to an open sore on the breast is beneficial, and if so, what current, and the length of time of the application.

Ans.— The electrical current is sometimes useful, but water, in the form of the hot and cold pour, is still more serviceable and is readily applied.

Complexion — Sties — Enlarged Throat.— L. M. A., Ohio: "1. What causes a redness of the face, especially about the nose and cheeks, nearly every day during cold weather? The one so afflicted gets no exercise at all, her work being of a sedentary nature. 2. What causes sties? 3. What will cure them? 4. What causes itching of the eyelids? 5. What can be used for an enlarged throat? 6. What is the cause?"

Ans.— 1. Dilatation of the small vessels.

2. Infection of a hair follicle or of the meibomian gland.

3. Bathe the face and eyes with hot and cold water.

4. Chronic irritation or inflammation.

5. Apply hot and cold applications to the throat.

6. Probably enlargement of the thyroid gland. A physician should be consulted. The health should be improved by all possible means.

Diabetes.— K. J. K., Maine: "You say that fruits and nuts will cure diabetes. I put my daughter on that diet, and the amount of urine passed was normal immediately, but the sugar did not disappear. Shall we keep her on fruits and nuts, or shall we restrict the diet to nuts only? She has never been sick otherwise. What is the lowest amount of non-starch food we could give her without injury, to prevent formation of sugar in the urine?"

Ans.— Continue the diet of nuts and subacid fruits.

Device for Closing the Mouth during Sleep.— A subscriber in California asks if there is any device for keeping the mouth closed during sleep.

Ans.— Make a cap to fit over the chin and mouth, and hold it in place by an attachment to a night cap

Dropsy — Diet.— M. B. H., Washington, sixty-one years old, has dropsy and a slow circulation. She asks if any other food is required as a diet than granose, nuttose, nut butter, malted nuts, whole-wheat cakes or graham rolls, and fruit.

Ans.— Such a diet ought to yield satisfactory results.

Pain in the Back.— E. M. L., Michigan, asks what causes a severe pain in the right side of the small of the back. The difficulty is of six months' standing, and more severe at night. Heat gives only temporary relief.

Ans.— The difficulty may be muscular, but more probably is reflex in character, the most probable cause of which is prolapse of the stomach or bowels, or both. A skilled physician should be consulted.

Trouble in the Head.— Mrs. E. J. S., California, asks what is the cause of a warm feeling in the head and base of the brain. Sickness and excitement provoke the difficulty, which increases with age. It is hereditary.

Ans.— Doubtless the sympathetic nerve is disturbed, the cause of which is most likely disturbed digestion.

Maltol — Fruits — Length of Meals — Quantity of Food for One Meal — Bathing — Corn-Meal Mush — Zwieback.— Mrs. C. A. W., Ohio: "1. Should maltol be used by one who has catarrh of the stomach and bowels? 2. Should acid fruits be used in the above case when the stomach is always sour? Are ripe pears and pure raspberry-juice wholesome? 3. Are fresh apples hard to digest? 4. Is one hour too long a time to spend in eating? 5. Two granose biscuits, two graham crackers, two bromose tablets, a large apple, — is this too much for one meal when three meals a day are taken? 6. Is pop-corn healthful? 7. How long should corn-meal mush be cooked? 8. Is it safe to take a walk outdoors immediately after a morning cold bath? 9. Is home-made zwieback as wholesome as that made at the Sanitarium?"

Ans.— 1. In some cases of the sort named, maltol is not well tolerated, but it is generally used with advantage.

2. No; acid fruits are generally not well tolerated in cases of catarrh of the stomach; but ripe pears and baked sweet apples and berry-juices can be tolerated. Excess of sugar must be avoided.

3. Yes, if hard, but not if thoroughly ripe and mellow.

4. Forty minutes is probably long enough for the majority of persons; but it might be well to eat somewhat more leisurely.

5. No, the amount is insufficient. Send fifteen cents to the Good Health Pub. Co. for a copy of "The Daily Ration," "How to Live Well on a Dime a Day," and "Balanced Bills of Fare."

6. Yes, if not saturated with grease.

7. Four or five hours at least. It is well to take corn-meal, as well as all other grains, in the form of bread slightly browned.

8. Yes, this is just the proper thing to do.

9. Yes, if properly browned.

Appendicitis.— M. G., New York, asks: "1. How long should one use continuous hot applications for appendicitis? 2. What should be the diet of one subject to such attacks? 3. Is there a place in St. Lawrence Co., N. Y., where health foods can be obtained?"

Ans.— 1. For one or two hours three times a day, continued for a week or so.

2. A diet of fruit, grains, and nuts.

3. If your leading grocer does not keep health foods, ask him to send for a supply from the Sanitarium Health Food Co., Battle Creek, Mich. Health foods are sold in all prominent cities in New York.

Congestion of the Stomach.— Mrs. M. B., North Dakota, suffers from frequent attacks of congestion of the stomach, and would like to know what to do for this difficulty.

Ans.— Correct the dietary, take simple foods twice a day. Apply fomentations for temporary relief; wear a moist abdominal bandage at night; and take the food dry if possible. Avoid hot drinks and very cold foods. Do not eat between meals. Take the meals seven hours apart.

Foods for Old People.— A. J. B., Wisconsin: "1. Name the three best foods, outside the Sanitarium foods, for an old person who has no teeth. 2. Who manufactures the best malted milk? 3. Is Horlick's Malted Milk nourishing? 4. What is the lowest price per month for board and treatment at the Sanitarium? 5. What will remove chloasma uterinum? 6. Will corrosive sublimate (2 gr. in one oz. of water) remove it? 7. Is it safe to use? 8. Is there any advantage for health in the climate around San Francisco over that of Asheville, N. C.? 9. Is the climate of either place beneficial or injurious to any disease? If so, what?"

Ans.— 1. Browned rice, well cooked; zwieback thoroughly browned, softened in fruit-juices; ripe fruits such as peaches, grapes, berries; baked apples and other cooked fruits. We would like to add, also, nut butter made from peanuts and almonds without roasting.

2. There is only one malted milk manufactured with which we are acquainted — Horlick's.

3. Yes.

4. Twelve dollars a week for those who are able to pay. The indigent sick are received at a lower rate.

5. We know of no efficient remedy but to build up the general health; nature will in time effect a cure.

6. Preparations of this sort will sometimes remove discolorations of the skin when superficial.

7. It is a powerful poison, but may be applied to the skin without injury by being careful not to get it into the eyes or mouth.

8. The climate of San Francisco is rather damp and foggy, and is less desirable than Asheville.

9. Asheville, being somewhat elevated and moderately dry, is a good place for consumptives, and generally a salubrious place. We know of no malady likely to be aggravated at Asheville. San Francisco, on account of the dampness, is productive of catarrh of the nasal passages.

Sties.— Mrs. R. E. C., Kansas: "Our baby, three years old, has had sties on his eyes for the last six months. Are sties caused the same as boils?"

Ans.—The child should be placed under the care of an oculist at once. Sties may be due to errors in refraction.

Sore Throat — Dates. — F. K., Minnesota: "1. Please state the cause and cure for cankered sore throat of three years' standing. 2. Would not dates be fit for use by stewing or baking? 3. Are those put up in packages as full of germs as those sold by the bulk?"

Ans.—1. There is doubtless some disorder of the stomach, probably hyperpepsia. The stomach disorder must be cured. An intelligent prescription requires an examination of the stomach fluid. Probably the use of dry foods, such as granose, granola, bromose, and malted nuts, will be found beneficial.

2. Yes; the best quality of dates are wholesome as found on the market.

3. Fresh dates are not likely to contain germs or parasites in any considerable degree.

Predigested Foods — Amount of Food.— E. S. L., Maine: "Is there not danger of weakening a healthy stomach by using predigested foods, such as malted nuts, for the principal food?"

Ans.— No; various combinations can be made. Send five cents to the publishers of GOOD HEALTH for a copy of "Balanced Bills of Fare." Five cents more will secure a little paper entitled "The Daily Ration," and another half dime will obtain "How to Live Well on a Dime a Day." You will find all these books helpful.

Crackers — Hardtack — Malarial Fever — Rheumatism.—G. H. M., California, asks: "1. With what are common crackers shortened? 2. Is it well for one who has poor teeth to use hardtack? 3. What is the best way to keep off malarial fever? 4. Would the ocean climate be beneficial? 5. What will rid one of rheumatism?"

Ans.—1. Lard, cheap butter, oleomargarin, etc.

2. Yes; but there is better food; granose, granola, and gran nuts, for example.

3. To keep so well and strong that the system s able to resist the parasites of the disease; in other words, live above malarial fever.

4. Yes.

5. A nourishing, nutritious diet, consisting of grains, fruits, and nuts; outdoor exercise; warm baths at night; and copious water drinking.

Ague.—Mrs. W. J. C., Oregon: "What can be done to cure ague in children?"

Ans.—Children require the same treatment in ague as older persons. The cold wet sheet pack; the morning cool sponge bath, followed by vigorous rubbing; a pure diet of fruits, grains, and nuts; and in exceptional cases, periodic doses of quinine are the most effective remedies.

Fruit with Lentils — Flatulence — Pop-Corn — Water.— C. F. F., Ohio: "1. Is fruit with peas, beans, or lentils a bad combination? 2. What will relieve the stomach in case of flatulence? 3. Does pop-corn aggravate this trouble? 4. Should peas, beans, and lentils be rubbed through a colander in preparing? 5. Which is the better to drink on arising in the morning, hot or cold water?"

Ans.— 1. Not for persons possessing moderately good digestion.

2. A few sips of hot water, if the difficulty is not habitual. If pains are present, apply fomentations over the stomach. If habitual, the stomach may need to be washed. The foods should be taken dry, and no starchy foods should be taken except in the form of granose, zwieback, or some other thoroughly cooked form. Grains are only thoroughly cooked when slightly browned.

3. No.

4. Removal of the skins by passing through a colander increases the digestibility of legumes, and is necessary for people with dilated stomachs.

5. Hot water is best in cases of gastritis. Water of the ordinary temperature is best for others.

Crackers — Muskmelon — Fruit and Bread — Persimmons.—M. P. B., Kansas: "1. Can you give me a recipe for making graham crackers shortened with nut butter? 2. When you say that grain is good for one, do you mean that it is to be made into bread or cooked? 3. Should fruits be eaten alone or with bread? 4. What do you think of muskmelons as an article of diet? 5. Is there much nourishment in them? 6. Are persimmons wholesome?"

Ans.— 1. Graham crackers can not be made without a machine designed especially for the purpose, but crackers and sticks which are practically the same can be made at home. Send for a copy of "Every-day Dishes," published by the Good Health Pub. Co.

2. Yes; grains to be thoroughly wholesome should be prepared in the form of bread, preferably water bread, made dry and crisp, and baked till slightly brown.

3. Either way.

4. They are wholesome, but the pulp should not be swallowed.

5. No; they should not be regarded as a food, but rather as a drink.

6. They should not be regarded as a food except when thoroughly ripe.

Warts — Corns — Cramps — "Hypo" and "Hyper" — Watery Eyes — Closed Tear-Ducts — Fruit — Catarrh — Diet.— F. P. H., Illinois: "1. What will remove warts? 2. What will cure corns? 3. What will cure cramps in the stomach? 4. What are the symptoms of hyperpepsia and hypopepsia? 5. What causes one's eyes to water when out in the cold? What will cure it? 6. What is the cause of and remedy for closed tear-ducts? This condition has existed for several years, apparently caused by a swelling in the corner of each eye. 7. Should fruit be eaten at the beginning or close of a meal or with other food? 8. What is the cause of a dull, heavy sensation over the eyes, and how can it be cured? 9. In case of catarrh, what organ discharges the phlegm? 10. If a person eats plain graham crackers, beans, apples, and peanut butter, what else does he need?"

Ans.— 1. Warts may be removed by the application of pure acetic acid. This may be repeated day after day till they are taken off.

2. Corns may be cured by removing, and taking off the pressure.

3. Correction of the diet is essential to a permanent cure. Fomentations give present relief.

4. In hyperpepsia there is excess of HCl; in other words, there is too much hydrochloric acid. In hypopepsia the reverse of this condition exists. An examination of the fluid must be made for a diagnosis.

5. The irritation of the cold air. Possibly there may be obstruction of the ducts which carry away the tears from the eyes. If the ducts are obstructed, an oculist should be consulted.

6. The cause is probably some obstruction in the tear-ducts. Dilatation, and possibly a more radical operation may be necessary. Consult an oculist.

7. Fruit should be taken with the rest of the meal, and is best eaten with some sort of dry food to insure mastication.

8. Probably nasal catarrh, which has extended into the frontal sinuses. There may also be some errors of refraction, for which an oculist should be consulted.

9. This depends upon the portion of the body affected. If in the nose, the discharge is from the nasal mucous membrane.

10. Nothing, if his appetite is satisfied and he eats these foods in proper proportions. They are capable of properly maintaining the body.

Lumps on the Body — Flesh.—C. D. F., Michigan: "I have a number of lumps (perhaps twenty-five) in the fleshy parts of my body, varying in size from that of a bean to an almond. They are not troublesome now, but is there any danger of their becoming annoying? 2. I weigh two hundred pounds, eat very little, and am inclined to have dyspepsia. Would a two- or three-weeks' fast be dangerous?"

Ans.— 1. Probably not.

2. Don't try it. Instead, adopt a fruit diet, of apples, grapes, peaches, or some other fruits in season. Try it for a week if you like. Eat all the fruit you want three or four times a day. Do not allow your strength to become too much reduced.

Peanut Oil.— H. B. D., Massachusetts, asks if peanut oil is hard to digest.

Ans.— Yes.

Dizziness.— S. C. H., California, asks what causes a feeling of dizziness in the morning, accompanied by belching.

Ans.— Doubtless indigestion in the stomach. A careful regulation of the diet, avoidance of all kinds of meats and pastries, and the use of simple preparations of fruit, grains, and nuts are the measures to be recommended. Cleansing of the stomach with the stomach-tube may be necessary once or twice a week at first; or a fruit diet may be adopted for a few days. Read carefully the book entitled "The Stomach," published by the Good Health Pub. Co

Meat Question.— R. J. E., Illinois, asks : "1. What will become of all the animals we object to having killed ? 2. Will the nut supply last indefinitely ? 3. If animals are not raised, will not the land become so impoverished that the grain supply will run short ? 4. What will take the place of animal hides ? "

Ans.— 1. What becomes of the dogs and horses?

2. As the demand for nuts increases, the production will increase.

3. It is much better to enrich the land by proper rotation of crops, by turning under crops, and by allowing the land to rest as described in the Mosaic law, than by animal manure, which is filled with germs of all kinds, and which defiles the land with seeds of weeds, and often gives rise to a diseased condition of the plants.

4. Excellent substitutes for animal hides are now made from paper.

Asthma.— A. W., British Columbia, asks what diet an asthmatic patient should observe ; also which of our sanitariums make a specialty of such cases, the terms, etc.

Ans.— A dry diet, consisting of fruits, grains, and nuts, eating but twice a day with seven hours between the meals. All our institutions successfully treat asthma due to indigestion. Those requiring change of climate should visit Boulder, Colo., or Guadalajara, Mexico. Address both institutions for circulars.

Nosebleed.— J. C. H., Wisconsin, asks what will cure an obstinate case of nosebleed in a woman fifty years old, the attacks occurring every month or so, and generally in the evening.

Ans.— There is probably ulceration of the mucous membrane of the nose. The Pocket Vaporizer might effect a cure. If this does not afford relief, consult a specialist. It may be necessary to make some special application to the diseased surface.

Steam Bath for Catarrh.— J. S. S. queries whether the steam bath (bath cabinet) is a good remedy for catarrh of the head and throat, and asks what subsequent treatment should be given ; also what other treatment to pursue.

Ans.— The morning cold bath is to be recommended in place of the steam bath for catarrh. In acute colds in the head, a hot bath at night is often beneficial.

Discarding Supper vs. Breakfast.— M. H., Kansas, desires to know why we advocate leaving off supper rather than breakfast, as advocated by Dr. Dewey, of Meadville, Pa.

Ans.— First, because an empty condition of the stomach is necessary for sound sleep; second, because a waking state of the brain and gentle exercise are necessary for sound digestion. Those who eat supper should certainly omit breakfast ; but better omit the supper, as it insures better sleep and better digestion.

Tapeworm.— A reader in Illinois wishes to know what causes tapeworm.

Ans.— The eating of beef which contains the embryos of the parasite.

Rheumatism.— Mrs. S. J. M., Nebraska, asks if a Crystal's electric belt is good for rheumatism in the hip and back.

Ans.— We can not recommend it.

Walnuts—Beans.— B., California : "1. What is the nutriment and digestibility of English walnuts (California grown), of both 'paper shell' and 'soft shell' ? 2. What is the nutrient value and digestibility of green beans (German dwarf wax) ?"

Ans.— 1. About 96 per cent. The nutritive value depends upon the dryness of the nuts ; something more than 90 per cent. on an average.

2. About 86 per cent.

Hysteria.— A subscriber asks : "What is the best treatment of a case of hysteria accompanied by excessive irritability of stomach and bowels, with a flow of acid saliva from the mouth at night and some flatulence ? The patient is seventeen years old, and his diet is fruits, grains, and nuts, no drinking at meals, and hot water between meals."

Ans.— Take the patient out of school, and let him live outdoors, engaging in light outdoor employment. Give him every morning a cool sponge bath followed by vigorous rubbing. Let him spend six months in becoming a good healthy animal. At bedtime apply fomentations over the stomach, followed by the moist abdominal bandage to be worn through the night.

Eggs.— F. E. W., Illinois, asks, "Why do you eat eggs when you do not believe in eating meat?"

Ans.— The writer makes no use of eggs. They are certainly not the best food, though they are less unwholesome than meat, for the reason that they do not contain the poisons found in meat.

LITERARY NOTICES.

THE August number of **Scribner's** magazine contains a remarkable contribution from Ernest Leton Thompson, entitled "The Trail of the Sandhill Stag." The following quotation will especially interest readers of GOOD HEALTH: —

"Again the flash — the move of a restless ear, then the oak boughs moved and Yan trembled, for he knew that the log in the brush was the form of the Sandhill Stag — so grand, so charged with *life*. He seemed a precious, sacred thing — a king, fur-robed and duly crowned. To think of shooting now as he lay unconscious, resting, seemed an awful crime. But Yan for weeks and months had pined for this. His chance had come, and shoot he must. The long, long strain grew tighter yet,— grew taut, — broke down, as up the rifle went. But the wretched thing went wabbling and pointing all about the little glade. His breath came hot and fast and choking,— so much, so very much, so clearly all, hung on a single touch. He laid the rifle down, revulsed,— and trembled in the snow. But he soon regained the mastery, his hand was steady now, the sights in line —'t was but a deer lying out there. But at that moment the stag turned full Yan's way, with those regardful eyes and ears, and nostrils, too, and gazed.

"'Darest thou slay me?' said an uncrowned, unarmed king once, as his eyes fell on the assassin's knife, and in that clear, calm gaze the murderer quailed and cowed.

"So trembled Yan; but he knew it was only stag-fever, and he despised it then as he came in time to honor it; and the beast that dwelt within him fired the gun.

"The ball splashed short. The buck sprang up, and the doe appeared. Another shot; then, as they fled, another and another. But away the deer went, lightly drifting across the low round hills.

"They say a wild beast can not look a man in the eyes; Yan found it hard to look a wild beast in the eyes when he was trying to take its life."

A popular feature of Elizabeth Stuart Phelps's writings is the happy blending of lively humor and tender pathos which always characterizes and illuminates them. These qualities were perhaps never more in evidence than in her latest and most touching story, "Loveliness," which appears in the August **Atlantic.** But the element which will attract the widest attention to the story, and call forth the liveliest discussion over it is its outspoken and trenchant attack upon the practise of vivisection and the methods of vivisectors.

"Josiah Allen's Wife" (Marietta Holley) has finished a new story, the first instalment of which is published in the August **Ladies' Home Journal.** It is in her characteristic, humorous vein, but may be said to be a story with a purpose. It bears the name of "My Stylish Cousin's Daughter."

Dr. Joseph J. Kinyoun contributes an article to the August **Forum,** entitled "Antitoxins in the Prevention and Treatment of Disease." He describes an antitoxin, prepared upon the same principle as that for diphtheria, which has been elaborated for tetanus,— a disease not so prevalent as diphtheria, but at least equally fatal. "This serum," he says, "possesses immunizing properties far superior to the antitoxin for diphtheria; but its curative effect has been disappointing.

"It is claimed that the mortality for all cases of tetanus treated with the serum has been diminished by at least one half. This is so, however, by reason of its efficacy in the subacute and chronic forms of the malady. The serum has been thus far practically inefficacious when applied to the acute type — supposedly for the reason that the characteristic symptoms of disease do not set in until the nervous system is so much involved that therapeutic measures avail but little. Laboratory experiments have demonstrated that animals suffering from well-marked tetanus can be saved if the antitoxin be injected into the brain substance; while if given subcutaneously, its influence is not marked."

Current Literature for August offers the usual variety of choice extracts from the best and latest publications. Among the readings from new novels are "The Wedding of Mc Teague," by Frank Norris, and "Richard Carvel Rides Baltimore's Pollux," by Winston Churchill. This number contains some interesting "table talk concerning eating and drinking," as well as timely information on many other current topics.

"The Cigarette and the Youth," by E. A. King, president of the Anti-Cigarette League, presents the facts of the case in such a manner as to arouse the most indifferent. It should be scattered broadcast, that no one may be able to claim ignorance as his excuse for failing to condemn the habit. No better work could be done by teachers than to place a copy in the hands of every parent within reach. Those who are interested in the nation's welfare should buy the leaflet in large quantities for free distribution. This leaflet is 5c each or 25c a dozen. Wood-Allen Publishing Company, Ann Arbor, Mich.

PUBLISHERS' DEPARTMENT.

THE Battle Creek Sanitarium Health Food Company recently received from Mr. Barton Huff, their Eastern representative, a single order for five carloads of their products. In a note to the managers, which accompanied the order from Mr. Huff, it was easy to read between the lines quite a little pardonable pride in the fact that this fine order a little more than rounded out the magnificent sum of one million pounds of health foods, representing the results of the work of the Eastern agency under Mr. Huff's management during the last four years. The Health Food Company regard the East as the best market for their products, and Mr. Huft has more than won the foremost place in the Company's corps of field agents and managers. Mr. Huff attributes a large share of the good health and ability which has enabled him to accomplish this great task, to the fact that he takes his own medicines, a thing which every doctor does not like to do; in other words, that he himself eats and thrives upon the foods which he recommends to others. Those who knew him twelve years ago, before he became a vegetarian in diet, would scarcely recognize in the rotund, robust, jolly gentleman of to-day the lean, sallow-skinned, despondent individual of the old days. Good food is a good thing. It makes good business men and good business, facts which are demonstrated in Mr. Huff and his work.

A LETTER received, as we go to press, from a representative in Texas states that the people are so anxious to get "Home Hand-Book" that he is solicited to take orders on Sunday. In two days he secured $70.00 worth of orders, and asks to be supplied with one hundred copies of "Home Hand-Book," library binding, by September 15. He says he has already taken orders to the amount of $500.00.

There is room for a few good agents to secure territory in this locality.

THE AMERICAN INSTITUTE OF PHRENOLOGY, President Mrs. Charlotte Fowler Wells, incorporated 1866, opens its next session on September 5 of this year. For prospectus send (free on application) to the secretary, care of Fowler & Wells Co., 27 East 21st Street, New York.

PUTNAM, CONN., July 20, 1899.

The Cupigraph Co.,
Chicago, Ill.

GENTLEMEN: I have used your sanitary still in my family for nearly a year and a half, and I am delighted with it. To a lover of pure water it is indispensable. Its product is delicious, refreshing to the thirsty, health-preserving to the well, and health-giving to the sick. It does its work simply and effectively, and almost without appreciable cost.

I would not be without it for ten times what it cost me. This testimonial is entirely voluntary on my part, and you are at liberty to make such use of it as you see fit. Yours respectfully,

ERIC H. JOHNSON,
Prosecuting Attorney.

ANY one having Vols. 1, 2, 3, 4, 5, 8, 10, 30, or 31 of GOOD HEALTH and wishing to dispose of them will please address this office.

Prevention of Hay-Fever.—In the Jan. 21, 1899, number of the *Journal of the American Medical Association*, Dr. Alexander Rixa, of New York, contributed a very interesting article on "Prevention of Hay Fever."

His ingenious researches for a number of years, regarding the etiology of hay-fever, lead him to admit that the pollen of the Roman wormwood, ragweed (*ambrosia artemisæfolia*), is the primitive and active cause of this disease. He says:

"From the time I found the pollen to be the exciting cause of the disease, I concluded in a logical way upon the proper treatment. I conceived the idea of rendering the receptacle aseptic by preparing the soil for the reception of the pollen. Naturally, they will find no proper soil for a possible generation, propagation, or development, destroying their existence in embryo, so to speak, and with it the real cause of hay-fever. For this purpose I decided on the following treatment:—

"About two weeks before the onset of the disease, I begin to irrigate or sterilize the nasal cavity and the post-nasal spaces with a harmless antiseptic solution, using the douche and atomizer. After giving a great number of antiseptics a fair trial, I decided on hydrozone as the most innocuous and most powerful germicide. Hydrozone is a thirty-volume aqueous solution of peroxid of hydrogen. At the beginning I use it for irrigation diluted in the proportion of one ounce of hydrozone to twelve ounces of sterilized water. Nearing the period of the expected onset of the disease, I increase the dose to two or three ounces of hydrozone to twelve ounces of the sterilized water, according to the severity of the disease, using the douche, either tepid or cold, four times a day,—morning, noon, evenings, and at bedtime,—while during the intervals I use the atomizer, with a solution of hydrozone and pure glycerin, or sterilized water, one to three, thus keeping the nares perfectly aseptic during the entire period, and preventing the outbreak of the disease in consequence thereof.

"In most obstinate cases, when there is still some irritation in the nasal cavity, I give as an adjuvant the following prescription:—

℞ Acid boracic, gr. xx.
Menthol, gr. iv.
Glyco-thymoline, ℥ ij.
Sol. eucain B. 4 per cent., q. s. ad ℥ ij.
Sig. Use in atomizer.

"As a rule this treatment was sufficient to avert the disease and keep the patient in perfect comfort."

What Josiah Allen's Wife Thinks of "Good Health."

"I AM very fond of the GOOD HEALTH magazine. I read it, when it first comes, with great interest, and keep it on my desk to take up at leisure moments. I believe it is doing a great deal of good."

NEW SLEEPING-CAR LINE TO HOT SPRINGS, S. D.—We have pleasure in announcing that a palace sleeping-car is now run between Norfolk Junction, Neb., and the Hot Springs, S. D., leaving Norfolk Junction daily at 7:00 P. M., arriving at Hot Springs the next morning at 7:45, and leaving Hot Springs at 9:06 P. M. daily, arriving at Norfolk Junction at 12:40 P. M.

This connection is made with the "Pacific Express" leaving Chicago at 10:30 P. M. daily, and with "The Overland Limited" arriving at Chicago at 7:45 A. M. daily, and passengers thus have the benefit of through sleeping-car service in both directions between Chicago and the Hot Springs, using one of the through sleepers between here and Missouri Valley and the Missouri Valley-Deadwood sleeper, Missouri Valley, to Norfolk Junction, and similar service in the opposite direction. W. B. Kniskern, G. P. & T. A., Chicago and North-Western Ry.

LADY AGENTS wanted to sell flavoring extracts and perfumes. It will pay you to write me. R. W. Snyder, 150 E. Canal St., Battle Creek, Mich.