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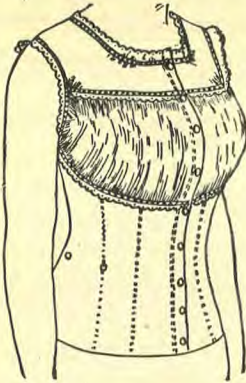
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As this issue of LIFE AND HEALTH reaches its readers, we trust they will not find it inferior in merit to the preceding numbers. We are endeavouring to keep this magazine up to at least the same high standard of quality as that which has secured for it a wide circle of readers and friends.

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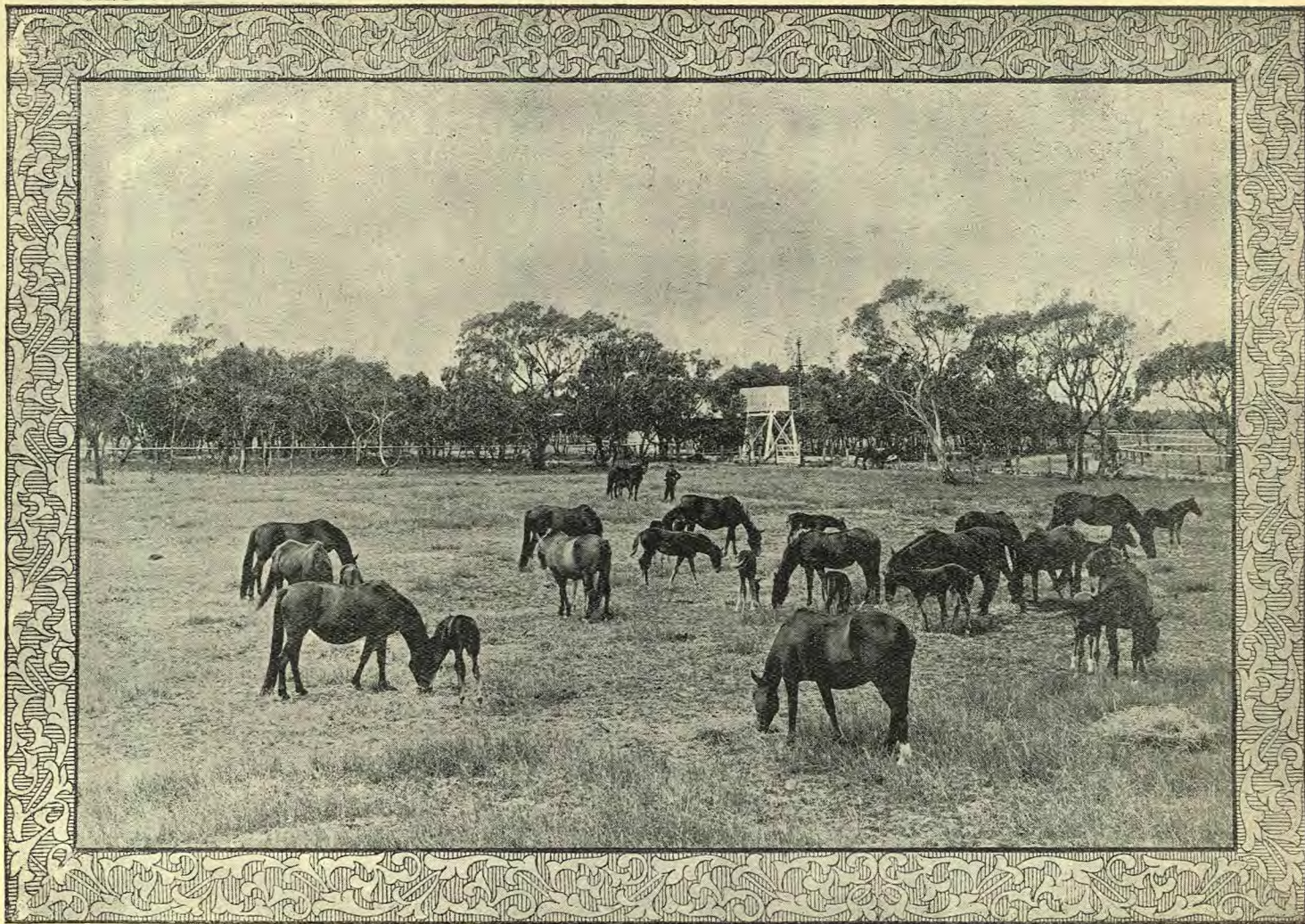
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A TYPICAL AUSTRALIAN GRAZING Paddock

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LIFE &

HEALTH



Vol. 3

October-November, 1913

No. 5

Diphtheria

W. HOWARD JAMES, M.B.,B.S.

OF all diseases of childhood there is none to be more dreaded than that of diphtheria; it is especially fatal between the ages of two and six years, on account of the small size of the upper air passages. The chief danger arises from suffocation, but death frequently takes place as a result of blood-poisoning, brought about by the blood absorbing special poisons produced by the specific germ of diphtheria. Diphtheria is an exceedingly infectious disease, and is caused by a specific micro-organism called after its discoverers the Klebs-Loeffler bacillus. Apart from this micro-organism diphtheria is an utter impossibility. The germ is found only on the false membrane formed in the throat, nose, or elsewhere; it has never been discovered in the blood; consequently, if the affection in the throat be attacked early, the disease is quickly dissipated. Infection is not carried by the breath, but by the discharges from the throat and nose of patients suffering from the disease. It is necessary to exercise great care in order that the clothing, bed clothes, carpets, curtains, and furniture of the room be not contaminated. The diphtheritic bacilli, like all other disease-

producing germs, are vegetable organisms, and may retain their virulency for quite a lengthy time; they have been cultivated from dried membrane retained in cloth material for as long as five or six months. They are, however, readily destroyed by moist heat; a temperature of 137° F. for a few minutes will destroy all the germs in any fluid or article of clothing or furniture. A lesser heat than this will lessen their virulency, consequently it is advisable that all applications made to the throat should be as hot as can be borne. The germ rapidly multiplies in milk, but milk brought to the temperature already mentioned will be found to be quite free from the disease. Fortunately the diphtheritic bacillus does not produce what are known as "spores." We may liken "spores" of germs to the seed of plants. Some seeds only germinate when passed over by a bush fire, and some spores are not even destroyed by half-an-hour's boiling; a temperature that will destroy the germ will have no effect on the spore. Often in order to free a fluid of all germinal life a second boiling is necessary; the first boiling destroys the parent germs, and then a period of warmth develops the spores into the full-grown

organisms, and these are destroyed by the second boiling. Fortunately, the absence of spores in diphtheria renders the precaution of a second boiling unnecessary. Diphtheria has never been known to be carried by polluted water; it is mostly, if not always, caused by the secretion from the diseased parts. It is so easy for the secretion from the nose, mouth, or throat to be imparted to the clothes of the child, the bed clothes, furniture, drinking and feeding utensils, and the hands of the child. In coughing, sneezing, or the spluttering of the child when being examined, the expectoration in very minute drops may be carried three or four feet from the child. All secretions should be caught in old cloths and burnt at once; one cannot be too careful in this respect.

The bacillus does not readily attack healthy individuals, it requires some unhealthy condition for its development; some abrasion, ulceration, inflammation, or other unhealthy condition, must exist before the bacillus can develop and produce the toxins that poison the blood and the system generally. The germ has often been discovered in healthy throats without the slightest appearance of the disease. Children so affected may be diphtheritic carriers; although they do not develop the disease themselves, they may communicate the diphtheritic germs to others less healthy than themselves, and thus be the cause of the disease developing in them. After the disease has disappeared from the throat, the germs may exist for three or four weeks, and, in fact, we cannot absolutely say that the danger of infection is over till the secretion from the throat is bacteriologically examined, and pronounced free from the bacillus. The period of incubation, the time between exposure to the infection and the development of the disease, varies from two to ten or more days; the length of time evidently depending on the condition of the infected parts of the one exposed to the infection. It is possible for the bacillus to remain in the throat for weeks, and then develop the disease through some other unfavourable condi-

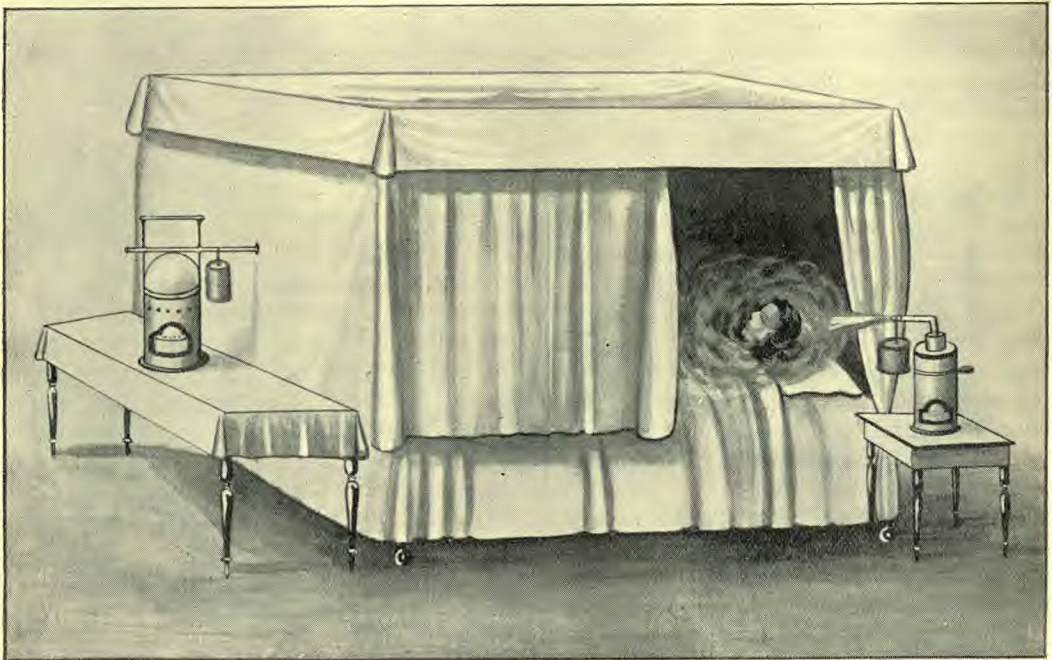
tion, as a cold, exposure to other organisms producing sore or ulcerated throats, or perhaps effluvia from bad drains. The diphtheritic bacillus varies greatly in its virulence, some epidemics are mild, while others are very fatal. The development of germs is analogous to the growth of the seed; the seed requires moisture, warmth, and a certain condition of soil, and its vigour will depend on these conditions; similarly, the rapidity of the development of the disease-producing germ will depend on diseased conditions of the system, such as unfavourable secretions, abrasions, etc. An ulcer, catarrhal, or other unhealthy secretion from the throat or nose, will form the soil in which the diphtheritic bacillus will develop. Apart from this soil it cannot develop.

Diphtheria is primarily a local and not a general disease, such as scarlet fever, small-pox, and measles; the bacillus develops on the surface of the lining of the larynx, throat, nose, or abrasion on any part of the body; it produces at first a greyish-white, and then a dirty or yellowish grey membrane, a "false membrane." This membrane is firmly adherent to the parts, and if removed, will leave a raw, bleeding surface on which fresh exudation rapidly appears. The germs are confined to the membrane, and do not enter the underlying tissues. The toxins, or poisons, however, produced in the false membrane, are absorbed into the blood, and cause symptoms of fever and general ill-health, and sometimes, later on, various nervous complications, such as paralysis of the throat muscles, or those of the eyes, limbs, or even the heart itself. The fever is due to the system fighting against the poisons. Nature produces in the blood her own remedies, "antitoxins." If sufficient antitoxins are produced the germs are destroyed, the membrane is removed, and recovery takes place. In childhood suffocation often supervenes before this favourable result can take place. The specific for diphtheria is the diphtheritic antitoxins now prepared by many reliable firms from the blood of healthy horses. The diphtheritic toxins (not the

germs) are injected repeatedly into the horse until no reaction (fever) will result. When the injection of the poison no longer produces fever, it is on account of the development of antitoxin in the horse's blood. The horse is bled, and after the solid constituents of the blood have been removed, the serum which contains the antitoxins is, after special preparation, sealed in glass tubes and sent to all parts of the world. If antitoxin be

Flies may carry particles of expectoration or secretion from the diphtheritic room to others outside. Calves are also said at times to develop the disease, and communicate it to the milk of the cow. Thus it is necessary to keep domestic animals out of the sick room, to exclude flies by wire gauze, and to scald all milk about which there is any doubt whatever.

It is important to recognise diphtheria at an early stage. There is generally at



Tent with Spray Apparatus for Laryngeal Diphtheria

injected in sufficient quantity, and if it can act on the system for fifteen to twenty hours, the result in almost every case is favourable. Often, however, the antitoxin is used too late, when the antitoxin has not sufficiently favourable conditions in which to work. There is not a particle of doubt as to diphtheritic antitoxin being a genuine specific in this disease.

Diphtheria is communicable from certain animals to man. The cat, for instance, is subject to the development of the diphtheritic false membrane, and may communicate the disease to children.

the commencement some fever (102° to 104° F.), chilliness, headache, and pain in the back and limbs. Convulsions may occur in infants or very young children. There may be difficulty in swallowing, and some stiffness about the neck. Occasionally, however, quite extensive diphtheritic membrane may exist without the child exhibiting any special symptoms of illness. On examining the throat there is generally to be found a patch of false membrane on the tonsil, together with a general redness of the throat. A small patch of membrane on the tonsil, how-

ever, does not necessarily mean diphtheria; it may be due to other septic conditions. If, however, the greyish-white patch extends beyond the tonsil, the diagnosis is pretty sure. As a rule the membrane develops on the tonsils first, and then spreads to the soft palate, and in more serious cases to the larynx, and sometimes the nose. Sometimes the membrane develops only in the larynx, none whatever being seen in the throat. In these cases there is some obstruction to breathing, and this obstruction gradually increases without intermission. Obstructed laryngeal breathing is sometimes due to spasmodic contraction of the muscles, but in these cases the breathing becomes periodically free and easy, when the spasm relaxes. If, however, there is the slightest suspicion of the disease, a medical man should be called in so that the specific remedy, "antitoxin," may be applied at the earliest opportunity, for a delay of a few hours often makes all the difference between life and death. Tincture of iodine is an excellent application for any white patches in the throat. Concentrated solutions of boracic acid also are good. These, however, are recommended only as temporary measures until the physician arrives.

Parents and nurses should studiously avoid kissing or fondling children with diphtheria. When possible, all other children should be removed from the house, and their throats daily inspected. An antiseptic gargle should be used frequently by all children exposed to infection. A teaspoonful of formalin to half a pint of water makes a very effective gargle. This may also be sprayed about the room. If this is not obtainable, a concentrated solution of boric acid may be used.

The room selected for the diphtheritic patient should be large and airy, well ventilated, and should have an open fireplace. Only absolutely necessary furniture should be allowed in the room. Carpets, mats, curtains, ornaments, etc., should be removed. A sheet wet with the formalin solution should be hung outside the door. Professor Cameron, M.D.,

in Hare's "System of Practical Therapeutics," gives the following instruction: "Dusters, towels, clothing, bedding, and utensils used in the room, should be kept there and washed there, and not allowed to be carried through the house or used elsewhere. Soiled clothes, etc., should be covered with boiling disinfectant solution before being taken from the room, and great care exercised in washing them." The patient should not be given books or toys that cannot be destroyed (burnt) immediately. No food should be left in the room longer than absolutely necessary, and it should always be covered.

The Cigarette and the Boy

D. H. Kress, M.D.

(Secretary of the Anti-Cigarette League of America.)

NARCOTICS of various kinds have for centuries been employed among civilised and uncivilised people for the purpose of obtaining relief from distressing symptoms of body and mind. The temptation to resort to something that affords present relief, even if it be but temporary, has in all ages been one of the most difficult to resist. Anciently the warning was given to the children of Israel concerning the deceptive nature of narcotics, and the admonition to take heed "lest there should be among you man, or woman, or family, or tribe, whose heart turneth away this day from the Lord your God, to go and serve the gods of the nations, lest there should be among you a root that beareth a poisonous herb, and it come to pass when he heareth the words of this curse, that he should bless himself in his heart, saying, I shall have peace though I walk in the imagination of mine heart to add drunkenness to thirst. The Lord shall separate him from all the tribes of Israel."

I am not fully prepared to say what the narcotic plant referred to was, but recently in reading the history of tobacco, it occurred to me that possibly this was the "poisonous herb" they were cautioned against. For instance, the poisonous herb referred to was employed in connection

with the worship of the heathen gods. Tobacco, we are informed, was also used in connection with the religious ceremonies of the American savages. As frankincense and myrrh were offered before God by the priest, so tobacco was made use of by the savages. They supposed that their petitions ascended with the tobacco smoke before the Great Spirit. Hence the plant received the name of the "Divine Herb," "The Holy Herb," etc.

The *mystery* man, who was also the medicine man, conceived the idea of bending over the smoke and inhaling it. It produced a state of intoxication and stupefaction, and while under its influence he claimed to be in communion with the gods. In regaining consciousness he claimed to be able to make known the will of the Great Spirit to the people.

As the sick and those in trouble applied to him for relief, they were instructed to inhale the fumes of this mysterious herb. The results were marvellous. The unpleasant feelings disappeared almost instantly. After this it was resorted to for the purpose of affording relief from pain and troubled thoughts. Out of this developed the tobacco habit among the American savages.

From the naked savages tobacco was introduced, as a great remedy for nearly all human ills, into Spain, France, Great Britain and other civilised countries, and finally it found its way into the Christian church itself. The evil resulting from its use was not appreciated then as at present, or as it will be in the very near future. I know of no one practice to-day that is doing more to weaken the church and to counteract the influence of the gospel than the use of tobacco, and especially the cigarette.

The degrading and demoralising influence of the cigarette upon our future men, is well understood by educators and physicians.

The cigarette undoubtedly paves the way for the saloon, the reform school, and the penitentiary. This is shown by the fact that practically all the boys who appear

in the juvenile courts of the United States are cigarette addicts. The rapid increase of crime, and the corresponding increase in the use of cigarettes the past twenty years, are intimately associated. Most of the criminals arrested in our large cities of to-day are mere youths. If I was forced to determine which of the two, whisky or cigarettes, a boy of mine must use, I should, with my present knowledge of the evils resulting from each upon the developing body and mind, say, *whisky*. The whisky habit is more easily cured than is the cigarette habit.

The cigarette addict has to be placed in a class with the morphine and cocaine fiend. The cigarette destroys the will of the boy and robs him of the *desire* to make reforms. It makes him unreliable; he will lie and steal, and in time he loses all sense of modesty. Recently I heard Judge Gemmell of Chicago make the statement, that of the many thousands of criminals that had appeared before him, he had observed that in almost every instance where the young man or woman had lost the faculty to blush, he found them to be cigarette fiends.

Dr. Coffin, who has for a number of years been connected with the Whittier Reform School of California, recently informed me that "Ninety-eight per cent of all the criminals that have passed through the school were cigarette users, and ninety-five per cent were cigarette fiends."

Whenever I read of a cold blooded murder or some other dastardly crime, I am prepared for the information I usually obtain on inquiry, that the culprit was a cigarette addict.

The use of cigarettes changes the disposition of the boy. He becomes careless and indifferent to his present and future welfare. A mother in writing to me recently, said, "I have a son who has just ruined himself with cigarettes. He is twenty, and unable to study or use his mind in any way. He was bright and capable until he became a victim of this habit. This seems to have changed his entire disposition. As he is my only boy

I had hoped much for him, and have felt I could not give him up. For five years I have been on the look-out for someone to help me, but my prayers have been unanswered, and in the meantime he is ruining my life as well as his own. This is my only excuse for troubling you."

I inquired of her if the boy would cooperate with her in getting rid of the habit, to which she replied: "He does not want help, and says he hates all of us," etc. I was not surprised to receive this reply, for again and again I have witnessed that the cigarette so perverts the conscience that it seems almost impossible to arouse it to a sense of right.

Recently in a murder trial the judge, noting the stained fingers of the prisoner, said, "This young man smokes one pound of tobacco a week in the form of cigarettes. This is sufficient to derange any *man's* brain and produce insanity. *It makes him irresponsible* for the crime he has committed." There is no doubt in my mind the cigarette addict is an irresponsible being. There are many of such *irresponsible* beings in our midst. They are of course responsible for beginning the use of cigarettes, but they are irresponsible after they become addicted to their use.

If the use of cigarettes continues to increase at the same rate during the next ten years as it has in the past ten, what can we hope for the future of our country? As far as the church is concerned, she may as well close her doors and devote her means toward building asylums for the insane and the mental defectives, and erecting reform schools and prisons for the increasing number of young criminals.

The boy with a crippled leg is an object of pity. We recognise that he is handicapped in life's battles, but, if he marries, his children will probably each have two sound legs, with the boy that is crippled mentally and morally it is not so; if he marries, his children will be born into the world crippled mentally and morally, and each generation will become more degenerate (unless reforms are made), until the family is finally wiped out. A corrupt

tree will bring forth corrupt fruit, and ultimately it will cease to bear or bring forth fruit.

Recently the judge of a juvenile court of California said to me, "Doctor, if this cigarette craze continues among our boys through another generation, our boys won't be worth killing." I said to him, "Judge, I fear very much there will be none left to kill; the cigarette is capable of accomplishing that."

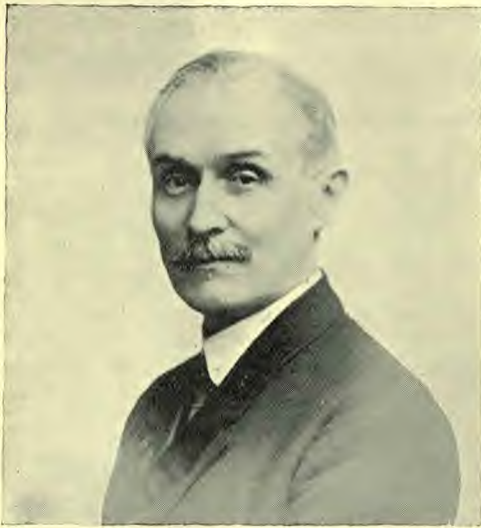
We pass rigid laws to shut out of our country defectives and criminals, but we sanction by law, in return for a few paltry pence received as revenue, an evil which is turning our promising youths into defectives, imbeciles, and criminals.

When the ball-weevil was discovered in the Southern part of the United States, we turned the government scientists loose, and authorised them to go to almost any expense in the hope of defending and rescuing our national cotton crop. Shall we feel less concern in regard to our national crop of boys? Can we afford any longer to close our eyes to this monstrous evil which is leaving its blight everywhere? Shall we continue to fold our hands and allow this juggernaut to pass unmolested through our main thoroughfares, crushing out the life and hope of our nation's future?

The use of cigarettes is rapidly increasing. In Germany it has increased tenfold during the past fifteen years. In the United States the increase in the consumption of cigars during the past ten years has been four and one-half per cent, while the increase of cigarettes has been over three hundred and sixty per cent. During the year 1912 there were consumed in the United States not less than thirty billion cigarettes, counting those rolled by hand. There is a yearly increase at present at the rate of about two billion, in spite of the educational and legislative effort made to discourage their use by the young.

In some sections of this country the habit is almost universal among the school boys. A short time ago the statement was made by the supervisor of compulsory

education of Los Angeles, California, that "seventy-five per cent of the boys over eleven years of age attending the public schools of Los Angeles were addicted to the cigarette habit, or tobacco in some form." I thought possibly a mistake was made by the reporter, and to confirm the statement I called upon Mr. Lickley. He assured me that it was absolutely correct and based upon eight years of careful observation. The habit may not be so



D. H. Kress, M.D.

prevalent in the East as it is in the Western States, but I am convinced that here, too, it is more common than is generally supposed.

Repeatedly I have met boys who had for a year or two used cigarettes, and had succeeded in keeping it concealed from their parents, the change in the disposition or health of the boy being usually attributed to the period of adolescence or something else.

The cigarette exerts a mysterious and fascinating influence over the boy. In this respect it differs from the pipe and the cigar. We have attributed this entirely to the inhalation of the smoke.

Recent investigations carried forward by the *Lancet* of England revealed the fact that the smoke of the cigarette con-

tains in addition to nicotine, products which are absent in the smoke of the cigar and pipe.

Among these by-products was found *furfural*, which belongs to a class of bodies known as Aldehydes. It is to this product that the extremely poisonous effects of crude, immature whisky are ascribed. The *furfural* contained in the smoke of even *one* cigarette is as much as is present in a couple of fluid ounces of this whisky.

While the process of manufacturing cigarettes is kept a secret, we know that glycerine, liquorice, salt petre, essential oils, and other products are added for the purpose of giving flavour and taste to them. Possibly it is by the combustion of these products that *furfural* is developed. *Furfural* is said to be fifty times as poisonous as ordinary alcohol. A small quantity of it causes symptoms of transient irritation, tremors, and twitching. This explains the trembling hand and characteristic hand-writing of the cigarette boy. In adequate quantities *furfural* gives rise to general muscular paralysis and to chronic spasms. I have a pronounced case of this type under my care at present. He was once a bright and promising boy, but is now bordering on imbecility.

What can we do to suppress this evil? China did not for many years fully appreciate the evil results of the opium habit. The £6,000,000 yearly revenue she received from the traffic blinded her eyes. Finally the effect became so apparent that she felt impelled in her own interest to sacrifice this revenue in order to save her people from total demoralisation. For several years she has made a brave fight. Since January 1 of this year I am informed that opium smoking will be considered a crime in China, and death will be the sentence for habitual smokers under forty years of age, and £400 the maximum fine for others.

While China is engaged in this warfare, strong efforts have been made by Americans to introduce the cigarette into China, thus substituting one evil for another.

But in China a strong anti-cigarette movement is on foot. Recently a board of trade in one of the cities bought all the cigarettes they could find and burned them publicly. We are glad that China is waking up.

Twelve years ago a bill was introduced into the House of Representatives of Japan prohibiting the use of cigarettes or tobacco in any form by young men under twenty years of age. This bill passed the House and became a law on the first day of April, 1900.

Mr. Nemato said, "I would like briefly to give you reasons why we have introduced this bill. Recently even children in our common schools have come to smoke cheap, imported cigarettes, the consequences of which we fear may bring our country down to the miserable condition of countries like China or India, because tobacco, like opium, contains nar-

cotic poisons which benumb the nervous system and weaken the mental power of children addicted to smoking, and this gives a death blow to the vitality of the nation."

He further made the *significant* statement, "If we expect to make this country superior to the nations of Europe and America, we must not allow our youths in common schools, who are to become the fathers and mothers of our country in the future, to smoke. If we desire to cause the light of the nation to shine forth over the world, we ought not to follow the example of China or India," and he might have added, America.

The time has fully arrived for us to arouse from our slumber as has China and Japan, and to put forth every legitimate effort to save our country by guarding and protecting its only real asset of the future—THE BOY.



GENERAL ARTICLES



Scientific Immunity from Disease

Concluded

ALEXR. HING

IN the preceding article it was stated in connection with "acquired immunity," that in the case of many of the most acute infectious diseases, one attack serves, as a general rule, to protect against another. Working on this principle, medical science has built up defensive systems that will enable one to pass through the most violent and destructive epidemics without fear and entirely unscathed.

One of the first diseases against which protection was resorted to by means of a mild, or weakened, attack, is small-pox. This horrible and deadly scourge once afflicted mankind with a fearful toll of lives as well as disfigurements of the living. It has been known for more than a thousand years, and in the Middle Ages epidemics were of great frequency and deadliness, giving rise to the proverb at the time, "From small-pox and love, but few remain free." A few statistics of epidemics in modern times may be of interest. In Iceland, in 1707, small-pox appeared after an absence of forty years, and in the three years 1707 to 1709 destroyed eighteen thousand people out of a population of fifty thousand. The first outbreak in Greenland, so far as known, was in 1734, and was attended with horrible mortality, two-thirds of the inhabitants perishing. It is said that when the disease made its appearance in Mexico, it swept over the country like a fire over a prairie, the death-rate being so fearful

that the dead bodies were too many to bury. And it is estimated that in London, during the latter part of the seventeenth century, there were a thousand deaths from small-pox every year.

The ordinary mortality from small-pox appears to have amounted to one death in every seven cases, but in severe epidemics it amounted to one in three.

Small-pox is one of the most contagious of diseases, the atmosphere round the patient being charged with the products of the disease, which cling to the clothing, furniture, etc. It has been one of the most destructive diseases to human life, and on account of the ugly disfigurements it is likely to leave, has always been regarded with horror.

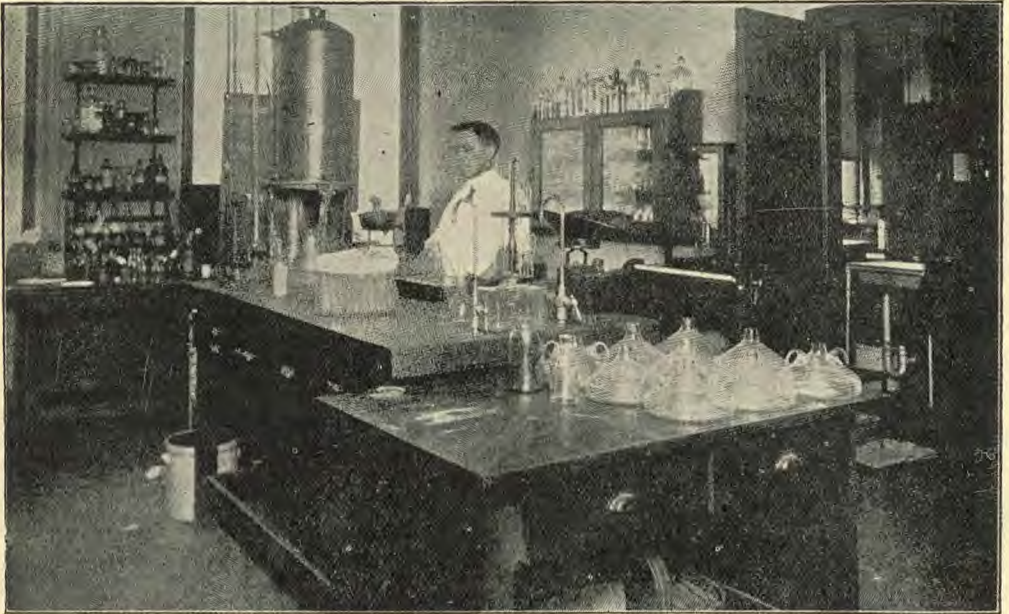
Inoculation

An early way of preventing small-pox was by inoculation. This was done by taking some of the matter from a case of small-pox, and injecting it in a minute incision under the skin. Thus a mild form of the disease was induced, which gave the same immunity as a severe attack would have done. But the method was not without grave danger to the community at large, or without a degree of danger to the patient himself. Sometimes the mild form of the disease thus brought about developed into a severe case, ending in the patient's death or at least in scarring. Again, the inoculated

person, seldom ill enough to be confined to his bed, became a carrier of the disease, and spread it among those about him. Thus while inoculation might protect the patient himself, it frequently gave the disease to many others, and hence really did more harm than good. Inoculation was a common practice in the East, and was introduced into England in 1720 by Lady Mary Wortley Montague, wife of the British Ambassador at Constantinople. She had so much faith in the practice

pox. While a young medical student, he was informed by a young country-woman that she could not contract small-pox as she had had cow-pox.

In 1796, Jenner, after a close study of the question, vaccinated several people with lymph taken from cow-pox. In each case the vaccination was successful, subsequent attempts to inoculate with small-pox failing. Jenner wrote a paper upon his experiments and forwarded it to the Royal Society, but not being approved



Cultures of Serum Ready for Distribution

World's Work

that she had her little boy inoculated the same year.

Vaccination

In the eighteenth century the belief prevailed in some parts of England, especially in the west of England, that if a person had suffered from cow-pox, a disease from which cows occasionally suffered and which sometimes communicated itself to the milkers, it was impossible for him to contract small-pox.

Edward Jenner, the originator of vaccination, was born in 1749 at Berkeley in Gloucestershire, England, and early became interested in the subject of cow-

of by that body, it was returned to him.

Two years later, however, Jenner wrote a pamphlet upon the subject, giving therein his reasons for thinking that cow-pox can prevent small-pox. The new idea was not at first readily received, but later gained favour rapidly, and spread quickly from England to Europe and America; and practically within six years, it is said, vaccination was known and practised throughout the world.

Observers are now nearly all agreed that cow-pox is really small-pox of the cow, or small-pox weakened by being passed through the cow's body.

Pasteur and Chicken Cholera

Great strides towards affording immunity were taken by Pasteur, the great French chemist, in the latter half of the eighteenth century. Pasteur, in making experiments concerning chicken cholera, which at the time was causing the death of ten per cent of the fowls in France, observed that when he inoculated fowls with old, or weak germs, the effects

man. In Pasteur's time the ravages by the disease among sheep and cattle were very great.

Pasteur found a way of weakening the anthrax bacilli, and demonstrated that by inoculating cattle and sheep with the attenuated bacilli, he could protect them from attacks of anthrax. It is estimated that the lives of millions of cattle and sheep have been saved in various parts of



World's Work

Inoculating Patients at the Pasteur Institute, New York, to Prevent the Development of Rabies.

were mild and the birds did not die. And, moreover, the same birds, when inoculated later with a vigorous type of germ, suffered no ill effects; they had become immune. The discovery of Pasteur reduced the mortality from chicken cholera among the fowls in France from ten per cent to one per cent.

Anthrax

This is a disease liable to attack sheep and cattle, and in extremely rare cases,

the world by this method, and that in France to-day the losses occasioned by anthrax are but one-tenth of what they were before Pasteur introduced his discovery.

Rabies and Hydrophobia

Rabies is a disease affecting mainly dogs, but also cats and deer, and other kinds of animals. When it attacks man it is known as hydrophobia, and results from the bite of a rabid, or "mad," animal.

When hydrophobia manifests itself, recovery is a most unlikely thing. It was noticed, however, that the disease takes a long time in incubating, months often elapsing between the time of infection and that of the manifestation of the symptoms. It occurred to Pasteur that by using a weakened virus at the first, and gradually increasing its strength, he might between the time of infection and the manifestation of the symptoms, make the patient immune before the disease appeared. But a preliminary difficulty was to find out just what caused the disease. After a great deal of investigation Pasteur found that the poison that caused the disease was situated in the spinal cord; and that if a portion of the spinal cord of an animal suffering from rabies were injected into another animal, the latter would contract the disease and succumb. He also found that if the spinal cord of a rabbit were taken out and dried, it diminished in virulence according to the length of time of drying. He further found that by beginning with a weakened virus and gradually increasing the strength of the injections over a period of time, he could prevent the appearance of rabies in susceptible animals that had been bitten by a rabid animal; and the same treatment proved successful in the case of human beings.

While not every person bitten by a "mad" animal develops hydrophobia, the disease rarely fails to manifest itself when the bite has been received on the face or hands; and, when developed, hydrophobia usually proves fatal. Pasteur institutes to deal with cases of hydrophobia have been set up in various parts of the world, and the method yields success in ninety-nine cases out of every hundred treated.

Typhoid Fever

In 1896 Sir Almroth E. Wright obtained cultures of the typhoid bacillus from soldiers ill with "enteric fever." These cultures were developed in sterilised beef-tea, and were afterwards killed by heat and a drop of carbolic acid, and

put up in tiny glass tubes, each containing 500,000,000 bacilli. Among the first persons to be experimented upon were British officers who had seen service in India and South Africa. One or two injections of the dead bacilli were found to give immunity double that in unvaccinated cases, and the immunity lasted for three years.

The method has since been brought much nearer perfection; and the regulations of the United States and Japanese armies and navies require every enlisted



World's Work
Inoculating Against Typhoid Fever

man to undergo three inoculations of the typhoid bacilli at ten-day intervals, this method being found to give the best results.

In 1911 twenty thousand United States troops were ordered to the Mexican frontier, and each man was required to undergo inoculation with the sterilised typhoid bacilli. And President Taft declared on New Year's day, 1912, that "the absolute prevention of and immunity to typhoid fever in the American troops encamped before Juarez was cer-

tainly the most wonderful event of 1911."

Investigators have similarly been successful with other diseases, the underlying principle of prevention being the same as

in typhoid; and it is possible now, by injections of the required sterilised bacilli, to give immunity from boils, meningitis, and pneumonia.

Mind Cure or Miracle, Which?

G. D. BALLOU

Concluded

ALL the modern so-called systems of divine healing are thus using the law of rest, and bringing about results that are surprising to those who do not understand this law. Every kind of mental diversion is used, anything to inspire confidence once more, and bring the troubled soul to a state of rest. Even occultism and mysticism and great swelling forms of expression are used to get the mind busy with some new thing beside the old, disagreeable, life-destroying lines of thought. Absent treatments work cure because the theory that one "soul" can project its influence through space to affect another one, if accepted, places the afflicted mind in an expectant, hopeful attitude. If the anxieties are laid aside for but one hour, the patient will begin to feel rested, and then he, or more likely she, believes the other "soul" has reached her with its benign influence, and then as the mysticism takes a deeper hold, the old moods are more and more fully banished, until the poor sufferer forgets to fret and worry and feel bad.

It is not very remarkable that those cured by this cheap system of human assurances and diversion should have to be cured frequently. Repeatedly we see them going for another course of treatment, even after they have been proclaimed whole. Sometimes sudden restorations occur. Is this more remarkable than sudden prostrations? If mental adversity can prostrate the physical suddenly, may not mental prosperity in many sensitive cases suddenly restore the physical? There is nothing so wonderful about this after all, and yet these cases

are pronounced miraculous. The sudden prostration comes from a violation of the natural law of rest, and the restoration comes from a supreme application of that law. It is just about as remarkable as that water will quench thirst, or fire warm the body.

All these systems, and there are several of them, have cut loose in their theology from all knowledge of a personal Creator; and these cures are said to be wrought by connection with a sort of supreme "all soul" that pervades the universe. This is the truth in general, but there are quite wide variations in their conceptions of God; but the supreme thought of pantheism—an all-pervading spirit essence—is present in every system. This entirely separates all these healers from the Creator who is revealed through His works and Word as a loving, tender, compassionate, all-wise, and all-powerful personality, with whom we may have fellowship if we will. But fellowship and communion are utterly unthinkable with such an impersonal god as is being proclaimed.

Miracles

These are suspensions, or accelerations, of natural law; or direct acts of creative power; or they may be but the setting aside of the penalty for the violation of natural law, all of which must be wrought through the agency of him who created and upholds all things. In all the workings of those who are proclaiming themselves as divine healers, in not a single case have we seen evidence of the workings of creative power. But yet we do occasionally see instances of the genuine

workings, but they are unheralded and generally unpublished. No flourish of trumpets, and no braggadocio is seen or heard. We know that the Creator can, and does, still work for those who humbly ask, if it can honour Him and His cause. But nearly, if not quite, all these professed systems of modern healing are as devoid of miracle as is the raising of a brood of chickens or the growing of a grain crop. To him who understands the law of rest this whole line of healings becomes a cheap sleight-of-mind performance, made possible only because of the undefined sentiment that prevails everywhere, that whatever is accomplished for the sick without the aid of visible means must be divine.

Here is healing through invisible mind influence which the people do not understand because they have never given it a thought, and they can hardly help ascribing it to supernatural cause.

Let in the light on this subject, and Christian Science, New Thought, and the Emanuel Movement become exceedingly tame affairs. One-half the confidence and devotion which these systems demand, would, if directed to the Creator and His laws of rest, bring infinitely greater results, because He is able to provide for all troubles, not only the past and present, but the future as well. In the law of rest the higher, nobler, and more powerful the object or basis of confidence, the grander and more lasting the results. We may get much comfort out of trusting in the law of gravitation, or the return of the season, or some faithful friend. We may even find satisfaction and rest in believing a falsehood or a false

doctrine. The heathen may get a measure of peace in making his offerings to his dumb idols. But there comes a day of revelation to that confidence which is on a false basis, and then the agony of disappointment follows. A few experiences of this kind so discourage and harden the soul, that it becomes difficult to ever again arouse confidence in anything or any system. Oftentimes in these cases we have seen indifference and despair take possession, and that being which was ordained to Godlike manhood and womanhood through loving trust, goes on the

rocks of doubt and unbelief, a broken, shattered wreck.

The Creator only can be the true miracle worker. Nothing is too hard for Him. In the life of Jesus of Nazareth He healed them all with faith and without faith as well. He demonstrated the presence of creative power in His miracle-working that man might have his confidence once more restored, and placed on the true basis of fellowship

with the great Father in heaven.

These modern systems of so-called divine healing are constantly meeting with failure. This proves their lack of connection with the divine. They can, and do, work the confidence cure without any connection whatever with the Creator, just because the "law of rest" is a law of nature. Water will quench thirst for a godless blasphemer just as quickly as for a devout Christian, and the law of natural rest will calm the fears of an atheist as well as the worrying of the Christian, and for a distance they may travel the same path of healing together, but when the Christian grasps the knowledge of a

Timely Advice

Chew your food slowly and thoroughly; it helps to keep the teeth and gums clean and healthy. Try it.

Brush your teeth thoroughly and always before going to bed.

Brush your teeth from the gums toward the cutting edge. Brushing crosswise does not remove particles from between, and causes unnecessary wear to the tooth and injures the gums.

Brush the inner sides of the teeth to prevent tartar from forming.

Use floss silk between the teeth to keep these surfaces clean.

Doing these things will help you to have pretty and sound teeth and sweet breath.—*Rochester Dental Society.*

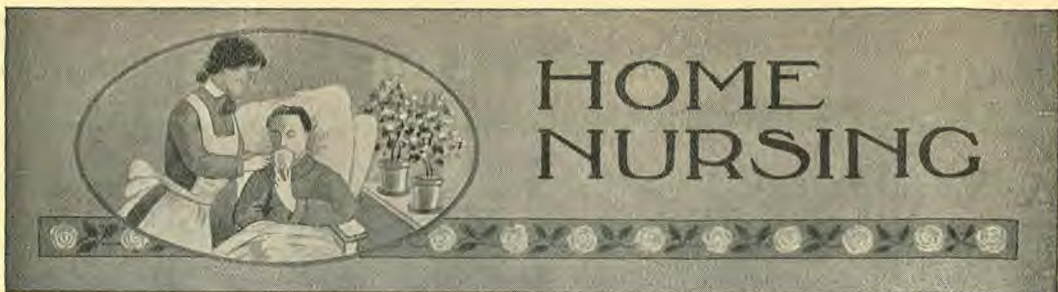
Creator fully, and comes in fellowship with Him, he has reached a basis of confidence that provides fully for all past, all present, and all future troubles. We call these modern systems atheistic because they are without a knowledge of the Creator. They are practically evolutionists, and evolution years ago dispensed with the Creator. It is true they do have an ethereal idea of a deity which pervades all things and all space. The Buddhist, who is the true original Pantheist, rejoices in the thought of being finally absorbed and losing his personal identity in Nirvana. The modern healing cults, so far as I can learn, do not expect to lose identity at death and be lost in the great "all soul," but they present to us the ethereal pantheistic background with shadowy outlines of departed humanity dwelling in the great "all soul." They do not ascribe creative power or energy to this impersonal god. How could they when this vapoury god is only the creation of human minds that had lost a knowledge of the infinite Creator? But they do claim each and all of them that their workings are identical with those of Jesus of Nazareth. This brings true miracle-working down to the sleight-of-mind performances which are the sources of their success. This mystical idea of God has been brought into so-called Christian lands through the influence of those who,

tiring of the restraints of the old Bible have sought relief by spiritualising away the God of this old Book, that they might the easier do away with its restraints.

The Creator is the author of law and restraint. He could not consistently continue to work miracles for those who ignore His regulations. Should He do so, He would only be confirming men in sin. But these modern systems proclaim healing for all alike irrespective of character, thus lowering the standard of distinction between sin and righteousness.

So from every point of view we cannot fail to see that there are neither suspensions nor accelerations of natural law, nor any removal of the curse, nor any evidence of direct creative power. They are all operating only the great law of natural, mental rest. If professed Christianity had only found its full and perfect spiritual rest in the faith of Jesus, there would have been no room for these modern systems. It is the privilege of the Christian to remove nine-tenths at least of all the evils of the flesh through simple faith and obedience alone, and then trust God for miraculous aid in his extremity. When this doctrine of mind cure, through the law of rest, is understood, it will take all the glamour and mystery out of the so-called divine healing fads, and open the way for a new line of mental, moral, and spiritual progress.





Cold in the Head

G. H. HEALD, M.D.

Prevention

THE vexed question as to the cause of colds is not yet satisfactorily settled. Some say all colds are due to germs, and that the old idea of draughts causing colds is mere superstition. It would probably be nearer the truth to recognise that in the causation of every cold are several factors, and that no one of them alone is sufficient to cause a cold.

First there is "predisposition," which may be inborn or acquired. Some all through life are more susceptible than others. Then this susceptibility may be increased or diminished by general habits. For instance, excessive clothing or overheated rooms, by causing an unnatural moistness of the skin and a weak reaction, may produce colds. On the other hand, the habit of cold bathing will render one less susceptible to colds.

Our houses in winter are kept about as warm as is comfortable in summer. Not infrequently the room temperature is above 70°. For one to wear heavy underclothing in such an atmosphere is to produce a condition of susceptibility to colds. It would be much better for those who live most of the time indoors in a modern-heated house to dress very much as in summer while indoors, and to have abundant wraps for outdoors.

Another cause of colds is unequal dressing of the body. Place the "chest protector" on the feet, in the shape of warm

stockings, and not over the lungs. If the feet perspire easily, the stockings should be changed often enough to insure dry feet; for it is impossible to keep the feet warm if they are damp.

One cause of frequent cold in the head is chronic nasal trouble, which should have the attention of a specialist.

Another cause of cold in the head is germs, or bacteria. It may be that these cold germs are in the air all the time. At any rate, they seem at certain times to be more virulent than at others, and then we have an epidemic of colds. One of the important measures of prevention is to avoid exposure to those who are coughing and sneezing. Any room in which a person has taken a cold, doubtless has floating around in the air minute droplets of saliva or mucus on which there may be infectious germs. Do not allow yourself to remain long in a room where there is coughing and sneezing; and if you have a cold, do not expose others.

By heeding the above precautions one may prevent many colds, thus avoiding not only annoyance and indisposition, but also the danger of worse troubles; for colds not only increase the tendency to future colds, but they are apt to leave a chronic weakness of the mucous membrane, which may invite other disorders.

Treatment

The old-fashioned purge by castor-oil is an excellent beginning, though the full



Ready for the Patient

enema may accomplish much good. The next treatment should be a cabinet bath. The apparatus may be improvised from the following articles: A chair, with a blanket, or other protection on the seat and down the front; under the chair a pan of boiling water over an alcohol stove; in front of the chair a bucket of hot water; a large double blanket; a cloth wrung out of cold water; an attendant to give the treatment. The bed should be convenient.

The patient, in nightshirt, should sit in the chair with his feet in the bucket of hot water. The blanket should be formed into a kind of tent around the patient (leaving his head out), chair, and bucket, and so arranged that more hot water may be added to the bucket as the patient can bear it. The treatment should be continued until free perspiration is induced. Meantime the cold cloth should be kept on the patient's head, and wrung out of

cold water as often as it warms up. More hot water should be added to the bucket until it is as hot as can be borne.

When free perspiration is established, the patient, after his feet have been thoroughly dried, may stand, and with the blanket wrapped close around him, get into bed and remain there for twenty-four hours if practicable. If the treatment is begun early and faithfully followed, it will abort any ordinary

cold. Unfortunately few attempt to "break up" a cold until it is too late.

At the beginning a spray of salt or baking soda, a teaspoonful to a pint of water, is good as a cleansing agent. Later a spray of liquid vaseline containing five per cent each of camphor and menthol, is bland and soothing. One should be careful not to blow the nose violently, as this is apt to force mucus up into the Eustachian tubes, and cause middle-ear trouble and permanent deafness.

It should never be forgotten that "cold



Patient Receiving Treatment

in the head" may be the beginning of some serious contagious diseases, like measles. A child with cold in the head should invariably be removed from school; for in any case the trouble is infectious.

A Sure Cure for Constipation

H. F. Rand, M.D.

ONE of the common causes of the clogging of the system with impurities is constipation of the bowels. And many of the stomach disorders and many of the other diseases with which people are afflicted are due to this cause.

In handling a great number of these cases during the past twenty-five years, I have found that the following simple methods, conscientiously adhered to, will conquer the most stubborn cases:—

One of the things that gives the greatest relief is whole wheat, cooked for four or five hours in a double boiler. I have seen cases of over twenty years' standing, in which all the laxatives have been used to no effect, respond to this treatment in a few weeks' time. Some of the wheat prepared in this way should be eaten with each meal.

Another great help is to take a glass of water as soon as one wakes in the morning. In about ten minutes take another, repeating this three or four times, if possible, before breakfast. In case the water cannot be taken alone, the juice of a lemon or an orange may be added.

An exercise of great value in these cases is to lie on the floor or something equally firm, before the body is clothed in the morning. Raise the limbs at right angles with the body, taking five seconds to raise and lower. Raise first one limb, then the other, then both together. Keep up this exercise for four or five minutes. This will strengthen the muscles of the abdomen, and is one of the very best of exercises.

Deep-breathing is also excellent, especially if conducted in the open air.

These are some of nature's simple remedies; and their continued practice will give relief. You will readily see that they could not possibly inflict upon you injury. Of course, if the patient is in such a weakened condition that he cannot follow such directions, he should see his family physician before entering upon this programme.





Your Child That Is To Be

LILY M. THORPE

IF there is one subject that lies deepest in every true woman's mind, and reaches the intensest depths of her being, it is that of motherhood. What tender memories cling round this sacred word. It is a word that falls softly and reverently from all our lips. It is the holy gift of God to His earth children. It is the means that brings heaven close to earth.

"But the sad fact remains that in actual practice motherhood is not always the clean, wise, protecting agency it was meant to be. Knowing what the child is, and is to become, yet we do it much evil, seldom intentionally, sometimes unavoidably, often unthinkingly; but however occasioned, the child is the victim of our unwisdom, whether it spring from ignorance, from indifference, or from intent."

Very few women are intelligent on the matter of prenatal influence. That prenatal influence is a fact is not to be denied. And that our yet unborn children receive the marks we place upon them for weal or for woe is not wanting in verity. The child that is being nourished in secret for so many months can be likened to a sensitive plate in a camera on which photos are taken, later on to be developed. Then can be seen the effect of prenatal influence. Our thoughts and actions focus themselves *in* the delicate impressionable structures of the brain of the child that is to be. Some women are not pleased

when they realise that a child is to be theirs. They rebel against it with anger and disappointment. Mothers, if you persist in these feelings, rest assured that your children will be of a rebellious, vindictive character. This may not appear in the early lives of the little ones, but sooner or later appear it will, for the imprint is there.

A grave mistake is made in the use of alcoholic stimulants by the prospective mother. It is a fallacy to even dream that they give added strength. It is only a stimulation that will again soon need to be stimulated. Child-bearing is natural to a woman, and nature provides for the extra draught upon her strength and resources at that time. Rest and relief from mental strain are the best stimulants. Not only are children whose blood has been stimulated with beer and other alcoholic stimulants weak and sickly, but they inherit the taste for it, which taste may either drag them, in after years, down to the depths of the lowest despair, or cause them to engage in a moral battle that will warrant the powers of Heaven to be engaged on their behalf. How much better and kinder to bring a child into the world untrammelled and unhandicapped by any such awful nightmare.

It is a solemn responsibility that rests upon the prospective mother. If we could only constantly realise that we our-

selves directly impress our unborn children; that every perverse trait in our characters, persisted in, is reflected again in theirs, or *vice versa*; that every lovely thought, beautiful picture, or soul-stirring music, will also leave the print of its beauty upon those little ones nestling under our hearts, how careful would we be, yes, how tenderly careful for the unborn babe. — Anything that disturbs the blood of the mother in this impressionable condition disturbs also the circulation of the babe, seeing that the child is directly fed by the same blood. It is the same food and drink entering into the circulation of the mother that feeds the delicate body and newly forming brain of her unconscious child. Ponder, then, as to the results.

The prospective mother should endeavour, if possible, to arrange her household duties in such a way as to relieve herself of heavy, laborious work. By using up all her strength in washing, ironing, or scrubbing, she is robbing her child of that vitality he will need for the performance of life's duties. Strong mothers often have weakly offspring because of this very thing. It is not fair to the little lives dependent upon them. II

Prenatal life is the gateway to gifts, gifts for the child that shall nestle in your arms and lay its soft hand upon your breast. Mothers, dear, tired mothers, live your lives for the little lives that lie hidden under your hearts. Read beautiful literature, look at lovely pictures, if possible, listen to beautiful music, and give yourselves the communings of sweet, holy thoughts. If this does not come naturally, cultivate it, long for it, and it shall be yours. It lies almost wholly with you to make your children what you will,—beautiful, sweet tempered, and sunny; or ugly, peevish, and of an unhappy disposition. And this last is not all (would that it were), even those habits and unhappy things you would have hidden from the child may be indelibly graven upon it as with a pen of iron. Prenatal influence makes or undoes a child.

The wife at these times should be care-

fully and tenderly cherished. Unpleasant things should be hidden from her. The husband and father can do much to make the time of waiting happy by never allowing any ebb-tide in the love that should hallow the sweetness of home associations.

The Neglected Child

DID you ever see such a child? Quite likely he has a bad reputation in the neighbourhood. A child that everybody is down upon. Isn't that a sad phrase?



Fruits of Neglect.

A *child*—that everybody is down upon! And yet it is safe to say that in almost every neighbourhood there is some child to whom those words will apply.

I have in mind now a black-eyed youngster of ten. Bright and intelligent, yet every mother in his section of the town dreads to see him coming. Partly through the influence of the mothers' dislike and partly on scores of their own, his unpopularity extends even to the youngsters. He is on their black list too. He has been denied admittance to all the best

Queer, How Mothers Are!

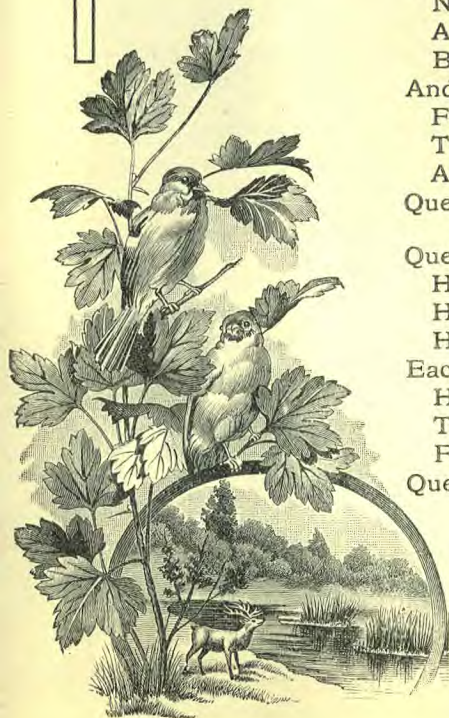
[MIRIAM TELCHNER in the "Detroit News."]

QUEER, isn't it, how mothers are?
 How peacefully content seem they
 Just to sit back, and, day by day,
 Let others go the joyous way;
 Let other people travel far,
 Let others have the smiles and fun,
 Help others get their labours done.
 Ready to comfort any one!
 Queer, isn't it, how mothers are?

Queer, isn't it, how mothers are?
 How, when there came an unseen treat,
 A chance to go somewhere and meet
 Some clever folk: a front-row seat
 To see some splendid, world-famed star—
 How mother simply shook her head,
 Pretending not to care, and said,
 "No, darling; please—you go instead."
 Queer, isn't it, how mothers are?

Queer, isn't it, how mothers are?
 Not caring as to what they wear,
 Although they are so fair, so fair.
 But how they work, and how they care,
 And bring some little jewelled bar
 For daughter's hair! How long they'll sew
 To make her dress "just right, you know."
 And fit it, then, with eyes aglow!
 Queer, isn't it, how mothers are?

Queer, isn't it, how mothers are?
 How they will soothe and nurse and pet,
 How sweet they make it to forget!
 How they can smooth each little fret,
 Each ugly little care and jar!
 How, in whatever thing they do,
 The heart of them shines out anew.
 Forgetting "I," and thinking "You!"
 Queer, isn't it, how mothers are?



homes. Children have been forbidden to play with him.

What has the child done? Simply this. He has had the misfortune to have a mother who in her love for ease has forgotten her responsibility to her child and left him largely to shift for himself. Oh yes, she provides his meals and his wearing apparel, and even a certain number of toys, but she forgets that a boy needs more than these, and is continually admonishing him to "go along somewhere



Receiving Instruction

—anywhere—and play." He can't have company for he must not litter up the house or grounds, and anyhow she "just can't stand having children around." They make her "so nervous." But she is content to thrust her children into other people's nests. And other people resent the charge, and rightfully—but God pity the child.

Naturally he hasn't the refinements that children from better homes acquire almost unconsciously. In his natural craving for amusement and understanding, all unguarded and misunderstood as he has

been, he has run against things that are not good. He has learned bad words, bad thoughts, bad actions.

"We cannot risk the ruination of our children by such as he," say conscientious mothers, and draw their robes of self-righteousness a little closer about themselves and their own. And the child of the street, for such he is, having been forced there by his own and other mothers, is left to his own devices.

"But what have other mothers to do with it," I hear someone ask. That, it seems, is only another form of the world-old question, "Am I my brother's keeper?"

I would not for one moment plead for mothers to allow their children free rein in playing with these little neglected lads and lassies. But might they not open their doors once in a while? Could they not now and then allow such an one to join in their own children's sports, always, of course, under their own kindly watchful supervision? Would it even do any harm for them to take their children slightly into their confidence in planning an especially good time once in a while for such a one, because he doesn't have many good times at home, and maybe if we are very kind and good we can help him to be a little better boy?

Who knows how much good a little kindly attention may do one such little neglected child? And who knows too, but that the Great Judge may hold those "other mothers" responsible also, for the help they refused to give when such an one was thrust under their influence?—
Pearle White McCowan.

IF you are happy it is largely to your own credit. If you are miserable it is chiefly your own fault. In a word, live in the passive voice, waiting for good to come to you ready made, and you will be a pessimist, miserable to the end of your days. Live in the active voice, intent on the progress you can make and the work you can accomplish, and you will acquire the art of optimism, and be happy forevermore.—*William De Witt Hyde.*

Bathing the Baby

So many mothers, especially young mothers, do not know how to properly bathe a baby. I have seen mothers who did not give the baby a tub bath until he was a year or more of age. But it is a very easy matter, if one once learns how.

First have everything ready before you

arm, his back being against your hand, with your right hand under him for support. Then when he is safely in the water, use the right hand for giving him the bath, still supporting him with the left.

When one learns just how to hold the baby, it is no trouble to give him the bath, and there is no danger of letting



begin—water, wash cloth, soap, powder, towel, clothing, etc. Have the temperature of the water about 95° and a warm room with no draughts. A very small child may be bathed in a large wash bowl, but I used a small tub bought especially for the baby. When the baby is ready for the bath, hold him with the left thumb and forefinger about the neck, and the third or little finger about under his left

him slip into the water. The bath can be given in a very few minutes, when he should be rolled into a warm blanket and kept covered until he can be dried with a soft towel. He should then be dusted with some good baby powder and dressed in his simple little clothing, fed and put down for his nap. He should be bathed before he is fed and at a regular time each day.—*Mary Cook.*

The Mother's Work

A MAN'S work in the world looks so much bigger and more important to a woman than her work in the home. And every once in a while even the best of mothers catches herself sighing as she reads or hears of some piece of vital work done by a man. That it is a tremendous privilege and responsibility to be doing a man's work in the world admits of no question. But what the woman forgets is that it is by far a greater privilege and an infinitely greater responsibility to shape and control the early influences and the environment that are to create the man who is to do the work. That greater work doubles the great "worth-whileness" of every hour in a mother's life, compared to that of a man. He does what he is created and shaped to do, but the mother has created and shaped the man to do it. That is why we hear successful men so often say: "What I am I owe to my mother; the credit is hers. She shaped: I did."

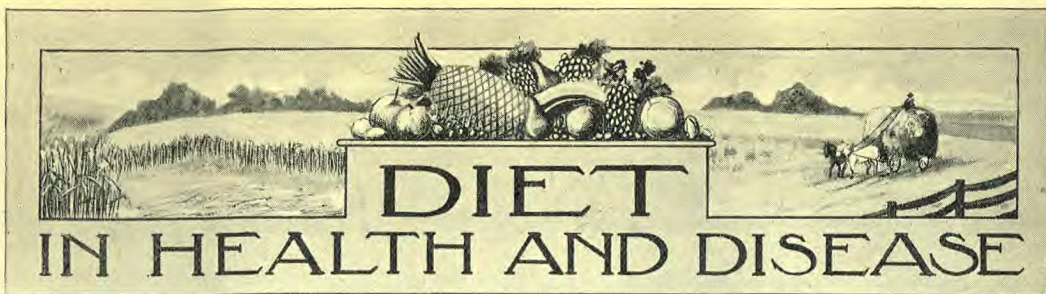
When Mother Says "Because"

The obedience of children is often made difficult by parental uncertainty. It is sometimes forgotten that obedience is a virtue for which the co-operation of two

persons is essential: one to give the orders, the other to carry them out. The initial condition is a judicious, firm, and well-considered giving of orders. Nothing is so demoralising to a gang of workmen or to a band of soldiers as a series of hasty, unadvised, and contradictory commands. With all the willingness in the world the sense of distrust which is thus awakened suggests disobedience.

The trouble with many children who seem not to know how to obey is that their parents do not know how to command. The orders are given hastily and changed readily on petition. Even an unwillingness to obey is made sufficient reason for withdrawing the injunction. Some of the discipline of young children is as foolish as the mother who says in answer to the question "Why?" "Because!" And you know, Johnny, that when mother says 'Because' she always means 'Because'!" The child quickly perceives that the parental discipline has no more sense in it than that. The disobedience which ensues is a fair expression of distrust. Obedience begins with respect. But respect is forfeited when it is made plain that the commands are not intelligently given.—*Ladies' Home Journal*.





Modern Dietetic Ideas

DAVID PAULSON, M.D.

WITHOUT exception the first advice the doctor gives to a patient suffering from Bright's disease is to discontinue the use of flesh food. The patient may plead, "Doctor, what about chicken?" The invariable reply is, "No, you must not touch meat at all."

Every sensible, up-to-date physician gives similar advice in a case of acute rheumatism, and also in fever, and more than likely in a severe attack of auto-intoxication.

But there is something even better than this, and that is to discontinue the use of meat one year or five years earlier and not have the disease at all. For what can cure a disease certainly ought to prevent it, and so it would in most instances.

I object to a flesh diet because it hurts my business. As a healer of disease, I am naturally opposed to all those things that produce disease. I am glad to help sick people become well, but it is a much greater inspiration to help well people not to become sick.

Gautier, one of the best recognised authorities in the world on scientific dietetics, writes:—

A meat diet acidifies the blood and diminishes the oxidation. . . . It congests the liver; it brings on obstinate constipation, and causes dyspepsia, gastric difficulties, and enteritis; it leads to psoriasis, eczema, etc., it develops rheumatic, arthritic, gouty, and nervous tendencies. It produces arterial hypertension (high blood pressure) and heart fatigue, and becomes one of the most active predisposing causes of arteriosclerosis (hardening of the arteries).

A diet, the exaggeration of which is the origin of so many physiological and morbid disorders, could not be favourable to the good development of the family or of the race.

Cancer and Gastric Ulcer

Gastric ulcer is rapidly becoming one of our most common diseases. Surgeons have demonstrated that it is ten times more prevalent than was formerly supposed. Several years ago Dr. Fenton Turk, Chicago's eminent stomach specialist, stood up before the American Medical Association and said: "Gentlemen, gastric ulcer is a meat-eater's disease. It is unknown where there is no meat-eating."

Merely to mention the word "cancer" starts a shudder through us. All experienced physicians believe that this disease is increasing enormously among civilised nations. There are a great number of physicians who believe that cancer is largely caused by meat-eating. Dr. Bell, an English physician, not only maintains that cancer is largely due to this, but that in the early stages cases have been cured by adopting a vegetarian diet.

Dr. W. Roger Williams has insisted for years that the rapid increase in cancer in Great Britain has kept pace with the increase in the use of meat. He has investigated the question the world over, and has found that non-meat-eating people are practically free from cancer. In Canada there is a large colony of religious people who originally came from Russia. They are strict vegetarians. It is said that there has never been a case of cancer

in that entire colony. If what I am suggesting shall finally be sustained as an absolutely scientific truth, it is evident that that alone is amply sufficient to blacklist meat as an article of diet.

The universal prevalence of high blood pressure among the middle-aged in active life is becoming a standing menace to humanity. Men are dropping dead in the streets of heart failure, strokes of apoplexy are becoming distressingly frequent. It is now known that in addition to our modern strenuous life, the waste products of meat, the nicotine of tobacco, and the caffeine of tea all tend to develop this condition.

Food Plus Ashes

Meat is partly burned food. It is nourishment plus ashes; and it is the ashes, the waste products, that I seriously object to, and that are responsible for a large share of the mischief produced by meat eating.

Contrary to the usual notion, the animal kingdom does not make any food at all. Every bit of nourishment there is in the earth to-day was created by the plants. The plant kingdom reaches down, lays hold of the dead minerals, absorbs the gases from the air, and aided by the moisture and wooed by the sunshine builds up food. The animal consumes this plant food, burns up most of it, leaving the remainder, more or less burned, as muscle.

But it takes about ten pounds of corn to make one pound of flesh. In other words, the animal, instead of making food, burns up about nine pounds to make one, and leaves a lot of ashes clinging even to this pound. The food that the animal eats is largely used in furnishing energy for its various activities, but a small part is stored away as muscle, and when we eat flesh we are simply eating the original food made by the plant plus the ashes made by the animal.

“THEY who provide the food for the world decide the health of the world.”—*Talmage*.

How to Feed the Sick

Wm. W. Worster, A. M., M. D.

THAT portion of dietetics which pertains to the feeding of the sick should receive a most thorough and careful consideration. Even for a person whose appetite and will powers are both active, it is not always easy to select a diet; and when these are temporarily absent or greatly diminished, the situation is more difficult. In the sick-room there are many complicating conditions to meet. What food to give, how to prepare and administer it, and when to give it, are problems constantly recurring. The attending physician sometimes prescribes the amount and kinds of food. Usually, however, not only these but the preparation and administration as well, are left to the discretion of the nurse or other attendant; many times, and far too often, to an inexperienced cook.

In the feeding of the sick, there are many things to be taken into consideration other than those which directly pertain to the food. The condition of the surroundings, the position of the patient, the appearance of the tray, the conduct of the nurse, and the like, are factors of great importance.

Before the tray is brought in, see that the patient is made as comfortable as possible. Be careful not to throw his head too far forward. Wash his hands and face before each meal. Rinse his mouth before and after eating. Be sure to protect all clothing. Do not permit crumbs to fall into the bed; they are very disagreeable. When he is able to sit up a half-hour a day, arrange the daily routine so that one of his meals will be served during that time. Keep the patient's mind, if possible, continually upon some pleasant subject. Be sure to consult, as far as orders and health will permit, the known tastes and desires of the patient, but do not annoy him each meal by asking. Learn by careful daily observations his likes and dislikes. Surprises are very gratifying and more appetising than meals planned for with the help of the patient.

Never overburden the digestive organs of the patient. This is frequently done in an over-anxious endeavour to help the patient. Remember it is not the quantity of food swallowed that helps, but the amount actually digested and assimilated. Many times a small, appetising meal is much better than a larger one. If the patient is sleeping, it is not always advisable to awaken him for meals. Many

The nurse or attendant should be very careful not to spoil the patient's appetite. This many times is done by serving foods in medicine utensils. Irregularity in serving meals may produce the same effect. The patient's appetite may fail completely if the meal is much delayed. If the nurse feeds the patient, she should do so slowly and usually in small amounts. She should never think of eating in the patient's room.



The tray should be attractive and inviting.

times the sleep will do as much good as the meal, if not more. The meal can be postponed, but the sleep in many instances cannot be resumed.

It is always advisable to keep the patient in a room with pleasant surroundings and abundance of fresh air. The room should always be isolated from the noise of the kitchen and the odour of cooking food. If the patient is unable to sit up, such articles as a bedside table, drinking-tubes, and feeding-cups are always of great convenience.

Very near friends or relatives may, under certain conditions, be permitted to do so, especially if the patient is convalescing to such an extent as to enjoy their company. In many cases it is necessary for the nurse to tax her ingenuity and judgment to the utmost to stimulate any desire at all for food on the part of the patient.

It is very essential that the nurse should know for herself about foods, their composition, and preparation; and under no circumstances should she leave this, perhaps the most important part of her work,

to inexperienced hands. The preparation of the food should receive the utmost care. It is one thing to cook for the well, but it is quite a different thing to cook for the sick. How many times have I heard such expressions as the following: "O, I just don't know what to get for my patient to-day!" It is a perplexing problem many times, and requires much thought and training.

Possibly no one thing is of greater significance than to have the tray both attractive and inviting. It should be scrupulously clean, with the best kind of well-cooked foods. A poor appetite may be wholly due to the non-tempting nature of the food or a poorly set tray. Food should never be prepared in the patient's presence. It should always be tasted before taken to him. Such foods as milk, eggs, and butter should invariably be fresh. Highly seasoned foods are objectionable. Great care should be taken to see that such foods as are to be served hot are not only hot, but also served in hot or warm dishes. The same is conversely true for cold foods.

Avoid having too many things on the tray, but, on the other hand, never neglect the essentials, such as knives, forks, spoons, sugar, and salt. Have the tray large enough to prevent crowding. Make everything as neat as possible. Clean serviettes, spotless china, shining silver, combined with order in arrangement, make the tray very inviting. Do not fill dishes containing liquids too full, as they are likely to spill. Glasses should never be over two-thirds full.

Garnishes, flowers, and quotations from the Bible or standard authors, while not imperative, may very appropriately be placed on the tray. It may be said in many instances that the patient is too sick to notice all these details. This is seldom, if ever, the case. He may nevertheless be too ill to mention them. The very fact that he may not give verbal expression to his feelings is no sign of his non-appreciation. Proper care in the preparation and administration of foods to the sick is as essential as the proper administration of medicine or treatments

of any kind. As soon as the meal is completed, remove the tray at once. It should never be left in the room with the expectation that it will stimulate an appetite. It is a good plan always to disinfect or sterilise all dishes that come from the sick-room. This is not always essential; but if made a routine practice, it will never be neglected in cases of infection, where great dangers exist not only to the nurse, but to the family, if the disinfection is not properly executed.

Some Advantages of Food Reform

Miss C. E. Rutley

IT is easy to talk vaguely of the benefits, physical, moral, and spiritual, to be derived from a fruitarian diet. But occasionally one is brought up sharply by the request for a precise definition of those benefits, and to comply with this is a little more difficult, and requires some thought.

We will suppose that our typical food reformer, who is also a nervous man, is looking back after fifteen months' trial of fruitarianism, and comparing himself as he is now with the man he was before the change of diet.

It is a common fallacy to suppose that there is loss of strength and endurance caused by a meatless diet. Nothing could be farther from the truth. If our friend has been careful to vary his food, and to take a sufficient amount of proteid and fats, he will find that his powers of endurance are, if anything, steadily on the increase. He will have quite lost that feeling of drowsiness and repletion after a full meal which often troubled him in former years; his hands and feet will be more nimble, his mental faculties brighter and more active. Of course, having been a nervous sufferer for many years, he will not as yet be quite free from some of his mental and physical symptoms, but they will trouble him far less than before. Then he will certainly feel more hopeful of a complete recovery, and that in the near future. "A man's reach should ex-



**"O, the golden world!
The stir of life on every blade of grass;
The motion and the joy on every bough;
The glad feast everywhere for those that love
The sunshine and for those that love the shade!"**

ceed his grasp," and by virtue of the greater powers of concentration, self-control, and stability of purpose already possessed by our friend he can reach forward with confidence to even brighter days of complete restoration to health.

Diet will not do everything; a systematic course of physical culture, abundance of fresh air, pure water, and healthful occupation of the mind, and above all, a steady determination to conquer the insidious enemy are also necessary. But by abstaining from all blood-stained and stimulating foods, avoiding alcohol, tobacco, tea, and coffee as the poisons they undoubtedly are, and adopting instead a wisely varied and moderate fruitarian diet, the system is given every chance to eliminate poisons already taken into it, and gradually to shake off the chronic ill-health resulting from them.

In the realm of fancy, so closely akin to the spiritual world, how great are the gains!

Looking back on former springs, the man can realise how much deeper and more subtle is his appreciation of the glorious unfolding of bud and blossom, of the wondrous glamour of evening light on meadows and hills fading into the misty blueness of our inimitable landscape, of the daily miracle of sunrise and sunset.

All homely, kindly things; mother-love, the happy laughter of children, the inno-

cent bliss of a "lover with his lass," the more sober joys of friendship, are more to him than ever before. He does not crave for constant excitement, but is content with simple pleasures. He can feel the deep heart of God pulsing through the smallest and meanest thing He has created, and can understand daily more and more of what it means to be "in tune with the Infinite."

Life is by no means all plain sailing with him, however; for a deeper perception of good involves a corresponding deeper knowledge, or shall we say recognition, of evil, both in himself and others. But evil thoughts and impulses in himself will be detected more readily; while he will have a deeper insight into the causes of evil in others, and therefore will be able to forgive and pity them more easily. For "to understand all is to forgive all."

Added to the drawback, if drawback it be, of a vividly keen insight, we must admit that a feeling of isolation and the fear of being branded as a "crank" are disadvantages to some minds. The best remedy is greater self-respect and more faith in one's own judgment, and so to live as a food reformer that others may be insensibly attracted to the movement. An ounce of example is worth a pound of preaching in this connection, but of course we must not be afraid to speak plainly of our convictions when necessary.





How Shall I Distinguish between Symptoms that are Grave and Trivial

LAURETTA KRESS, M.D.

YOU will have difficulty, dear young mother, in making this distinction, so I am ready now to help, if possible, with a few suggestions. Babies and young children never give up until they are really ill. They seldom sham disease, and they will get up just as quickly as possible. So it is very necessary to guard the beginning as well as the ending of any sickness.

Fever

A flushed face does not always indicate a fever. The child may be flushed from excitement, sleep, and so forth. On the other hand, there may be a rise of temperature when the hands and feet are cold. It is always best to provide yourself with a clinical thermometer, and learn how to use it in your home. Then it will assist you to arrive at the exact body temperature. Always take the temperature of children below five or six years of age in the armpit, groin, or rectum. The armpit and groin register nearly a degree lower than mouth temperature, and the rectum one degree higher.

It is not alarming for a young child to have a temperature of 101° when taken in the rectum. This is not high for a young child at any time. In taking a rectal temperature (it is always the most accurate way), turn the child on the side, and after shaking the thermometer down well below 95° , oil the thermometer bulb

with vaseline, and insert for two inches, allowing it to remain from one to five minutes.

When the temperature runs very high, there is usually accompanying the fever some brain complication, as rolling of the head, talkativeness, and restlessness, which are grave, particularly when these symptoms continue for a long period.

A child has fever from the slightest cause, and this symptom is therefore not so alarming unless it continues for a long period. On the other hand, a child may have high fever when the hands and feet do not indicate it. This is usually a serious symptom.

Fever can usually be treated by yourself at first by giving an enema and a full hot bath, accompanied with frequent and copious drinks of cold water. If the fever continues high after the treatment, it is best to call a physician.

Cough

A cough is dry, moist, or croupy. When dry, it indicates the first stages of bronchitis, and requires poulticing to make it looser. A moist, loose cough is found in the later stages of bronchitis and in the later stages of pneumonia. It is serious only in this way: the child always swallows what is coughed up, and the mucus coughed up from the lung goes into the alimentary canal to produce trouble there. This necessitates the giv-

ing of castor oil, olive oil, or something to carry the mucus through the body quickly. In pneumonia this discharge of phlegm is abundant, and must not be allowed to remain long in the body.

A croupy cough is more alarming than dangerous. It demands immediate action, and is soon over. A compress of cold water will give relief before a physician can be secured.

The Cry

As a young child cannot explain its feelings by talking, it must do so by crying. One gradually learns by experience to know what all the varied cries mean. A cry of hunger is usually fretful, and ceases when the child is satisfied. A cry of indigestion is like the cry of hunger. It is not eased, however, by feeding, but is usually worse. The cry of pain is sharp. The legs are drawn up, and other signs of distress are manifest. If the pain is in the ear, the child puts a hand to its ear. If the child falls asleep from exhaustion, it wakes soon with a scream. A cry of temper is prolonged and violent. The arms and legs are thrown about, and the body becomes stiffened. The cry of habit ceases when the child is satisfied with its doll, rattle, or any object it desires. When the brain is affected in high fever, the child may cry out when moved, or may cry out shrilly in the night, or may utter a short, suppressed cry if pain is produced by coughing, as in pleurisy or pneumonia.

Convulsions

are always grave, and a physician should be called immediately. While a convulsion may be the result of some condition readily remedied, there is the danger that it may be a complication of more serious trouble.

Stomach and Intestinal Trouble

become serious so soon that it is well to seek advice early. A very large majority of cases do not recover from these too numerous complaints.

"Is It Right to Do That?"

THIS question is constantly put to every doctor, often about matters concerning which he cannot make a definite reply. People ask, "Do you think it is right to bathe in hot water?" "Do you think it is right to bathe in cold water?" "Do you think it is right to drink coffee?" "Do you think it is right to wear cotton next the skin?" as if all these things were "right" or "wrong," irrespective of the individual case.

If we dared to attempt an epigram we should say that suicide is the only thing a man must never commit. If this is found too general, the answer is that hygienic rules must be general in their statement, but individual in their application.

"Is it right to bathe in cold water?" Right for whom, when, where, how? A strong young man looks on the cold morning plunge as a life-giver, and could not be persuaded to miss it at any season. This view of it is perfectly correct for that person. It is a life-giver, and the fact is proved by the exquisite sensations of increased vitality that follow it. Yes, it is "right to bathe in cold water."

Then some anæmic person with a poor blood circulation goes and does likewise—with what result? An imperfect reaction, shown by chattering teeth, fatigue, chilliness, and all the signs of depressed vitality—no, it is wrong to bathe in cold water. In matters of health, each person possesses a personal equilibrium, the maintenance of which means health for him; general maxims must be tested, modified, and applied to his particular case.

Perhaps the most pernicious of all foes to health is the "fad." The spirits of the expert in hygiene sink to zero when he reads that open-work silk stockings are to be worn by young women through the winter season, or that while skirts remain so narrow, it will be out of the question to wear petticoats under them. He is perfectly aware that thousands of young women will follow the dangerous fashions

and remain unscathed; for he knows that there are thousands of young women who cannot be killed except with a club.

But already he is, metaphorically speaking, in tears for the thousands of other young women who will follow suit rather than look queer—the helpless candidates for influenza, bronchitis, and pneumonia.—*Youth's Companion*.

A Very Young Doctor

A PHYSICIAN owning a country-seat where his family were accustomed to spend the summer months, taught his boys to swim as soon as they were out of the nursery. His farm bordered upon a lake, where the greater part of the boys' time was taken up with boating, fishing, and swimming. One was nine and the other six years old, and they were expected to take care of themselves.

One day the younger child was seized by a cramp while he was in the water, and after screaming for help, sank out of sight. The brother swam out boldly and got an arm under him before the third downward plunge.

The youngster was unconscious and helpless, but the older one contrived to keep him afloat with one arm while striking out with the other for the shore. He drew the little fellow out of the water, white, motionless, and apparently dead.

The rescuer had heard his father describe the treatment for resuscitating persons taken from the water when nearly

drowned. He could not remember it in detail, but he was impressed with the necessity of prompt action.

He did not attempt to summon help from the house, which was a long way off. Placing the boy on his face with his wrist under the forehead, he paused a moment, and then turned the body on the side.

This crude attempt to restore respiration was repeated several times, until he was delighted to find the lips moving and the eyes opening. The young physician had not made a strictly scientific application of the rules for artificial respiration, but the little fellow's breath was restored.

Then two additional rules mentioned by the father were remembered. The body was briskly rubbed, and then bundled up with the jackets and dry clothes which were on the bank.

With these measures for restoring circulation, recovery was well-nigh complete. Then taking the child on his back, the rescuer started for the house, where the mother received them with open arms and anxious face.

The patient was put to bed, and the father summoned from town, but precautionary measures were hardly necessary. The nine-year-old physician had done his work so successfully that nothing more was required.

The father was proud of the boy, as he had a right to be.

"I could not have done better myself," he said to the lad. "You must be a doctor when you grow up; indeed you are one already."—*Selected*.





Salads

GEORGE E. CORNFORTH

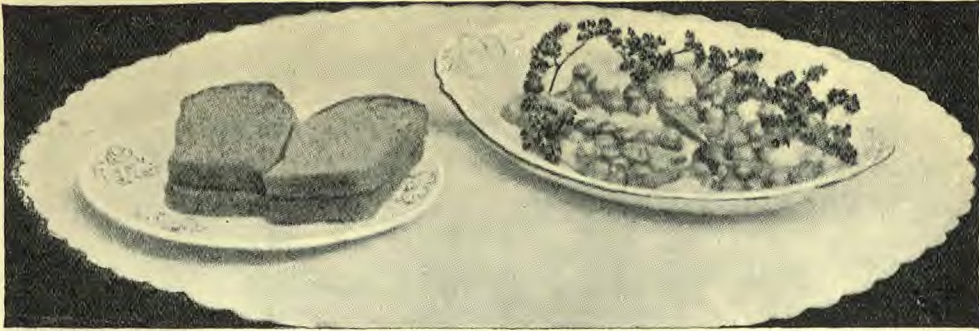
THE making of salads gives the cook an opportunity to bring into play her artistic tastes and ability, for salads may be made very attractive to the eye as well as to the taste. The salad has been called the "prince of the menu." The needs of the bodies of those who partake *might* be supplied by putting proper combinations of food on the table as feed is put before horses, and those who eat *might* do so as if they were getting a disagreeable duty done; but we believe that with sufficient study, thought, and care the preparation of food may be a real pleasure, and give the satisfaction which comes with the feeling that we have done something well; and it is capable of demonstration that food which delights us through the eye and the taste is of greater benefit to us than that which is eaten mechanically. I do not know but we might say that to enjoy our food is a duty which we owe ourselves. Therefore we feel that salads may fill an important place on the bill of fare. Moreover, in salads, vegetable oils which have no inconsiderable dietetic value, for the taking of which many feel an aversion, may be so disguised with other most wholesome foods, such as fresh vegetables, that the whole is made a very palatable food combination of real health-giving value, the oil supplying real nourishment, while the other ingredients supply elements of real medicinal value in the form of vegetable acids and salts in

combination with pure water. I am inclined to believe that a properly prepared salad of the right kind is a far better medicine than any kind of emulsion of cod-liver oil.

General Suggestions

Vegetables and leaves should be fresh, crisp, and tender. Tough and bruised parts should be removed. Lettuce, celery, parsley, spinach, and endive, should be washed in cold water, allowed to stand in cold water till crisp, then drained until serving time, when they should be dried with cheese-cloth if any water remains on them. To prepare lettuce for garnishing salads, cut out the tough lower part of the midrib of the leaf. Vegetable salads may be garnished with lettuce, parsley, beets cut in various shapes, olives, tomatoes cut in different ways, nuts, radishes cut in the shape of tulips, slices of radish, slices of lemon. Fruit salads may be garnished with parsley, lettuce, nuts, sections of orange from which the rind has not been removed, nasturtium leaves and flowers, pansies, sweet peas, or other flowers, and smilax. A pretty way to serve a fruit salad is to put it into a sherbet-glass, set the glass on a small paper doily on a salad plate and lay a wreath of smilax around the glass on the plate.

To prepare oranges for salad, peel them as you would peel an apple, removing all the white skin on the outside of the



Vegetable salad with zwieback.

orange. Then by cutting with a sharp knife on each side of the membranes that separate the sections, remove the sections free from membrane, then cut the sections into small pieces. When apple or banana is used in salad, the dressing should be made first, and the apple or banana cut into it, so it will not turn dark by standing exposed to the air after being cut.

Salad should always be served cold. Green salad plants lose their crispness by standing in the dressing; therefore the dressing should be added to green salads just before serving. Left-over cooked vegetables may be well utilised in salad. With salads of this kind it is well to mix the dressing, and then allow the salad to stand in a cold place for an hour before serving, so that the ingredients may become seasoned with the dressing.

The ingredients of a salad should not be carelessly stirred together, but should

be gently "tossed together" with as little handling as possible. "Vinegar is the liquid excrement of a microbe," a product of decomposition; therefore we do not recommend its use. Lemon-juice, with whose medicinal qualities all are acquainted, is to be recommended instead. The dish in which the salad is served may be rubbed with a cut onion or with the cut end of a clove of garlic to give a delicate flavour. Some kind of biscuits are usually served with salad.

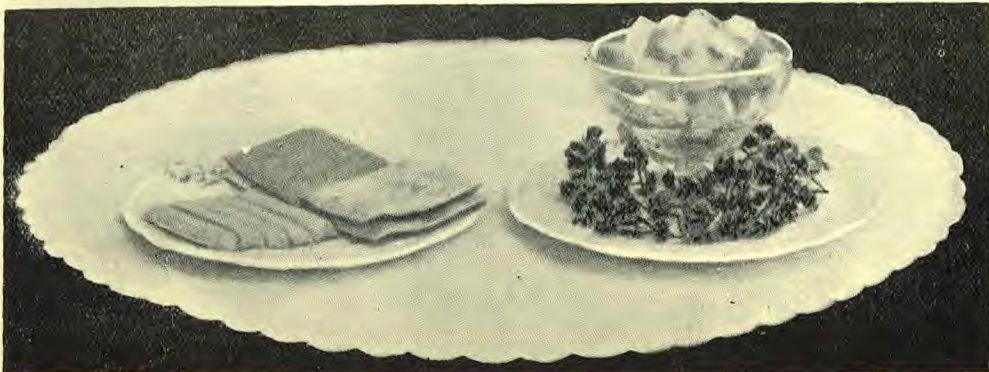
I do not use olive-oil in making salad dressings. Instead, I use a salad oil which has no flavour, and find that people who think they can not eat salad dressing because the flavour of olive-oil is disagreeable to them enjoy my dressing.

SPECIFIC DIRECTIONS

Mayonnaise Dressing

1 egg yolk, 1 cup salad oil, 4 tablespoonfuls lemon-juice, $\frac{1}{4}$ tablespoonful salt.

Have all the ingredients cold. Put the egg yolk



Fruit salad served in a sherbet glass. A variety of biscuits.

into a cold basin. Beat it with an egg-beater till it begins to thicken. Add a drop or two of oil and beat it in, then add a drop or two more and beat it in. Continue beating in the oil in this way, adding a few more drops at a time after the first few additions of oil. When the mixture becomes too thick to beat, thin it with lemon-juice, then beat in oil again. Continue in this way till all the oil is used. Use enough lemon-juice to make the dressing of the desired consistency. Lastly, beat in the salt. If the oil fails to unite with the egg, it will be necessary to begin over again, putting another egg yolk into a clean basin and beating the oil-and-egg mixture which failed to unite, drop by drop, into the new egg yolk.

French Dressing

1½ tablespoonfuls oil, 1½ tablespoonfuls lemon-juice, ¼ teaspoonful salt.

The ingredients of this dressing may vary. More oil than lemon-juice may be used or more lemon-juice than oil. Have the oil and lemon juice, also the basin in which the dressing is to be made, very cold. With a fork stir the salt into the oil, then beat the lemon-juice drop by drop into the oil. The oil

with the corn-starch, which has been stirred smooth with a little cold water. Add remaining ingredients.

Whipped Cream Dressing

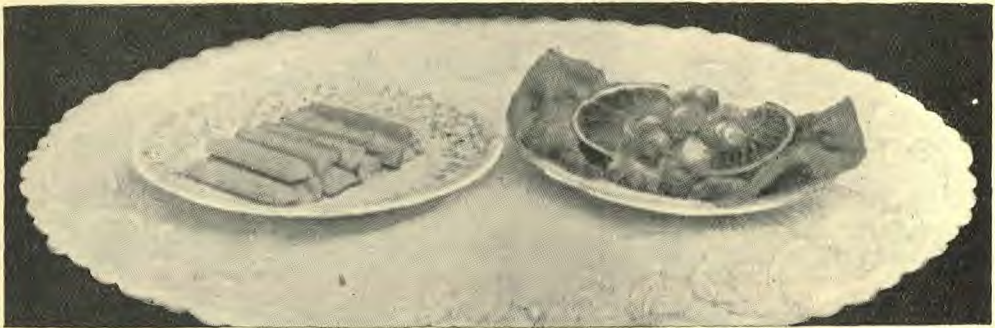
1 tablespoonful sugar, 2 tablespoonfuls lemon-juice, ½ cup thick cream, ½ teaspoonful salt.

Mix the lemon-juice, sugar, and salt. Whip the cream, not too stiff, then add to it the mixed lemon-juice, sugar, and salt. Care must be taken not to stir the mixture too much when the acid is added.

With these general directions the reader should be able to make a large variety of salads, but in the next article I shall suggest a few combinations.

The Housekeeper's Responsibility

A GENERAL makes plans and directs campaigns that affect the destinies of nations. A great preacher, through his



Fruit salad garnished with orange sections. Cream sticks. Pictures fail to show the beauty of salads because they do not reproduce the colours.

will turn white, thicken, and become creamy. Pour at once over the salad, and serve. If the dressing is allowed to stand long before using, it will separate. Use only as much of the dressing as the salad will take up, not enough so that any will drain out of the salad into the bottom of the basin or onto the plate on which the salad is served.

Boiled Salad Dressing

3 eggs, ¼ cupful oil, ¼ cupful lemon-juice, ¼ cupful water, ½ teaspoonful salt, 1 teaspoonful sugar (this may be omitted).

In a double boiler heat all the ingredients except the eggs. Beat the eggs, add to them some of the hot mixture, mix well, then stir the eggs into the hot mixture and cook, stirring, till the mixture is of the consistency of thick cream. Too long cooking will cause the mixture to separate and look rough or curdled.

Tomato Salad Dressing

½ cup of tomato-juice, 1 tablespoonful lemon-juice, ½ teaspoonful sugar, 1 tablespoonful oil, 1 level teaspoonful corn-starch, ¼ teaspoonful salt.

Heat the tomato-juice to boiling, and thicken it

gift of eloquence, brings the souls of men to their inheritance. Behind the general and behind the preacher, helping to bring him nearer to the full effectiveness of his powers, is the woman who fed him and taught him.

Not all women have the moulding of great men in their hands, but every wife and mother has potential good citizens at the mercy of her cooking and her instruction, and if she is wise she will study how best to equip her husband and her children for the struggle of life.

A short time ago one of the guests at a national conference was a man, admired and beloved, who, through the kindly hospitality that was offered him, had his digestion so much impaired that he lost

most of his enjoyment in the occasion and found his efficiency for the purpose of the gathering greatly lessened. The man gave honour to whom honour was due when he said, "I want to get home to my wife. She cured my college-bred dyspepsia, and she will cure me now."

A wife can do more than cure her husband's dyspepsia. She can so instruct him in dietetic knowledge that he will learn how not to have dyspepsia.

The task is not hard. A wife need not become an expert food chemist, although she will find that the wider her knowledge, the more interesting will be her work. She must merely gain a comprehensive view of the laws of nutrition, acquaint herself with the chemical characteristics of the ordinary articles of diet, and learn how to classify them. Her next step should be to study the particular needs of each member of the family, but she ought also to bear in mind that to dwell too long on the peculiarities of the individual is bad for the welfare both of the individual and of the family.

The thin person needs milk, cream, butter, olive-oil, and well cooked starchy foods. The stout person should omit most of those articles of diet. Those who are much in the open air can digest food that is harmful to persons of sedentary habits.

The family health will suffer unless the meals are palatable. A housekeeper should, of course, plan her expenses carefully, but the cheaper foods can be made both attractive and nourishing. Every member of the household needs a properly varied diet. If they have that, they will

stand in need of no "blood purifiers" or "spring medicines."

The children's food should be a study in itself, for children ought not to have the full adult meals until they are old enough to digest them.

They should learn moderation and self-mastery in respect of food, and should not be permitted to yield to "notions," or to cultivate dislikes. An inborn distaste for an article of food may be respected, but in general it is better that a child eat and learn to like what is set before him. Children's tastes are naturally simple. It is a mistake to foster a craving for a complicated diet.—*Selected.*

The Art of Cookery

"Cookery is or should be a fine art. Like other arts, it has its laws of proportion, harmony, and contrast. The art of cookery appeals to the sense of taste, music to the sense of hearing, and the graphic arts to the sense of sight. Gratification of the sense of taste is as legitimate as enjoyment from any of the senses. The temperate indulgence of the sense of taste is indeed necessary for good digestion, on which depend physical well-being and efficiency. A systematic study of cooking, then, should be a fundamental part of the education of the home-maker."

The printed matter bearing on the subject of food and sensible eating is already extensive. A woman who is eager to learn will find the publishers of *LIFE AND HEALTH* ready to supply her with plenty of books that treat the subject in language that is not at all technical.

Dreading the Dishes

MOST people put off doing disagreeable things. "Won't to-morrow do?" is a familiar household question; the easy promise, "Yes, I'll do it in a little while," has often tided us over until the merciless "eleventh hour" that finds so many things undone, or done helter-skelter, in order that we may be ready when the clock strikes twelve.

It is disagreeable to wash dishes. Even mothers, who do most things cheerfully, will sometimes pass the dishes on to youthful and unwilling hands. The schoolgirl invariably has other things to

do, and the dishes are so insistent! Even when stacked in the sink, they look reproachful. Left in disorder on the table they glare at you every time you pass; and when you are playing tennis or finishing a book, they loom over your head like a thunder-cloud. "I just dread to get at them," you say, and the dread grows greater every time you think of them.

But is doing the dishes as bad as dreading them? To scrape off the left-over food; to pile spoons with spoons and plates with plates; to have a sparkling lather of soap-suds and hot water; to attack the dishes in the order of their cleanliness, instead of inversely or haphazard; to hang up the towels and see a clear sky spanning a golden afternoon—surely there are worse things than that! Washing dishes, like many other disagreeable jobs, requires no concentration. The mind is free to dwell on pleasanter things.

The sense of freedom and the feeling of self-righteousness that follow the prompt washing of the dishes are enough to raise the humble drudgery into a fine art, and insure that it be done not only quickly, but well. "There," said one valiant girl, hanging up the dishcloths with a flourish, "if I plunge headlong into them, I don't really come to my senses until I am half-through! It is only dreading to do them that gets on my nerves." That, as all who know will admit, was hitting the nail square on the head.—*Selected.*

A Mistake at the Table

MEAL-TIME is the wrong time to air the family troubles, and the wrong time for household discipline. It is a wrong time for the description of physical ailments, the discussion of harassing problems of one kind and another,—for the consideration in a word, of the sorrows, perplexities and miseries of the day.

Mary or Tom, whose rapidly growing bodies need every available ounce of nourishment, no sooner begin to eat their dinner than their parents take them to task for some mistake or wrong-doing. Mary bursts into tears, and leaves the table; Tom finishes his meal, silent and sullen.

Does the reader know that emotions of pain or anger check the flow of gastric juice, sometimes stop it entirely? Indigestion is the only result of trying to eat when under stress of emotion. Let the parent who is tempted to conduct the family discipline at the table recall the effect on his appetite of the receipt of bad news during the eating of a meal.

Better no meal at all, so far as nourishment and health go, than one eaten in bitterness of spirit. It is difficult in the extreme to shut out from meal-time the discussion of perplexing and irritating problems, but it is imperative. Laughter and good will, on the other hand, are vigorous promoters of the digestive functions.—*The Healthy Home.*





CHILDREN'S HOUR

LAUGH-AND-BE-JOLLY

Did you ever meet laugh-and-be-jolly?
If you haven't, I wish that you had.
To look at his face in the gloomiest place
Will make any murmurer glad.

He is chubby with romping and laughter.
He is crinkled with humour and fun;
To stay melancholy with laugh-and-be-jolly
Is to do what nobody has done.

When the heavens are drizzling and drippy,
It's a mercy to have him about;
For he chuckles away on the dreariest day
Till he looks like the sun coming out.

Knock him down, he is up with a scramble;
Ignore him, he smiles all the same;
Call him frisky or simple, he just shows a dimple
That puts any cross-patch to shame.

Take your grumps and your growls and your
grouches
And carry them all to this elf;
He will show you his way, and make you some day
A laugh-and-be-jolly yourself!

—Selected.

Keeping House

CHILDREN, did you ever play house-keeping? Just at that time you lived in that little play-house of yours a little boy was asked what a house was for? He answered, "The kitchen is to cook and wash in, the sitting-room to live in, the bed-room to sleep in, and the parlour for company." I suppose that was the way that things were at his father's house, but I think the parlour should be used a good deal when there is no company. The heart is the house in which the soul lives. Our bodies walk out of our houses every day; just in the same way the soul comes out of the heart in thoughts, words, and feelings. "Out of it are the issues of life."

A house is built to give comfort, and everything is arranged so as to add to our

happiness. It would not be comfortable with only bare walls. It must have chairs, tables, bedsteads, and many other nice things that are good and useful. So the heart will have feelings, loves, hates, and plans. If these are not good, the heart will not be comfortable. There would be no comfort if a table was full of sharp things that ran into us every time we ate at it. So if the heart is furnished with bad feelings and with the love of bad things it will not be a comfortable house for the soul to live in. I said that the heart must have plans. What is a plan? It is to think out what you intend to do in the future. There can be no good or successful life without a plan. There were two boys living in the same town. One of them always had a plan. In the morning he used to plan out all his work and his study, and even his play for the day. At the beginning of the year he laid out a plan for the year. He could not always carry out his plans, but he succeeded with most of them. He grew up to be a farmer. His farm and farm work were well planned. His crops were better, his fences safer, his cattle more docile than many of the other farmers'. He gave the credit of much of his success to his always having a plan. The other boy seldom had a plan. He became a farmer also, but he did not succeed. He did not know what he would sow in a field till it was generally late. He was always behind, hoped something would turn up to help him in the troubles that his want of plan brought on him; his heart was not furnished well, and so was an uncomfortable house.

Children, God wants us to let Him

help to furnish the heart with good feelings, good loves, and good plans. Will you ask Him for His help, so that we may have comfort?—*Golden Truths*.

An Elevator For Towser

MANY people have a mistaken idea that the cat is not an intelligent animal. The truth is that all the feline family, lions and tigers as well as cats are headstrong because they regard human beings and their ways with indifference; and lacking



Towser and his elevator

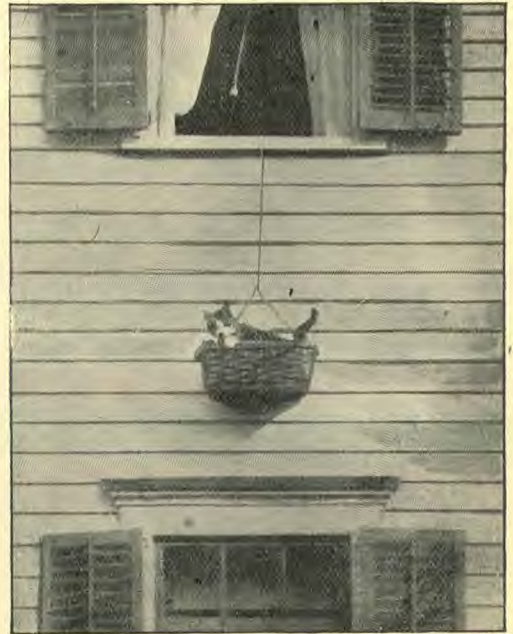
this interest in us, it is hard to teach them tricks. Persuasion and flattery and petting will occasionally win over their stubborn wills, however, as in the case of Towser.

He learned to use a basket as an elevator from the ground to his second story home. His mistress found it very inconvenient to allow him out-of-door freedom, when it meant going down a flight of stairs every time Towser went in or out; so his family resolved to teach him to ride in a basket on a rope to the second-story window.

The first step was to get him to settle in the basket on the ground and become used to it. Catnip was placed in the basket to make it attractive; and, when Towser voluntarily settled down in it, the basket was pulled up a few inches. Towser got out as soon as it left the ground. The basket was left in the same place so that he would become familiar with it; and, day after day, his owners tried to induce him to ride in it. Little by little the distance from the ground increased before he would jump, until they succeeded in getting him up 10 feet.

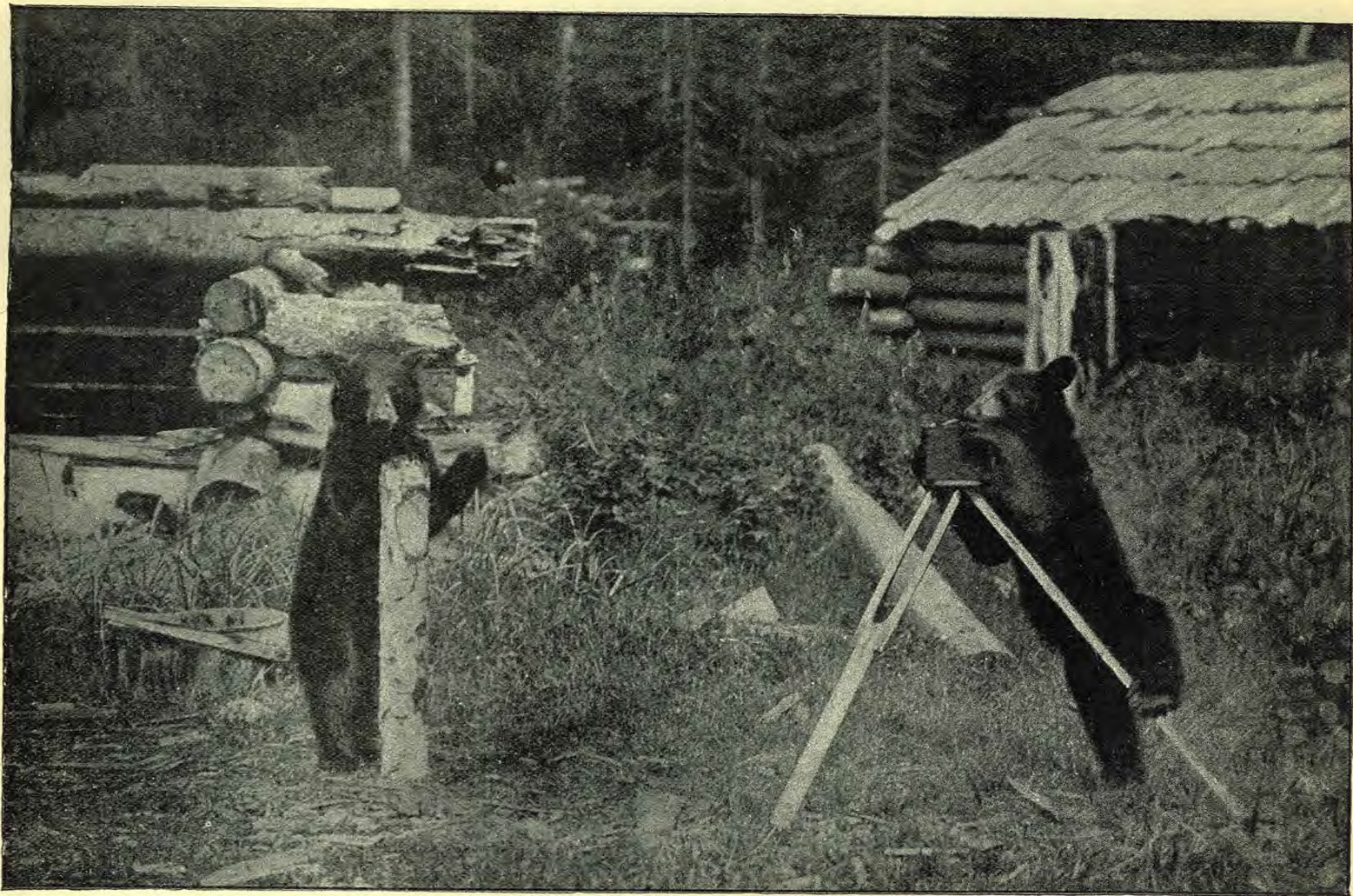
After the first long ride Towser seemed to enjoy his excursions, and they had no

difficulty in getting him up to the window. The basket was left on the floor below the window, in the room, and he made no trouble about going down in it after he had tried it once. He soon learned to get into his basket on the ground and mew when he wished to go in: and now it is a well established trick with him, though he has changed his place of residence several times in the eight years since he learned to use his basket car. Towser was then three years old, so he is "going on eleven" now, and he weighs fifteen pounds.—*Angeline Scott Donley, in Country Life in America*.



At first Towser would jump out as soon as the basket started, but he soon learned to enjoy riding in his elevator.

IT is a good thing to have a sweet, low voice. We can all do a great deal towards having it. Do not talk in a loud, rough way. Remember to speak softly and gently. It is more attractive in every way. I am sure you would all like to have sweet, soft voices when you are men and women. You must think of it now while you are children.



It is doubtful if the young of any animal possesses a more humorous appearance than a bear cub.

Only a String

ELLA and Rob were sister and brother, yet they were inclined to dispute with each other over trifling matters. This grieved their gentle little mother greatly, as she was trying to teach them to always be at peace with the world in general, and especially at peace with each other.

"Nothing is ever gained," said mother, "by loud and angry words. Few things are worth a quarrel!"

It was on a bright spring morning that they heard her voice calling, "Children, come here. Mother is in the garden. Come at once."

Away they ran. Upon reaching the garden their mother simply pointed her rake, with which she had been turning the soft earth, toward a fluffy, screaming, angry little ball in the garden path.

"Let go, it's mine," screamed Mrs. Robin.

"I will not," cried Mrs. Bluebird. "It's mine; I saw it first."

And thus they screamed and rolled and tugged, for the little lady birds were quarrelling over a long white string which they had found in the garden. Each housewife desired it for use in building her new spring nest. At last, after much pulling and fluttering of wing, they each dropped the string that they might argue and fight each other the better. But just in the middle of their fight bright-eyed Mrs. Sparrow came twittering by, and flew off with the string to her own nest she was building.

"Good enough," cried Ella, clapping her hands. "Why the little birds should be ashamed to quarrel so over a piece of string."

"I am glad you see it so, my little girl," replied her mother. "I had no idea when I called you that the birdies would lose their string by quarrelling, but I did want you to see how it looked to others. You see, we seldom gain in this world by disputes, and, my dear children, I do want you to remember this fact."

"I'll try, mother," laughed Rob, "and after this when I see that sister and I are

about to quarrel, I'll whisper to her, 'Remember the string.'"

"And I'll remember," cried Ella.—
Selected.

Only Five Minutes

BOB was frankly telling his father about his failure in the algebra class that day.

"I don't see why I missed," he said. "I studied it an hour before school this morning, and that was time enough to put on it."

"Do you suppose you really studied it hard for an hour?" mildly inquired his father.

"Well, half an hour, anyway. And I put my mind right on it, too."

"Half an hour is a long time—a very long time—for a person to keep his mind on any one subject. Five minutes is only one-sixth as long, but I wonder if you realise how long five minutes are?"

He took his watch from his pocket and held it in his left hand, while he raised his right hand, with the forefinger extended.

"Now stand there," he said, "and watch my finger. I will bring it down at the end of five minutes exactly. Now?"

Bob stood as he was bid, with his eyes fixed on the upraised finger. At first he felt like laughing at the idea of looking at his father's finger, but before he knew it he was thinking of something else, and his eyes had wandered to some object across the room. Then he heard the big clock ticking out in the hall. It never ticked so slowly before. He made a calculation: three hundred slow ticks of the big clock before that upraised finger would come down. He began to count the ticks, but it was such slow work that when he got to forty he was tired of it. Surely it could not take sixty of those ticks to measure off a single minute!

Would the five minutes never be up? His mind raced from one thing to another—things that had happened at school, plans for the big game next week, the coming class election, the queer ways of the new teacher. It grew harder and

harder to keep his eyes on the finger, and in spite of his efforts they wandered away many times. He shifted from one foot to the other. At last, in desperation, he began to count again, and kept doggedly at it.

Five minutes! It was more likely that his father was playing a joke on him, and that ten minutes or more had passed. His father's gaze had not left the watch. At last, as Bob was wearily changing his

is concentrated on the study or work at hand, you can accomplish a great deal in that time, and the minutes have wings. If you let your attention wander away from your work and think of this or that or the other thing, and then force it back to the task for an instant, only to let it wander off again at once—why, then the time drags, and the task remains undone or half-done. I suspect that was the way you worked on your algebra lesson



"Now stand there and watch my finger."

weight again from one foot to the other, down flashed his father's hand.

"Now!" he said, and smiled as he looked up.

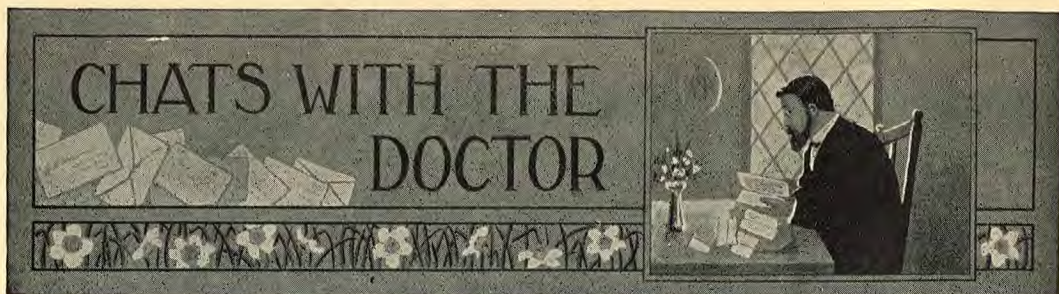
"Honestly, now, was that only five minutes?" asked Bob as he sank into a chair.

"Exactly five minutes," responded his father.

"Seemed pretty long, did it? Well, there is a lot of time to use or to waste in the space of five minutes. If your mind

this morning. Next time try to keep your whole attention on your lesson. When it begins to wander off, force it back at once. It will be hard at first, but it will grow easier and easier, and you will be amazed to see how much more quickly you can get a lesson that way, or do any other task that has seemed long to you before. Just try it for a few days—try it honestly and faithfully."

And Bob promised that he would. *Youth's Companion.*



[Send questions for this department to the Editor, LIFE AND HEALTH, Warburton, Victoria.]

NOTICE.—Subscribers sending questions to this department should invariably give their full name and address, not for publication, but in order that the Editor may reply by personal letter if he so desires. Because of this omission several questions have not been answered.

143. Toast and Milk as Food

A subscriber asks our opinion in regard to toast and milk as foods.

Ans.—**TOAST.**—Whether toast is beneficial or injurious depends altogether on the way it is prepared and eaten. If the bread be merely toasted on the surface and buttered while it is hot, it is decidedly indigestible. This surface-toasting makes the bread new again, and in this state it is difficult to divide it into fine particles by mastication, and thus expose it thoroughly to the action of the starch-digesting saliva and the proteid-digesting gastric juice. The hot, melting butter acts in the same way. It surrounds the particles of bread, and not being digested itself in either the mouth or the stomach, the bread escapes digestion until the fatty envelope can be removed by the digestive juices of the small intestine. If toast be properly prepared and buttered after the melting heat has passed off, it is appetising, digestible, and nutritious. Toast should be crisp without being hard. The crispness should extend right through the toast, there should be no spongy part; and thus prepared the starch of the bread is dextrinised and prepared for easy digestion. Toast is more appetising, and, consequently, more digestible when freshly prepared, but sufficient time should be allowed so that it can be buttered without liquifying the butter.

MILK.—Milk is undoubtedly one of the best of foods. It contains all the essential elements for the development and up-

keep of the body. It is especially a food for children, as it contains the elements specially needed for the development of bone and muscle, but it is also an excellent food for adults. It should, however, be remembered that milk is also a good culture medium for almost all diseased germs, and where there is any suspicion of tuberculosis in the cow, or of exposure to such infectious diseases as typhoid fever, cholera, diphtheria, measles, scarlet fever, or other germ disease, the milk should be sterilised. This can be readily done by keeping it at a temperature of about 170° F. for twenty minutes. High temperatures, however, undoubtedly interfere with the digestibility of milk, and give a decided tendency to constipation. Milk is most digestible and nutritious just as it comes from the cow. Dr. Treves, for instance, recommends that delicate children should be put directly to the teats of the healthy goat; the milk is thus taken before it is exposed to germs from any outside source. Where there is no suspicion of disease in the cow, and the milking is carried on under hygienic conditions, we believe milk is better without sterilising. It should be cooled as rapidly as possible, as germs develop very rapidly at the temperature of the milk as it comes from the cow. Milk is more digestible when taken in sips, or absorbed by the bread, rice, or other foods with which it is taken. Swallowed in bulk, it forms large curds in the alimentary canal, which are not easily digestible, and may produce considerable discomfort. Milk is especi-

ally good in sickness and run-down conditions, as it requires but a feeble digestive action on the part of the gastric juice. Many people, however, cannot take milk, especially in the boiled form. It produces in them constipation and general sluggishness; it is not sufficiently stimulative to the gastric secretion. As the gastric juice is a stimulant to the duodenal digestion, the digestion carried on through the secretions from the liver and the pancreas, milk foods in some cases produce a sluggishness in this part of the alimentary canal, resulting in dirty tongue, headaches, bad breath, disinclination for mental work, and constipation. Milk, however, is such an excellent food that it should not be excluded from the dietary except under exceptional circumstances. Milk should not be taken with much sugar; sugar and milk with porridge, for instance, is a poor combination. As milk requires a gastric juice with a low percentage of acid, it should not be taken with those foods which require a high percentage of acid, such as meat and nitrogenous foods—as peas, beans, lentils, and nuts. Milk agrees better with the cereal foods, foods where the nitrogenous elements are not so pronounced. It should also be remembered that milk has a high percentage of water, that it only contains about fourteen per cent of solids, and, consequently, should not be largely partaken of with other sloppy foods. A meal of porridge and milk, fried sausages, and tea or coffee could only be partaken of with comfort by those who have the best digestive powers, and even then such a meal is by no means advisable. At some future time we will give a special article on this important subject.

144. Irritable Heart

A lady subscriber writes: "When I lie down at night time, after getting into bed my heart beats very fast, but after I rest awhile it beats slower, but even in turning on my side it beats very quickly, and seems to stop, and then goes off again. I can hear my heart beating very loudly all

night long. . . . I do not notice it as much through the day unless I hurry."

Ans.—This case is probably a nervous derangement, and is not due to any actual disease of the heart. It is often produced by tea and coffee. Sometimes it is the result of worry or long, anxious hours in one's daily work. All stimulants, such as tea, coffee, cocoa, and alcoholic drinks should be avoided; as much rest and quietness as possible should be taken during the day; rest before and after meals for half an hour is advisable. Sponging the body daily with cold water will prove helpful. The heart is very readily influenced by the state of the stomach, consequently the digestion should be carefully attended to. Men often suffer from the same symptoms, the result of smoking or excessive venery.

145. Painful Menstruation

"Anxious" states that every month just before the menses her daughter suffers from great pain and vomiting.

Ans.—An examination is necessary in this case. The trouble is probably due to a contraction in the neck of the womb. If the cervical canal were dilated two or three times, a small operation after the menses, relief would be obtained. One slight operation might be sufficient, but the probability is that a second and perhaps a third would be required. The hot hip bath for a few nights previous to menses often proves beneficial. The feet should also be placed in water at a higher temperature than that of the hip bath.

146. Discharge from the Eyes, and Nasal Growths

"La Patrie" writes: "My three children suffer from smarting eyes with a mattery, sticky discharge. They suffer also from nasal growths and enlarged tonsils."

Ans.—We would most decidedly recommend that the nasal growths and enlarged tonsils be removed in order to pre-

vent permanent trouble, such as catarrh of middle ear, deafness, etc.

147. Red Spot on Nose

"La Patrie" also complains of "red spot on one side of my nose. It was only a tiny red spot, slow but persistent . . . It is now the size of a shirt button."

Ans.—An application of salicylic acid in collodion (twenty grains to the ounce) applied daily for a few days might remove the growth, but probably something stronger would be required. We have seen cases of this kind completely recover with two or three applications of liquid ethylate of soda, but this is a very powerful caustic, and should only be applied by a medical man.

148. Persistent Pimples

"Constant Subscriber" complains of two persistent pimples with pus on back of little finger with swelling of joints and adjacent parts. This condition has existed for two months. Also that the outer edge of her right ear gets sore at intervals, and produces a watery pus.

Ans.—We would recommend the use of resin ointment. The ordinary resin ointment is rather hard, and it is more easily applied if rubbed up well with a little vaseline. Foment well at night.

149. Cocoa

A correspondent from Auckland asks the value of cocoa as a food, and whether vi-cocoa is more nourishing than ordinary cocoa.

Ans.—Cocoa contains a large percentage of fat, ranging from 15 to 30%; but this fat is particularly liable to upset digestion. Bilious people cannot tolerate it at all. The actual amount of nourishment in cocoa, however, is very small. It takes about one-third of an ounce to make a breakfast cupful, and this would yield only forty calories of energy. Seventy-five such cupfuls would, if fully

digested and absorbed, yield the amount of energy required daily by the body. The sugar and milk consumed with the cocoa contain much more energy than the cocoa itself. The action of cocoa on the nervous system is very much less than that of tea and coffee, as it only contains from one to two per cent of the alkaloid theobromine. Theobromine is almost identical with the alkaloids contained in tea and coffee (theine and caffeine.) Cocoa contains about six per cent of tannin, which is considerably less than the amount found in tea. Vi-cocoa contains a certain amount of kola, in which is found a considerable proportion of caffeine. Robert Hutchison, in speaking of vi-cocoa says: "Kola is said to possess remarkable sustaining qualities, prolonging muscular contraction and abolishing fatigue; but its action seems to be uncertain, and the addition of such a drug to a beverage intended to be used regularly is a practice which can hardly be recommended."

150. Sugar and Egg-Shells

The Auckland correspondent also sends newspaper clippings on Dr. Metchnikoff's opinion in regard to the use of sugar as "the secret of longevity," and of the discovery of two German scientists of Munich "that egg-shells consumed in proper form and proportion lengthen human vitality, increase the power of resistance to the withering blight of time, add weight to the body, etc." Sugar, according to Dr. Metchnikoff, destroys the "indols" and "phenols," products of a pernicious set of microbes, and which are slow poisons to the system. In order, however, that the sugar may be carried to these poisonous products, it is necessary to take a sufficient supply of "the dog's own microbe, the 'glycobacter.'" These "fabricate a great quantity of sugar, and with it fight the indols and the phenols produced by the mischievous microbes."

Ans.—We have always found that sugar in anything like large quantities interferes seriously with digestion, causing acidity,

fermentation, etc., and have a decided tendency to develop a catarrhal condition of the alimentary canal. Sugar, by clogging the digestive organs, undoubtedly predisposes to rheumatism and its allied diseases. We have no more faith in Dr. Metchnikoff's advocacy of sugar than we have in his proposition to remove by a surgical operation the whole of the large bowel, because man has ceased to be a vegetarian or non-meat-eating animal. If the large bowel makes the consumption of flesh dangerous, our best plan is to abide by nature's decrees, and live on the fruits, grains, and nuts, the foods most suitable to the construction of man's digestive organs. If sugar cannot be taken without the foreign element of the dog microbe, we again think it wisdom to act in accord with the provisions of nature, and abstain from that which cannot be partaken of except under unnatural conditions. Keep the alimentary canal healthy with healthful and natural diet, and there will be neither "indols" or "phenols" to be destroyed by the "sugar fabricating" "glycobacter."

We look on the egg-shell as being merely a protection for the contents of the egg, and as neither a food for the man nor the chick. We have known individuals who have made the experiment of taking the shell of the egg in solution, but the results were negative. The carbonate and phosphate of lime, as well as the magnesia in the egg-shell, are found in sufficient quantities in our ordinary food. An excess of any kind of food is never productive of good. We quite agree with the opinion of the English physician quoted in the newspaper clipping, "Medical men will want to hear more about the discovery before they put their patients on an egg-shell diet." The experimenters found that the feeding of four pair of white mice on egg-shell greatly increased their fecundity, their offspring in a given time numbering fifty-four, whereas another four pair without the egg-shells produced nine only. We cannot do better than quote the concluding sentence of the clipping, "The only moral of it seems to be

that it is not wise to leave egg-shells about in the kitchen if there are mice on the premises."

151. Olive Oil, etc.

Correspondent asks the food value of the best olive oil, and states that she has been advised to replace it in cooking with cotton seed or ko-nut oil.

Ans.—The fuel value of olive oil is very high, over 200 calories per ounce. One ounce of olive oil is equal to nearly two ounces of cheese, to three eggs, two ounces of flour, three ounces of bread, or over two ounces of dried peas; that is, when it is completely digested and absorbed by the system. If olive oil were the only fat taken, two to three ounces might be taken in the day, more than this quantity would not be digested. Much, however, will depend on the climate. In cold weather much more will be digested than in hot weather. Cotton seed oil and ko-nut oil are good substitutes in cooking. They are cheaper, and at the same time about the same fuel value. Cotton seed oil can often be taken more easily than olive oil. It has not such a strong taste.

152. Milky Urine

"Toowoomba" states that her little boy nearly two years old passes milky coloured urine occasionally, and wishes to know proper treatment.

Ans.—Milky colour of urine may be due to matter (pus) or excessive phosphates. There would not be pus in the urine without other very pronounced symptoms of disease. If the child is enjoying good health and has milky urine only occasionally, the symptom may be disregarded. Probably it is caused through some error in diet. It would, however, be as well to have the water examined by a medical man. In rare instances microscopical globules of fat occur in the urine, and this condition is called "chyluria." It may possibly be due to excess fat in food or to a parasite

in the blood known as "*filana sanguinis hominis*." This parasite may cause one of the lymph canals to burst somewhere into the urinary organs, and the escape of lymph causes the milky urine. There is no known cure for this complaint.

153. Stomach Trouble

"Farmer" writes: "Mine is a stomach trouble of some kind. I sometimes think I eat too much, and others too little. I am troubled with a full, distended feeling in the stomach. If I try to remedy this by limiting the amount I eat, I at once get weak and easily exhausted, and get a pronounced raw and tender feeling about the stomach. My appetite is at all times a keen one—much too keen a one for my liking, as I often have difficulty in restraining it. The matter has troubled me for the last year or two, and I have lost much weight. I am a fruit grower by occupation, and lead an active, outdoor life."

Ans.—The trouble is an increased irritability of the gastric nerves. This is often due to use of alcoholic drinks, especially spirit drinking, the use of stimulants, such as tea and coffee, and condiments, such as mustard, pepper, hot sauces, or fried dishes and rich foods. Eating too rapidly, drinking with meals, or soon after, or indigestible articles of diet, such as new bread, scones, pastry, and fried foods, are among the causes of this trouble. Patient complains of disagreeable symptoms on reducing the amount of food taken. The probability is the light meals are not continued a sufficient length of time. These symptoms in time would gradually disappear, and then the amount of food taken could be gradually increased. Thorough mastication of all food is absolutely necessary. Sloppy foods should be avoided. Zwieback, granose biscuits, plain, unsweetened biscuits, wheatmeal, and oatmeal biscuits should be taken in preference to bread. Tea, coffee, and all drinks should be

avoided at meals. Also avoid the coarser vegetables, such as cabbage, potatoes, carrots, parsnips, and turnips. Foods of a bulky nature are better omitted. Fomentations over the abdomen at night followed by moderately wet compress under flannel until morning. Sponge body and especially the abdomen daily with cold water. Probably ten grain doses of carbonate or subnitrate of bismuth would be helpful one-quarter of an hour before meals.

154. Croup

A.H.L. asks for the best treatment for attacks of croup, measles, and whooping cough in young children.

Ans.—True croup is of diphtheritic nature. This subject is dealt with elsewhere. There is another croup not associated with any form of membrane or exudation, and this is often spoken of as false croup, spurious croup, spasmodic croup or laryngitis, and inflammatory croup. This form is a mild laryngitis, a catarrhal condition of lining membrane of larynx associated with spasm of laryngeal muscles. An attack, as a rule, comes on suddenly at night. The child wakes with a hoarse, hard, clanging croup. His voice and cry may be hoarse, but not whispering as in diphtheria. There is great shortness of breath, and a loud cooing or crowing inspiration. The attack will pass off in a few hours, and in the morning the breathing will be perfectly easy. In diphtheria the difficult breathing is continuous. There are no intermissions, as it is due to the larynx being blocked with membrane, and not to spasmodic action of the muscles as in false croup. At the outset a smart emetic should be given. A child two years of age may take a teaspoonful of ipecacuanha wine every fifteen or thirty minutes until free vomiting takes place. A mixture of antimony and ipecacuanha wine is still more useful. For a child one year old the following prescription is useful:—

R

Vini Antimonides	-	ʒiv	(4 drachms)
Vini Ipecacuanha	-	ʒiv	" "
Syrupi Scillae	-	ʒiv	" "
Aquae ad	-	ʒiii	(water to make 3 ozs.)

One teaspoonful every fifteen minutes till vomiting occurs, and then half a teaspoonful every two or three hours while the cough lasts. In addition hot fomentations should be applied frequently to the throat and upper part of the chest. If these are not efficacious, continuous applications of cold wet compresses will relieve the spasm. The room should be kept warm and the child will receive benefit by inhaling the steam from hot water. Vinegar may be added. An excellent method of generating steam is to slack lime in a teapot and allow the child to inhale the steam from the nozzle. The air of the room may be kept moist in a similar manner. Place the lime in a tub near the patient and add water. See that the child is warmly clad and not exposed to draughts.

Measles

The children should be warmly clad and kept in well ventilated rooms. There is a decided tendency to bronchial troubles, consequently exposure to cold and draughts is to be avoided. Fomentations should be applied to the chest daily when the cough is troublesome, but not otherwise. The rooms must on no account be stuffy. The diet should be nourishing. There is no specific treatment, the disease runs its regular course whatever treatment is adopted. With ordinary care there should be no complications. If the eruption is slow in making its appearance, or if it is repelled after having once appeared, a warm blanket pack is helpful. Cool drinks should be allowed, and if the patient is very feverish there can be no objection to sponging or cold water enemas. Procedures to reduce the temperature, however, are very rarely required.

Whooping Cough

It should be remembered that this disease is highly infectious, and weak children should as far as possible be removed from source of infection. For most children plenty of fresh air is of greater importance than medicine in a long illness such as whooping cough. In severe weather with rain and cold, or where there is bronchial trouble, the children would be better in large, ventilated rooms. All rooms should be well ventilated, but free from draughts. The diet should be plain and nutritious. The best time to give food is after the paroxysms are over, for if given before, the food is likely to be vomited. For small children a liquid diet is often advisable, as solid foods often increase the fits of coughing. The children should be warmly clad; light flannel underclothing is essential except in hot, summer weather. The drugs recommended are legion, and children get on very much better without such narcotics as morphia, chloral, belladonna, chloroform, bromides, etc. These drugs injure the general health, and increase the liability to permanent after-effects. Treatment by inhalation of sulphurous acid is very serviceable. Remove the patient from his bedroom in the morning. Burn about one ounce of sulphur for every forty-five cubic feet of air in the room. The doors, windows, ventilators should be absolutely closed for five hours. Before the child is placed in bed at night, open all outlets and inlets, and ventilate the room till the child can breathe the air. Clean linen garments should be used each night. This treatment is very efficacious, and the paroxysms diminish rapidly after this treatment. In the later stages of the disease there is nothing so valuable as change of air. The breathing of fumes from the gas works is a very old remedy, and is often followed by good results. A fire in the bedroom is very helpful at night, and lessens the paroxysms, but the room must be well ventilated.

155. Deformed Chest

A Stawell correspondent writes: "A young girl aged nineteen has a very high chest. It curves right round from the shoulder in a regular bow shape. . . . It is not noticeable when dressed. . . . She has a strong voice, and is otherwise in perfect health." Correspondent wants to know "if there is any weakness of the lungs, and if so what treatment is necessary."

Ans.—The deformity evidently had its origin in very early life, probably before birth. She has evidently overcome this weakness of constitution, and there is no reason why she should not live to a good old age. If the deformity were increasing, systematic but gentle exercises would be helpful, coupled with good, plain, nourishing diet.

156. Grinding of Teeth, Eczema of Tongue, etc.

C.W.C. complains of grinding her teeth in her sleep, causing her jaws to ache in the morning and a feeling as though she had been talking all night, and asks if it is due to "worms," and would we recommend a carrot fasting each morning. Was very much troubled with thread worms years ago. Another trouble, "heat

rash on her tongue. It comes like white rings all over the tongue, and is very sore." She also complains of "ears that make very little wax and are very dry."

Ans.—The grinding of the teeth at night is usually a child's complaint, and is due generally to some disorder of stomach or bowels. It is certainly sometimes due to worms. In children it is often due to certain diseased conditions of the nervous system. The trouble on the tongue is probably eczema, a kind often called geographical tongue or wandering rash (*annulus migrans*). Ring-shaped patches, red and denuded of epithelium, are seen on the tongue, and are found to spread at the edge while healing at the centre, coalescing and forming irregular areas with curved outlines. We would recommend our correspondent to diligently follow out the rules for good digestion so frequently advocated in this magazine. Read the directions given under "Worms" in a recent issue. Paint the tongue once daily with an eight per cent solution of protargol in glycerine. A little lanoline or mixture of equal parts of lanoline and vaseline may be rubbed into the ears. Either of the oils suggested in letter (almond, olive, or cocoanut) may be rubbed into the skin behind the ear.

W. H. J.



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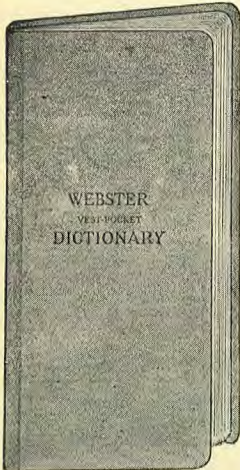
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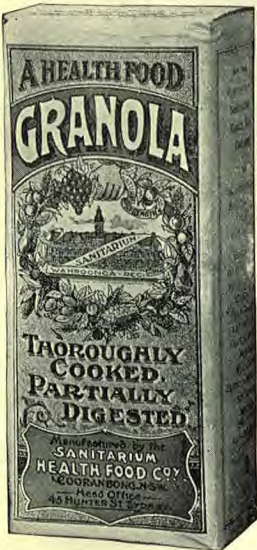
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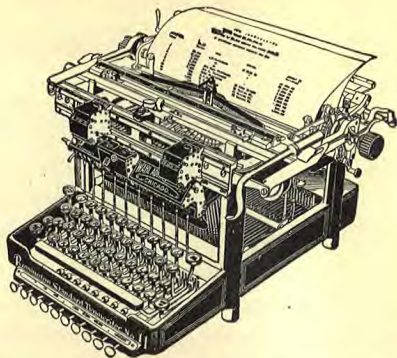
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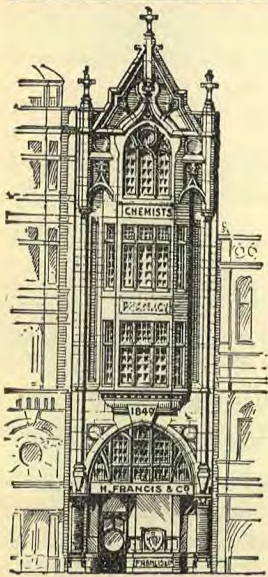
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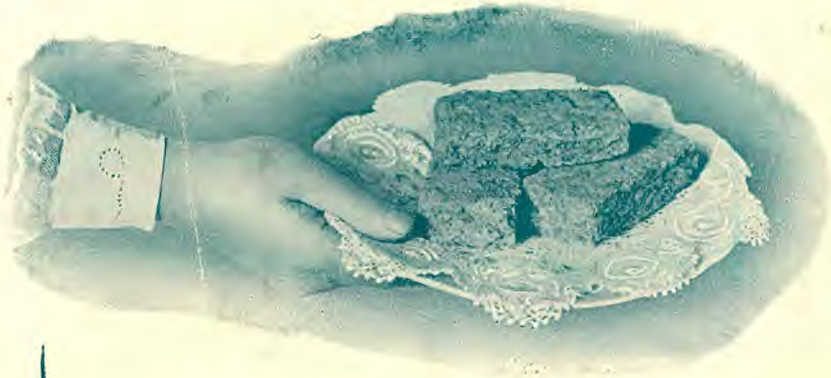
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