Life & Health

THE FIGURE-OF-8 BANDAGE
(See page 176)

MIDWINTER
JULY-AUGUST, 1918

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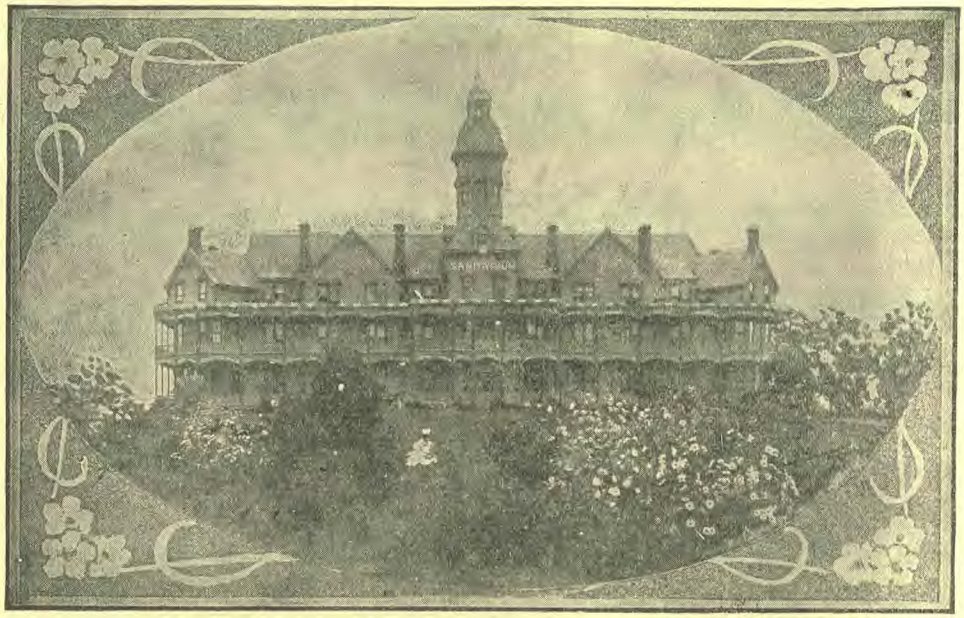
Wahroonga, New South Wales



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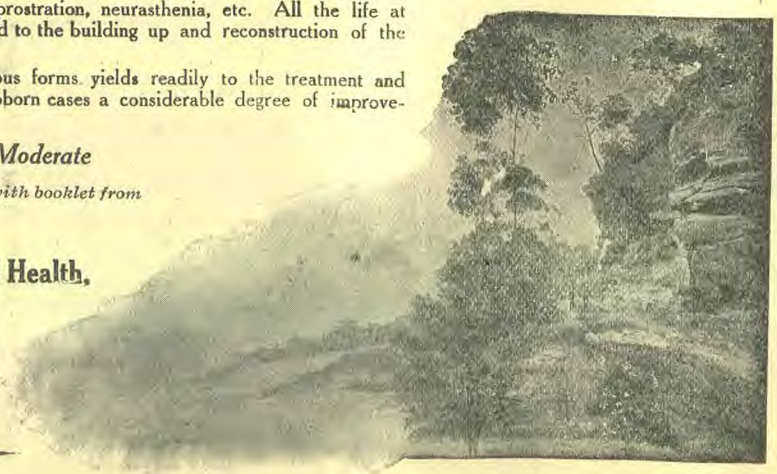

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EDITORIAL

GENERAL ARTICLES

CHATS WITH THE DOCTOR

QUIET TALKS WITH MOTHERS

THE HOUSEKEEPER

THE CHILDREN'S HOUR

THE LARGEST LIVING HARD WOOD TREE IN THE UNITED STATES
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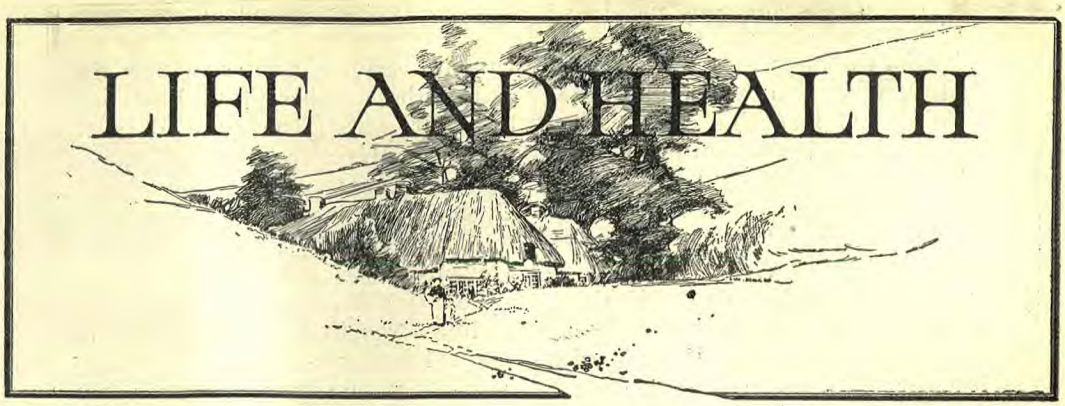

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Editor: CHARLES M. SNOW Associate Editors: W. HOWARD JAMES, M.B., B.S. EULALIA RICHARDS, L.R.C.P. & S., Edin.

DO NOT eat all the time. One of the most unnecessary, useless, and wasteful habits of English and Australian people is that of eating too frequently, and so keeping the digestive apparatus in constant motion. Three meals a day are better than four or five, and there should be nothing but drink between these meals. If we take more than three meals during the day, we do not give sufficient time for the food to be properly digested, and, more than that, the alimentary canal gets no rest. Such a practice, if persisted in, will finally cause the alimentary canal to give its possessor no rest, and then comes the long, long rest. The wastage of time and energy in preparing two or three extra and unnecessary meals, and the wastage of food besides, ought to condemn and curtail the practice.

THE world was never so much in need of studying and practising the principles of healthful living as now. The young and healthy blood of the nations is being poured out like water, and those who are least fitted to fight the battle of life are left to repeople the world and to bear the tremendously increasing burdens. The world will never be the same again. Millions who had competences and were living in ease or in luxury have had their competences swept away, and from this day on must help to bear "the burden and the heat of the day." How will they do it? They will do it very poorly unless they conserve their mental and physical and nerve energy by close adherence to the laws of nature which are the laws of healthful living. They will do it very poorly also unless they learn in this hard school of necessity how to save and how to eliminate waste; how to do without the things they do not need and how to use with discretion and economy the things that are absolutely essential. This journal will endeavour to do its bit during the months to come in helping to that end.

THE manufacture of alcoholic beverages within the boundaries of this empire is a direct wastage to the country and an advantage to the enemy. It takes food materials that are sorely needed and converts them into a beverage that muddles our workers and weakens our people. The land utilised for the growing of hops means just so much less land to be utilised for the growing of food grains. If that were the only loss, it would not be so serious; but with that loss there goes also, and as a certain consequence, the depletion of the people's energies, the wasting of their brain and brawn through

excessive indulgence in the beverages made from these food grains that are misused and from the hops grown upon land that might have grown wheat and vegetables. Why not face this enemy also, as the nation is facing its military foes, with a determination to fight this battle until this worst enemy of the nation and the individual is completely overwhelmed?

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PAIN "removed" by drugs is there still, and the cause of it is there still. The only difference is that your nerves have been made drunk and you do not feel the pain. But pain removed by heat is generally gone for good, taking the immediate cause with it. That is where and why hydropathic treatment has the better of the treatment that seeks to remove pain by deadening the nerves. If the Germans should land an army at Adelaide and start to march overland to Melbourne, the telegraph would warn us of their progress eastward, and we might be unable to sleep. We might destroy the telegraph system, go to bed, and get a good night's sleep; but that would not stop the Germans. That is what we do when we anæsthetise the nervous system with opium. The only way in which Australia could remove that German army would be to make it so warm for them that they could not remain. Heat does that for pain. For instance, a hot foot-bath will often remove a headache. The best means of relieving sciatica is to get into a bath tub half filled with hot water as hot as can be borne. Then, after a couple of minutes, let in a little cold water; then, after another minute, put in more hot water. Thus continue the boiling process until you are as red as the so-called "boiled lobster." By this time the pain will have been relieved or greatly lessened. It is claimed that ten or fifteen minutes of this kind of treatment will remove the most obstinate cases of sciatica, if repeated a few times. If the pain returns, repeat the prescription. During this treatment the patient sits up in the water, as he can stand more heat if the upper portion of the body is not covered.

THE typhoid problem has not been solved by the use of anti-typhoid vaccine. In the various armies it has reduced greatly the number of typhoid patients; but still, where the typhoid bacillus is prevalent, the disease appears as high as ten per cent among the vaccinated. Typhoid vaccination is not, therefore, a satisfactory substitute for personal and preventive hygiene. A vigorously healthy system can destroy a few typhoid bacilli without vaccination; a vaccinated person will resist a larger number of the bacilli than one not vaccinated; but in at least ten per cent of vaccinated persons typhoid will develop when such persons are "exposed" to the infection. The boiling of drinking water and the pasteurisation of milk where typhoid exists are still the best preventives.

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THE reader need not be surprised to find in this department from time to time suggestions of a definitely practical nature which might ordinarily be looked for (or overlooked) in the department of recipes. Our aim is to make this journal more definitely and emphatically practical with each issue if possible. Here is a suggestion which we make with that end in view. Don't throw away breadcrumbs, crusts, and scraps of bread left after the meal, or left from the cutting of the loaf into slices. Instead, take all such bread waste with all other bread left-overs, such as rolls and fragments of biscuits and scones and dry them in the oven until absolutely free from moisture, and either run them through a food chopper or grind them up with mortar and pestle, and serve as a breakfast cereal. If you have not tried it, the result will surprise you. After a thorough drying, this breakfast food will keep almost indefinitely, but will not be so crisp after being kept a number of days as when first made. This has become the regular practice with those who have once adopted it, and is no less tasty than the patent breakfast cereals. It also puts that which was a waste in the place of that which costs money.

Cause and Prevention of Coughs and Colds

MOST coughs and colds can be traced to a wetting, or exposure to draught of cold air as in a railway carriage, or from an open window. Very often the cold can be traced to infection, the cold runs through a family; a guest comes from a distance with a cold and many members of the family contract colds with exactly the same characteristics.

The infectious colds frequently go by the name of influenza, and probably they are of that nature, although the symptoms vary both in character and severity in each epidemic. We have just attended two members in one family which illustrates the infectiousness of certain colds.

A lady occupying a public position was compelled to relinquish her work on account of feverishness, lassitude, and the general symptoms of a cold. On partially recovering she visited a friend's home in the country, with the result that two children were attacked with exactly the same symptoms as the guest, but unfortunately both developed broncho-pneumonia. After the first case developed pneumonia, special care was taken with the other child, but, notwithstanding, the second child gradually developed a pneumonia of exactly the same nature and severity as that of the first child. Infection is undoubtedly the cause, or one of the causes, of all feverish colds. Every disease, however, has more than one cause; diphtheria, scarlet fever, typhoid fever, and pneumonia are all germ diseases, but unless some predisposition exists, the specific disease will not develop. The seed will not grow unless there is sufficient nourishment, moisture, and heat in the soil in which it is placed. All germs are of vegetable origin, although not of such complex organisation as the ordinary seeds of our vegetable or flower gardens; they are of microscopic size and only need a small amount of suitable "soil" in order to develop and produce their characteristic symptoms

Under healthy conditions there is just sufficient blood in the delicate lining membranes of the throat, nose, larynx, trachea (main wind pipe), and bronchial tubes to nourish them, keep them at a temperature of about 100° F., and to supply a sufficient amount of moisture for their physiological functions. Consequent on some *unusual* exposure, the blood on the surface of the body is driven internally and these membranes become congested; if they remain in this condition the symptoms of a regular cold gradually develop. In good health the nervous system causes a quick reaction, the normal supply of blood is established in the surface of the body, and the internal structures lose their temporary congestion.

Excessive clothing, like a splint over a set of muscles, lessens the powers of Nature; clothing keeps the skin warm without so much nerve control, the reactive power is lost, and hence these over-clothed subjects are more liable to develop colds or are less able to dissipate internal congestions. One often wonders how the ragged street urchins keep so well with their tattered garments, shoeless feet, and bare legs. Nature compensates the poor, and correspondingly develops their resisting powers. One great item in favour of these children is that they are not overfed, their blood is not so filled with waste products, and hence the capillary blood vessels of the mucous membranes are less liable to become congested. This fact, coupled with the watchcare of their well developed nerve structures, is their salvation. However, nature can be overworked; a continued exposure of the feet and legs of children is certainly harmful, and may, and often does, produce chronic internal congestions in shape of nasal and bronchial catarrh, which may develop into serious lung trouble.

All children in cold weather should have their feet and legs well covered; these parts are far removed from the cir-

culatory muscles of the heart and require more protection than the body itself. Underfeeding is also harmful; the overburdening of the blood with waste products may be avoided, but the resisting power of the nervous system is lacking from insufficient food.

A GARDEN VISTA

The thin anæmic individual will lessen his liability to colds by the taking of more nourishment, especially in the form of pure fats, such as those contained in fresh milk, good butter, or cream. On the other hand, the overfed will gain more power to resist colds by a decided lessening of the quantity of food taken.

In the fairly plethoric individual (the one who has a fair amount of good blood) a cold is cut short by fasting or by a very abstemious diet—especially the avoidance of sweets, fats, and flesh foods. A day's fast at the inception of a cold will frequently abort it altogether. The same result is often brought about by active exercise; a few hours at gardening, chopping wood, or a long walk in the country produces healthy perspiration, frees the blood from impurities, and lessens internal congestions. This active exercise, however, must not be accompanied by increased feeding.

The old adage, "Feed a cold and starve a fever," has now to be reversed. The cold should be starved and the fever have a certain amount of nourishment, so as to cope with perhaps weeks of illness in which the tissues are constantly being burnt up. A short fever like a cold, however, is decidedly benefited by the fasting method.

For the less vigorous, a hot bath with a day or two in bed on a light diet will be more advantageous than the production of perspiration by active exercise. A hot bath, however, unless properly given, is liable to be followed by a further chill; the increased blood in the skin speedily throws off its warmth, the superficial blood vessels contract, and the cold blood is driven into the mucous lining of the air passages, and the primary congestion is thus increased. Where the patient is put into a warm bed immediately after the bath, this cannot take place. A cold shower or a cold sponge is decidedly

beneficial after a hot bath; it contracts the superficial dilated blood vessels and thus lessens the loss of heat, and through the nervous system develops the heat producing functions of the tissues generally. There is little danger from exposure after a warm bath when followed by cold applications.

Drugs containing opium, alcohol, etc., are frequently used to produce effects similar to those produced by the hot bath, but they have this decided disadvantage, they are poisons whose baneful results remain in the system, and although they relieve, under suitable conditions, the internal congestion, they do harm in many other ways.

To prevent colds, healthful living, abstinence from rich foods, appropriate clothing, cold sponging or cold shower baths, avoidance of contaminated air as in close rooms and public assemblies, and regular outdoor exercise are all necessary; the feeble need abundance of good food such as fresh milk, lightly cooked eggs; but the vigorous must confine themselves to good, plain, and simple foods that do not clog the system. W.H.J.

Differences Between "Acute Sore Throat," "Diphtheria," and "Tonsillitis"

IT is extremely important to be able to differentiate the several affections of the throat. Many are of a comparatively innocent nature and pass away in a few days at most; others require instant treatment, and delay may mean the loss of life. A simple sore throat may be ushered in with pronounced symptoms such as fever, loss of appetite, pains in limbs, and great lassitude, while even diphtheria may exist without much impairment of the general health.

The tonsils are situated between what are known as the pillars of the fauces (throat) at the side of the throat; these pillars can be recognised as two slight ridges running from the soft palate (above) toward the base of the tongue. In children the tonsils are much more developed than in adults, in the latter often they cannot be seen at all.

Acute sore throat, tonsillitis, and diphtheria are all different kinds of inflammation of the throat. "Itis" at the end of a word signifies inflammation; thus instead of writing or speaking of inflammation of the throat (pharynx) we use the term "pharyngitis" and that of the tonsil is known as "tonsillitis." When the larynx is affected we write "laryngitis"; or the bronchial tubes, "bronchitis," and so on.

In tonsillitis the redness and congestion are centred in the tonsil or tonsils; the tonsil may be simply red and swollen as in quinsy; or it may show one or more whitish or greyish spots over the crypts, and known as "follicular tonsillitis"; this form is sometimes called "septic tonsillitis," the inflammation being the result of poisons from disease bearing germs. "White specks" on the tonsils often alarm mothers and naturally suggest diphtheria; they, however, do not necessarily mean diphtheria, but nevertheless call for energetic antiseptic treatment. A painting with simple tincture of iodine is exceedingly useful in these cases. Diluting the iodine with glycerine makes the application less uncomfortable for the patient. The dilution may be as great as two-thirds glycerine to one-third iodine. Sometimes the specks of white or greyish matter run together and form a covering to the tonsil; the membrane gives the inflammation a much greater resemblance to diphtheria, especially when the surrounding parts are highly congested. As a rule, however, the white or greyish patch extends beyond the tonsil in diph-

theria. It is the extension of the white "specks" or membrane beyond the region of the tonsil that indicates diphtheria, especially when there is decided redness of the surrounding parts. The membrane of diphtheria sometimes develops only in the nose, or the larynx (voice box), or the trachea (main wind-pipe), without being seen at all on the throat. Continued difficult breathing without any relief would show that the larynx is inflamed; the inflammation, however, may be simple, an extension from an ordinary cold, or diphtheritic. It is in epidemics of diphtheria that obstruction of the breathing through the larynx excites the physician's suspicion.

Simple sore throat (angina simplex or acute pharyngitis) is indicated by redness, swelling of the lining membrane over the soft palate, uvula, tonsils, and pharynx. This redness may be accompanied by high fever, rapid pulse, more or less quick breathing, headache, and pains in the limbs as in influenza; or by obstruction of the nose, followed by first a clear and then a turbid discharge from the nose as in coryza (cold in the head).

Affections of the throat frequently block up the entrance to the Eustachian tube, (the tube leading to the middle ear which equalises the air pressure on both sides of the drum), and cause temporary deafness. When the inflammation extends to the larynx, it produces hoarseness, or loss of voice. Diphtheria is often so mild as to escape observation at the time, and frequently the fact that it has occurred is only shown by subsequent temporary paralysis of the soft palate causing regurgitation of food into the nose and a nasal tone in the voice. W.H.J.

Nasal Catarrh—Symptoms and Treatment

CHRONIC inflammations of mucous membranes are always difficult to cure, whether they be in the nose, throat, larynx, bronchial tubes, or the alimentary canal. They result from long-continued or repeated acute attacks. The affection of the naso-pharynx (the back part of the nose and the upper part of the throat) is so common that it is frequently spoken of as "catarrh."

The nose and the throat communicate in the back parts; this fact can be illustrated by the practice of smokers inhaling the tobacco fumes through the mouth and expelling through the nose; and again, fluid syringed into the nose will run into the back part of the throat.

In healthy breathing the mouth is separated from the naso-pharynx by the soft palate, which hangs as a curtain at the back part of the mouth. Breathing through the mouth is a frequent cause of throat affections, and these again extend upwards producing postnasal catarrh. When the air is inhaled through the nose, the fine hairs at the front part prevent the dust from entering, and the great surface of mucous membrane abundantly supplied with warm blood, warms the air and thus prevents inflammation of the throat and air passages generally. Mouth breathing is mostly the result of some nasal obstruction, polypi, postnasal growths, deformities, or simple swelling of the lining membrane from congestion. A regular current of fresh air through the nose keeps the parts in a healthy condition; when this is absent, chronic forms of inflammation are very likely to result.

In the treatment of all cases of nasal catarrh, every obstruction to breathing through the nose should be removed and the patient educated to breathe properly through the nose. Postnasal catarrh cannot be cured in mouth breathers. The symptoms of postnasal catarrh are chiefly the constant appearance of more or less thick phlegm (mucus) at the back part of the throat (pharynx), and the constant irritation and hawking produced in the

effort to expel it. Often one or both sides of the nose are obstructed. The inflammation may extend into adjoining cavities, as those situated above the eyes or in the upper jaw, and cause pain and uneasiness in those regions. One of the most common and serious results is the

ANTERIOR SYPHON NASAL DOUCHE

extension of the catarrh along the Eustachian tubes to the ear and its drum, interfering with hearing. Sometimes hard scales are found in the nose, and these frequently contain cholestrine, a substance formed in the liver. Undoubtedly a sluggish digestion, catarrh of the alimentary canal, is the main obstacle to the cure of postnasal catarrh.

The facts mentioned under "Colds and Coughs" in this issue of LIFE AND HEALTH, must be remembered in the treatment of all catarrhal affections of the nose and throat. The general health, particularly the digestion and the bowels, must be attended to in all cases of chronic catarrh, otherwise cure is impossible. Much fat, sweets, and proteids (especially flesh foods) must be avoided. Fat should only be used in its natural condition, as in milk, nuts, separated cream, and should never be cooked in any form. All foods cooked with fat should be avoided; thus cakes, pastry, and fried foods must be omitted from the dietary.

Close, ill-ventilated rooms increase the catarrhal condition, consequently the patient should live out of doors as much as possible.

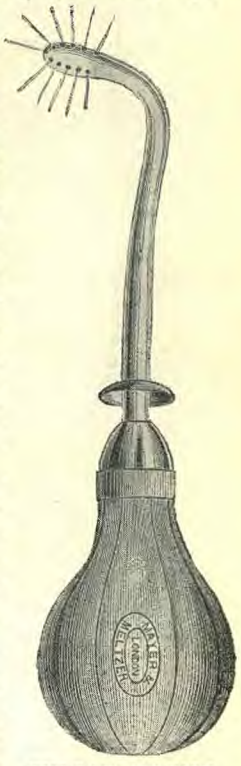
The clothing must be warm but not heavy, both night and day.

Fruit, vegetables, and food that will keep up a regular action of the bowels should be largely used.

Fresh milk is often found to have a laxative action, and when used special proteid food can be dispensed with. Cooked milk is undoubtedly constipating.

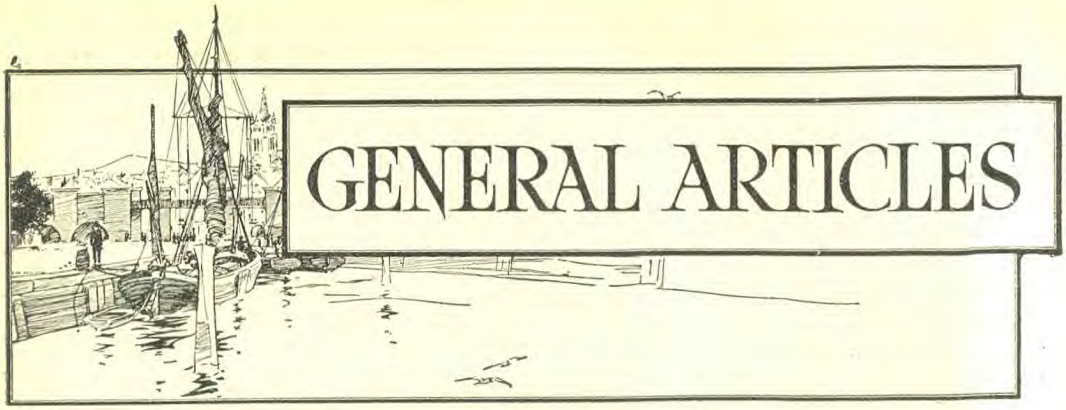
If the digestion and the general health are attended to, local applications will be beneficial, but if relied on alone the results will be disappointing.

Local applications are made with the nasal syphon douche or a postnasal spray. A simpler method is to pour a little of the solution into the palm of the hand and snuff up each nostril. A solution of salt and boiled water (one teaspoonful to a pint) should be employed twice daily. Three times a week after the use of the above a slightly astringent solution should be used in a similar manner, such as tannic acid in water (a small teaspconful to one pint). Where the discharge is very profuse, the chloride of ammonium spray will often do good. If the discharge is offensive, use 20 drops of carbolic acid to the pint of salt solution; see, however, that the solution is thoroughly shaken to dissolve the acid. Fifteen grains of permanganate of potash to the pint of water is also good in these cases.



THROAT SYRINGE

A warm, dry climate is favourable in postnasal catarrh, but a cold, wet atmosphere prolongs the trouble. W.H.J.



GENERAL ARTICLES

The Great White Plague

How Prevented—How Cured

D. H. KRESS, M.D., Medical Superintendent of the Washington, D.C., Sanitarium

TUBERCULOSIS is a disease more rapid in its effects and more actively contagious than the much dreaded leprosy of India and the South Sea Islands, and it is almost equally fatal. The results of the enquiry made in India by the Leprosy Commission appointed by the British Government show that leprosy, like consumption, is propagated chiefly through the air by means of fine particles of dust carrying the germs of disease. In appearance the germs of leprosy and of tuberculosis are almost identical. Their resemblance is so close that a bacteriologist of some note has asserted that they are absolutely the same, and that the disease known as consumption is only another form of the disease known as leprosy. Certain it is that tuberculosis is a disease as much to be dreaded as the leprosy. In civilised countries no other disease except pneumonia has a death-rate equal to it.

To give some idea of the prevalence of tuberculosis it is only necessary to say that the mortality from it is equal to the combined mortality of all the most dreaded diseases, as smallpox, typhoid fever, diphtheria, cholera, scarlet fever, appendicitis, influenza, and cancer. At the second annual American Congress of Tuberculosis, held in New York City, Dr. Pryor said that "one-sixth of all the deaths in the world are due to this one disease." Statistics show that in France, 150,000; in Germany, 170,000; in the United States, 160,000, die every year of this disease.

According to some of our best statisticians each year the world yields up about 1,200,000; each day, 3,000; and each minute, two of its people, as a sacrifice to this plague.

Its Prevalence Among Children

Dr. Schleuker made 100 consecutive post-mortems on adults and children who had died from various causes. He carefully examined every part of their bodies, and found 64 per cent tuberculous. Dr. Babes found lesions of the bronchial glands in more than one-half of his post-mortems on children. In many cases of infection occurring in childhood, the disease does not prove fatal until maturity is reached. Upon examination of the death records of thirteen prisons located in different parts of America, deaths from tuberculosis were found to average about 60 per cent; that is, out of every ten deaths, six were due to this disease, and tubercular deposits were found in the remaining 40 per cent. Close confinement and association is no doubt the prime cause of this high tubercular prison-mortality.

It is within the range of probability

that in a city of 1,000,000 people several thousands of this number are walking the streets who are, through their association with an unsuspecting public, engaged in spreading this disease. This is certainly alarming. Suppose a smallpox hospital should release its inmates and permit them to associate with the public as consumptives do, it would create a panic. Yet here is a disease that kills thirty times as many people as does smallpox and scarlet fever combined, and yet tubercular subjects who have no realising sense of the contagious nature of the disease are permitted the greatest freedom in their association with others.

This disease carries off young men and young women just as they bloom into manhood and womanhood, or enter upon years of usefulness and responsibility. One-third of the deaths which occur in civilised communities between the ages of fifteen and forty-five are said to be due to this disease.

In Germany, where a careful study of the disease was made before the war, it has been found that nearly one-half of the deaths between the ages of twenty and twenty-five are caused by it.

Dr. Nageli, a noted European scientist and authority on tuberculosis, as a result of very extensive investigations, concludes from the tubercular scars found in the lungs of post-mortem cases that practically every adult has at some time had tuberculosis. From autopsies made on thousands of persons of every age who had died in the hospitals, he has found as follows:—

Above 30 years of age all persons without exception, were, or had been, affected with tuberculosis.

Between 18 and 30 years, 96 per cent affected with tuberculosis.

Between 14 and 18 years, 50 per cent affected with tuberculosis.

Between five and 14 years, 33 per cent affected with tuberculosis.

Between one and five years, 17 per cent affected with tuberculosis.

Under one year he found not a single case of tuberculosis.

Dr. Symes, of Christchurch, New Zealand, who probably conducted more post-mortem examinations than any other man in New Zealand, also affirms that he has never made an after death or post-mortem examination without discovering traces of tuberculosis.

Another European authority says that ninety-eight per cent of his post-mortems either presented active tubercular disease or the remaining scars indicated the presence of the disease at some time. From these facts it will be seen that tuberculosis, "the Great White Plague" of modern times in civilised lands, is constantly present as an epidemic.

It may be asked—

Can Its Ravages Be Checked?

When the true nature of the disease is more fully understood, and it is regarded by the common people as are other epidemic diseases, there can be no reason why, with the prescribed precautions, we shall not meet with the same success in preventing its spread as we have met with in staying the spread of smallpox and yellow fever, etc. Tubercular subjects will then be kept in the open air, and will not be permitted to sleep in rooms with other members of the family—greater precautions must be taken for the welfare of the patient as well as for the welfare of his friends, if we would prevent or lower to a great extent the mortality due to this disease.

According to Dr. Lagneau, the statistics of 662 cities in France show that the closer people are packed in cities, the more frequent is this disease. In some of the American cities the proportion of deaths from consumption to deaths from all causes rises as high as from twenty to thirty per cent, while in the newer communities of the West, the proportion falls to from eight to ten per cent.

Whenever an outbreak of smallpox or plague occurs, the whole community is at once aroused. Decided and effectual efforts are put forth to prevent its spread and lessen its prevalence. With consumption little anxiety is felt. While we have been able to isolate the bacillus which causes the disease, comparatively little has as yet been done to ascertain

the predisposing causes which after all account chiefly for its prevalence.

The probable reason for the existence of this apathy in regard to consumption is the fact that while other epidemic or germ diseases carry off their victims in a few days, consumption steals in quietly, fastens upon one member of the family, and in the course of a number of months claims its victim. Then it is found that another member of the family is failing in health, begins to cough, and is losing in weight. In a year or two he too dies of the disease; and so it goes on weeding out one after another, until often entire families in the course of a few years are wiped out. But it does its work so slowly and stealthily that little alarm is created. Friends of the bereaved stand by and say, "It is too bad, but it runs in the family." This leads to a blind resignation to the apparently inevitable, and thus this monster is left undisturbed in its cruel work of destruction. That consumption is seldom, if ever, inherited is shown by the fact that among the many autopsies on children under one year old, Dr. Nageli was not able to detect the slightest trace of tuberculosis. Dr. Turner, who has made the disease a special study, was unable in his researches to find a single authenticated case, either of an infant or a calf actually born with tuberculosis. He says, "It is the *hereditary employment* of the butcher and milkman" that is responsible for the disease.

Consumption, then, is not inherited; this has been fully demonstrated again and again. It is true that it is possible to inherit certain predisposing weaknesses; but it is in our power to develop and strengthen these weak points, and, in fact, have them become our strong points. Does not the gardener take the weak, degenerate plant, and by cultivation improve it, and make of it a healthy, thrifty plant? I have known of many who have inherited contracted chests and weak lungs, but who have, by suitable exercise, outdoor life, and proper diet, developed a marvellous lung capacity, and overcome all inherited tendencies to this disease.

The difficulty lies, not so much in the inheritance of weak lungs from tubercular parents, as in the fact that the wrong habits, which were responsible for the tubercular disease in the parents, are also inherited. These, and not the weakened constitutional heredity, are responsible for the disease whenever it appears in the offspring of tubercular parents.

It is well known that the use of alcohol lowers the vitality of the tissues and acts as a predisposing cause of tuberculosis. At the late International Tuberculosis Congress the close relation existing between alcoholism and tuberculosis was again established. A medical expert, who examined 350 families of tuberculous children, stated that the alcoholism of parents is even more fatal than tuberculous tendencies to their offspring. In nearly half the cases to which he referred, the father and mother were free from any pronounced weakness. The death rate was greatest among children whose parents were alcoholics. In the opinion of another French expert present at the Congress, tuberculosis is not a hereditary malady. If it runs through families, he said, it is due to contagion alone, because of lowered vitality, resulting from wrong habits of living. Tobacco has long been recognised as a predisposing factor in the causation of tuberculosis.

This demonstrates beyond a doubt that both alcohol and tobacco lessen the vital resistance of the tissue to germs of disease, and therefore they act as predisposing causes of tuberculosis.

The Disease May Be Eradicated

Tuberculosis is due to a micro-organism known as the tubercle bacillus. There can be no tuberculosis without the tubercle bacillus, even in those in whom there exists a predisposition to the disease. This being so, if we can prevent the spread of tubercle bacilli, the disease will soon be eradicated.

Let no one settle down in apathy, and say, "There is no hope for me; I have inherited this weakness." Do everything in your power to prevent the planting of

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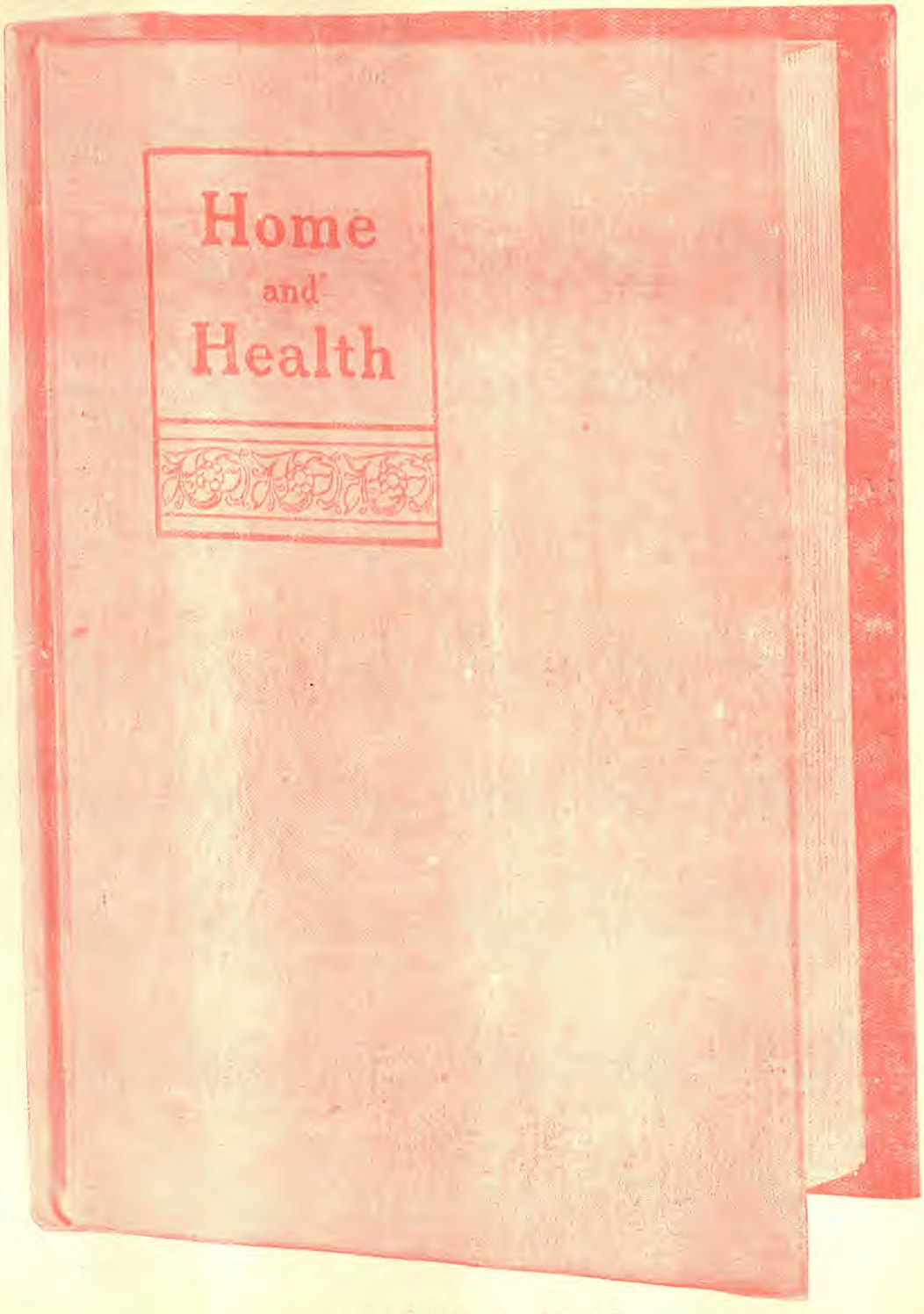

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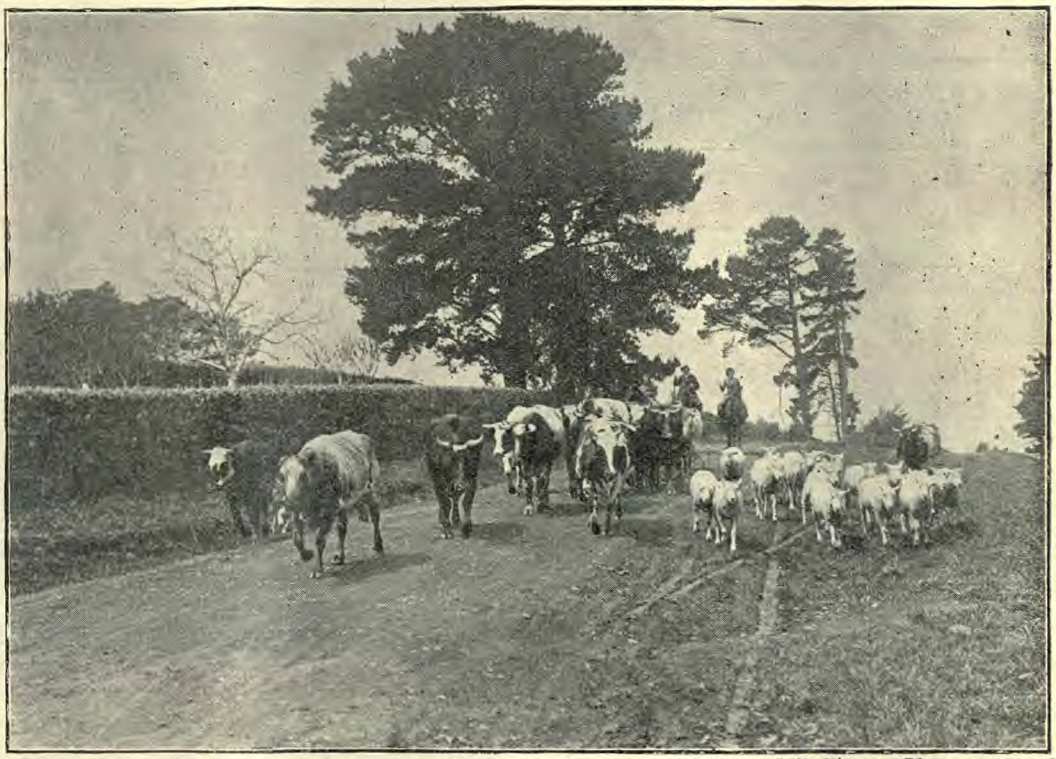
the bacilli in your body, and you will not have this disease. Then determine to ascertain the causes of your weakened heredity, and remove the causes, and by suitable exercises strengthen the weak points. If the chest is narrow and contracted, take exercise to develop it. Sit erect. Stand erect. Walk erect. Send a current of energy into every muscle of the body. Practise deep, abdominal breathing, practise singing, keep in the open air, do outside work, dispense with every harmful practice. Fully co-operate with nature's efforts in your restoration, and you may improve your health and possibly entirely overcome the hereditary weakness.

I am convinced that nothing but ignorance, carelessness, and indifference are responsible for the prevalence of this disease. We become accustomed to certain diseases and tolerate them, and after a time regard them as unavoidable. Not until we understand the true nature of these diseases, and see that they need not exist, will we arise from this apathy, and determine to leave nothing undone to eradicate them. And when we go about it in this way, consumption will become as rare in civilised communities as the plague or yellow fever.

The spread of consumption may be prevented in two ways. First, by isolation of tubercular subjects and by destroying the tubercle bacilli as far as possible, thus affording protection to the weak and susceptible. Second, by fortifying the system, making it able to resist the attacks of tubercular germs. The first should be always done, and the second should never be left undone. Decaying fruit when observed we always separate from the rest.

Consumption is a curable disease when taken in hand in time, and when proper hygienic measures are at once adopted.



J. H. Kinnear, Photo, Auckland

COMING HOME

But if it is not seen to in time, it soon reaches the incurable stage. Its progress is rapid as a rule. It begins at a small point, like a spark in a house, and rapidly spreads if not extinguished. It is, therefore, of the utmost importance to have an early diagnosis of the disease, that curative measures may be adopted at the very outset.

Drugs are valueless in this disease. The Tuberculine Treatment has met with no success. The only hope for those who have the disease is to build up the vitality of the tissues by utilising nature's agencies: pure air, exercise, and pure food.

The late Dr. A. Flint said nearly forty years ago that the disease was curable if taken in hand in its earlier stages. E. B. Borland, M.D., says: "Tuberculosis may be considered a curable disease in the sense that it may be held in abeyance, that is to say, kept in a latent condition for a lifetime, providing the vital resistance of the individual is kept up to the normal standard, and nature has been known to completely eradicate it in a limited number of cases."

There are, without doubt, many more recoveries from tuberculosis than the average physician or the laity have any idea of. It has been demonstrated that fully two-thirds of all infections either disappear or remain quiescent during an average life.

Persons with small, narrow chests usually possess small resisting power and are naturally more apt to be claimed as victims of the disease than others. But no one is immune. The principal thing for all, then, is to maintain the vital resistance of the body, or to build up the natural barriers of defence. This all may successfully do. Germs thrive only on dead or diseased tissue; that is, on tissue that has lost its life or vitality.

Just as soil must be prepared for the seed before it is possible for it to grow, so the body must be prepared for the germs of tuberculosis before it is possible to have tuberculosis. Mold never grows on the leaves of a healthy tree, and germs cannot grow on the lung tissue of a healthy subject. It is possible for man, by proper habits of life, to keep up the vitality of his tissues, and thus live securely above the possibility of germ disease. Of course, after we have done all this, every precaution should be taken to prevent unnecessary exposure, and the greatest care should be exercised by patients and friends to protect the well.

Rules To Be Rigidly Observed Wherever the Disease Exists

Always wash the hands with soap and hot water after attending the patient. Some reliable disinfectant should also be employed after this.

Never take food out of the same vessel as the patient.

Destroy by burning all food the patient may leave.

Boil, in soap and water, all spoons, cups, etc., after being used by the patient.

Avoid raising dust in the bedroom; always use a damp cloth in dusting. The chief danger arises from dust.

Admit as much air and sunlight into the room as possible.

Do not sleep in the same room with the patient. Keep as much in the open air as possible, if the patient is confined to a room. It is better when possible to have the patient sleep in the open air.

In cases accompanied by diarrhœa, always disinfect the stools, and use hot water and soap suds to wash the vessels. The vessel should be then washed with bi-chloride or some other disinfectant.

When a room is vacated by a patient, strip the paper off the walls if it cannot be treated with a disinfectant solution, and afterwards burn it in the fireplace of the same room, if possible.

Thoroughly wash the ceiling, floor, walls, etc., with some disinfectant solution.

Wash all articles in the room with some disinfectant solution, and open the room wide for several days to air and sunshine.

Boil all bedding, then place it out-of-doors for several days in the bright sunshine. The clothing which cannot be boiled in soap and water or placed in

some disinfectant should be burned.

The patient, when indoors, should spit into small paper bags (these should be burned before the sputum dries) or into a receptacle containing some disinfectant solution. This vessel should be emptied and washed in boiling water and soap suds every twenty-four hours at least.

Out of-doors the patient should spit into a special flask, or a paper bag which can be burned.

To avoid infecting other parts of the body, the expectorations should never be swallowed.

In carrying on a conversation with friends, the patient should turn the face to one side, exercising care in coughing. Kissing must be avoided.

The patient should be encouraged to live in the open air day and night if possible. If this is not possible then keep a current of pure air circulating through the room constantly.

Gentle exercise should be taken, but over exertion must be guarded against. Should the temperature rise when exercising, rest is indicated, or the exercise should be lessened. If the temperature remains about normal the exercise may be gradually increased. But never take *vigorous* exercise. It should never be indulged in by those who have weak lungs. It will invariably result in injury and may result in hæmorrhage.

Gardens and Their Soils

Simple Tests For Chemical Qualities

HORACE G. FRANKS

THE greatest interest has been manifested by the human family in gardens since man's first home in the beautiful garden of Paradise. Since that glad natal day man has deteriorated, and gardens have deteriorated, but the interest and the enthusiasm of the one for the other have never flagged. In the leafy bowers of garden glades the greatest of poets have found their inspiration for the grandest of songs, while wrapped in the sweet perfume of the myriad scented blossoms is all the romance and mystery of the ages.

And even in these times of stern realities, the romance of the garden is far from gone. In one year America created over three million new gardens, war gardens they are called. The individuality and patriotism of a man are to be seen, not so much in the national red, white, and blue flag he waves aloft, as in the red rows of beets, the white hearts of cauliflowers, and the blue dungarees which are all combining to "save the Allies." The garden beautiful of to-day is the garden useful. All countries of the world, save our own at the present time, lack food; and the home garden is the place to produce that food. And even in our own Australia, when prices are soaring to "Jack-and-the-Beanstalk" heights, a paying garden is the greatest of blessings and the richest of treasures.

What Is a Garden?

In it we can see the miracle of the new life but cannot solve its mystery. We have probed into the heart of radium and it has disclosed its secrets to us; we have, so they tell us, solved the riddle of the atom; but the mystery of the garden yet needs unfolding. In the garden are two main essentials: soil and seed. Out of the garden come two main essentials: food and life. Only the Infinite can link up those four essentials into the vital chain. Science cannot do it, although it can do much to help along the process. One little grain of seed and but a thimbleful of soil set all the sciences at nought, but the life of that little seed and the usefulness of that tiny cup of soil find great assistance in the laboratory of the chemist.

The Right Foundation

The sure foundation of gardening is the soil, and he who desires a successful vegetable plot must look upon scientific exploration and administration as absolutely necessary. This article will present a few simple facts and hints which are just as essential for good results as perfect seed and much work and care.

A SIMPLE TEST FOR SOIL ACIDITY WITH BLUE LITMUS PAPER

Kinds of Soils

There are several general kinds of soils, which differ from one another in several ways. The most common kinds are clay, loam, and sand. Clay soil contains particles which are extremely fine. Theoretically this is good, but practically, as doubtless the majority of our readers have experienced, it is bad. When wet, the pure clay soils cannot be worked, and when dry, they often bake hard on the surface, so that again they cannot be worked. Thus, although they may contain an abundance of good plant food, they shut out the two great life-giving streams, air and moisture, from the roots of the plants.

Sandy soil, however, often contains very little plant food, and although water will pass through it readily in great quantities, very little will be retained and conserved. It may seem to possess the advantage of being workable in hot and dry weather, but the stunted and impeded growth as a result of this shows that the seeming advantage is a disadvantage.

Although neither a sandy loam nor a clay loam is an ideal soil for gardens, both are infinitely better than either sand or clay alone. A loam soil is a combination of one of these two fundamental constituents with such material as decayed vegetable matter, which from year to year has been added through the decomposition of plants and leaves and grasses. It usually contains more natural plant food

TESTING THE PHYSICAL CONSISTENCY OF SOIL

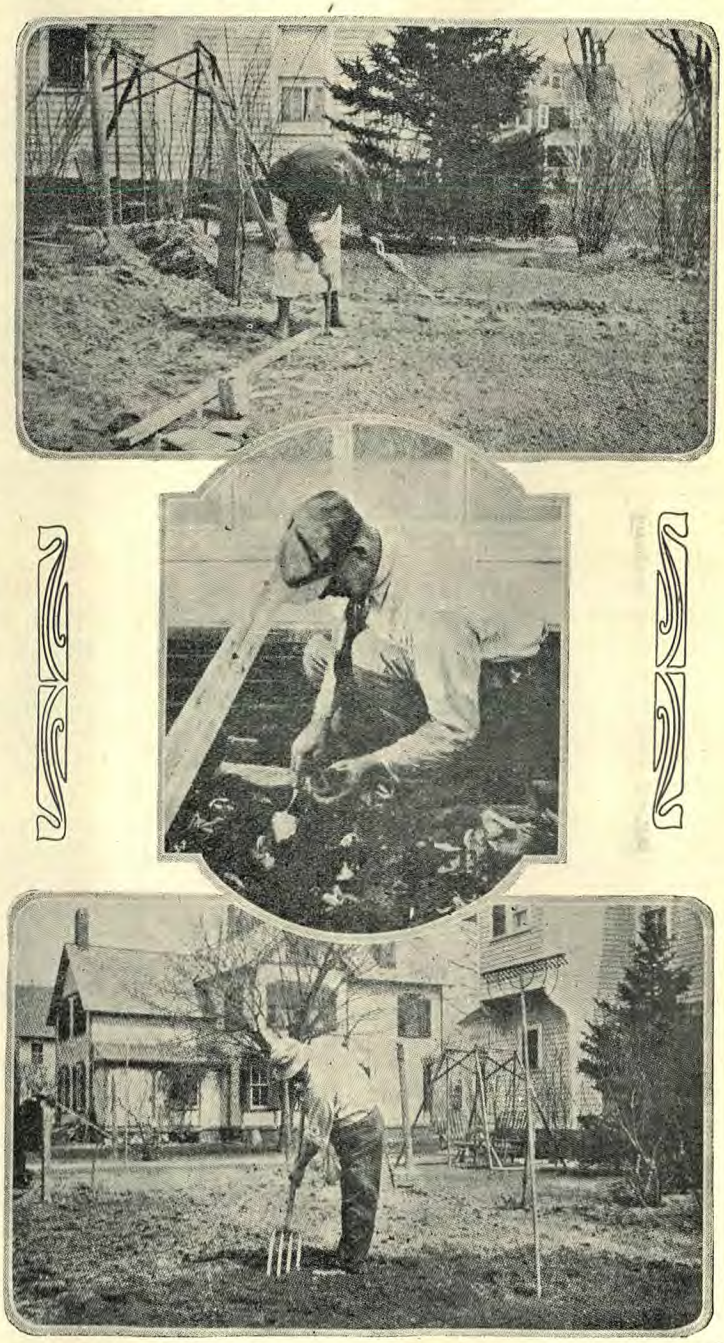
than either of the other soils that have been mentioned, and is usually responsible for a good growth of vegetation.

Other things to be considered in connection with the soil are exposure or shelter, and the composition of the subsoil, the foundation on which the surface soil rests. This sub soil should be such as to retain a certain percentage of water, but to carry away readily all surplus water which would keep the top soil wet.

It has thus been proved that ideal soils are not found everywhere; in fact, they are scarcely found anywhere. The ideal soil must be made. The best method,

and the most economical, is to take the land at your disposal and build it up as quickly as possible to the ideal. Here are the ideal conditions for general gardening:—

"First, the soil should be very porous, to permit thorough and quick drainage of all surplus water. Second, it must be very retentive of moisture so that it will not suffer too quickly from dry weather. Third, it should rest upon a sub-soil that can carry off quickly any surplus of moisture passed through the surface soil. Fourth, it should be well supplied with all the necessary plant foods. The most important of these are nitrogen, phosphoric acid, and potash. Fifth, it should be of a character to furnish the best conditions for furthering the growth of soil bacteria."



MAKING THE GARDEN PAY

Testing At Home

To make your soil ideal it must be tested for four different things: Amount and character of plant food present; acidity (sourness) or alkalinity (sweetness); proportion of humus; species and quantity of soil bacteria necessary for growth.

Testing for Plant Food

To ascertain these indispensable factors, a fully-equipped laboratory is by no means necessary. For the first test take a few potfuls of the soil and set apart as follows. To one add nothing; to the second, add a quarter of a teaspoonful of acid phosphate; to the third, the same quantity of sodium nitrate; to the fourth, a quarter of a teaspoonful of muriate, or sulphate of potash. If the latter is unobtainable, a teaspoonful of wood ashes can be substituted. In the remaining pots place combinations

of any of the above three chemicals. In each pot plant a quick-growing vegetable seed, such as beans, peas, or corn. Now "sit back" and watch results. The different rates and stability of growth will soon reveal to you the missing element in your soil, whether it be nitrogen, phosphoric acid, or potash.

This test may also be carried out in the garden by watching the growth of the plants. A weak growth, lacking healthy green colour, implies a lack of nitrogen; remedy this by adding sodium nitrate to the soil. A good start with a later lack of strength to "carry on," resulting in weak stems and poor blooms, proves that the soil needs the addition of phosphoric acid; while failure of grain or legume crops to produce plump grains and seeds usually shows a lack of potash.

Just a word as to the use of fertilisers. In nearly all soils some plant food is necessary, and there are many good fertilisers on the market if natural manure is unobtainable. Buy a good one, however; as a rule, the more you pay per bag, the cheaper it will be in the end. Apply the fertiliser broadcast before raking, and as long before planting as possible. Use four or five pounds generally for each 100 square feet of surface.

The Second Test

Is the ground "sweet" or acid? Here is the test; Procure a strip of blue litmus paper from the chemist and place in soil moist enough to dampen the paper. If the blue colour changes to pink or red, the reaction is acid, the degree of change indicating the degree of acidity. If sorrel grows freely and clover does not, it is a sure sign that your soil is acid. The corrective for this condition is lime. A very generous addition of wood ashes will contain sufficient lime to keep the soil sweet. It is better, however, to use burnt lime or "agricultural lime" to the extent of about seven pounds to 100 square feet.

Test For Humus

The greater the quantity of humus in the soil, the more water it will absorb and retain. To ascertain the condition of your garden soil, take a sample of the soil "air dry" and weigh it. Now add as much water as it will absorb, and re-weigh. The increase in weight should be at least thirty-three per cent; preferably greater than that. If the soil remains wet and sticky for a long time after rain, you may be practically certain that it is deficient in humus. The remedy is not easy. The condition usually implies either overwork or neglect of the ground. Use all the manure possible, plant some quickly-growing crop, such as cow-peas, to dig or plough in, and start a compost heap where everything that will decay can be saved up. If a quicker method is desired, purchase some of the extensively advertised commercial humus and use according to directions.

Soil Bacteria

These bacteria are absolutely necessary for a good productive garden; for, while they are not plant food, they make all the difference between success and failure. To increase these necessary "imps of the soil," time is required. Manure is one of the best agencies, while special inoculants for different crops are on the market. Purchase some of these and test the necessity for them by planting plain seed and inoculated seed in different pots; then watch results.

If your soil is heavy, every load of sand put on it is as good as a load of manure; if sand is not available, the use of coal ashes or coarse ground limestone will make the ground equally open and friable. If the soil is sandy, add to it as much loam as possible.

Such tests as those detailed in this article will make your gardening much more interesting and successful than it has hitherto been; if, however, your tests are unsuccessful or you find you cannot make them, send a sample of the soil to your State Agricultural Department, and full details as to its requirements and the best crops to be obtained from it will be sent to you. In fact, it would be a good plan to make your own tests in addition to forwarding a sample and compare your results with those sent to you by the Agricultural Department.

Try this. Be scientific. Be successful!

The Duties of Parents Regarding Sex Hygiene

MARY C. McREYNOLDS, M. D.

So delicate a subject must be treated most guardedly; so vitally important a subject should be conscientiously studied and intelligently understood, not only by every parent and teacher, but by every young man and woman who has come to the age of adolescence.

Prominent among the instructions given ancient Israel are the statutes regulating the relation of the sexes, both before and after marriage. In this relation is bound up so much of the happiness or grief of individuals, so much weal or woe to posterity, and so much even of the destiny of nations, that the Creator of the human family might well give most explicit instruction to His children concerning the matter.

Few realise how early is the stamp given to the life, how soon may be formed habits that will strengthen self control or give free rein to passion. Such influences for good or for ill may become active even during the prenatal life of the child. The work of training begins with infancy. "The mother's work begins with the babe in the arms." "To parents is committed the sacred trust of guarding the physical and moral constitution of their children."

Lesson of the Flowers

The first lessons may be given from the flowers. All life originates from the seed; and in every flower the secret of the seed formation is revealed. The delicate arrangement of the stamens and the pistil, protected by the encircling corolla of petals, is a fitting symbol of the house circle, which guards that most sacred function, the one nearest kin to the work of creation, the reproduction of human beings to inherit the eternal kingdom of God. The attention of the tenderest mind may be called to this simplicity and beauty; the comparison may be left for later years, when, in his contact with other children, the child will need the safeguarding of more explicit teaching.

Useful Work

"Provide useful work fitted for young hands." Nothing will be a more sure source of evil than indolence. We remember with gratitude one family of early acquaintance. The three children, all boys, entered into the work of the "family firm" as young as five years, earning, tithing, and spending their own money under the wise counsel of prayerful parents. The home was very humble, a log house only; but each boy had his own private corner, and a bed by himself. We have never seen cleaner, purer minded, stronger men than developed under this régime.

Good music in the home sheds a subduing influence upon growing minds. The benefits of plain, wholesome, palatable food cannot be overestimated. The appetite developed for spiced foods and condiments calls for strong drink also. This is the foster mother of prostitution, which brings such fearful physical and mental disease in its train. This fact being recognised, liquor-free towns are sought out as locations for modern universities.

Answering Questions

With lessons of self-control must be given that knowledge of the physical being which will develop due respect for the body and reverence for its functions. Proper questions should also be met and prayerfully answered—*by the parent*. If parents consent to the pernicious idea that such things "must not be mentioned," they may be sure that Satan's agencies will not only arouse questions, but will provide answers—and lead the children into soul- and body-destroying vice.

Know for yourselves what your children are reading, and reject not only the bad,

but that class of literature which throws a false light over life, and stimulates an animated imagination. Avoid any manner of dress that will obstruct the return flow of the blood, either by tight bands or by exposure, and thus cause a congestion of the delicate organs, in time arousing

THE RESULT OF WELL SPENT LEISURE

undue and untimely excitement of the sexual sense.

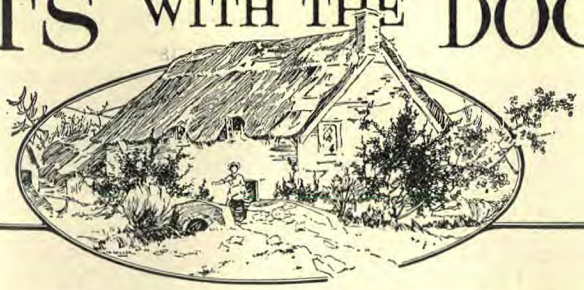
As the children near the age of adolescence *separate* and very careful instruction should be given concerning the organs the Creator has given them. Every undesirable impulse should be controlled. Dr. Rosenau says: "Experiences in childhood and infancy exercise a controlling influence upon the sexual life of later years. The practical application of this is, not that children are to be brought up in seclusion, but that there is no higher duty of parents than to establish such relations with their children that sex difficulties can be discussed and straightened out before they give rise to permanent moods or trends. Hypocrisy and false shame are not natural attributes of the child; and when we create them, we raise a barrier behind which much damage may take place without our knowledge. In childhood and adolescence there must be established the closest bonds of sympathy and understanding between parent and child. Wholesome, frank communication and sensible consultations at that time regarding sex quandaries, may save a child or young adult from disaster later on." — "*Preventive Medicine and Hygiene*," *page 306*.

The Proper Standard

Educate to the single standard. Teach young men to be as pure and chaste as they demand that their sisters and wives must be. The hazards of an impure life are terrible. Diseases of the very worst type have their origin here. Their victims make up a quarter of the inmates of the insane asylums. These diseases bring woe to the suffering wife and innocent children who are contaminated by the very man who has promised to protect and honour them. It is needless to say that there is no law written in any human being that requires such great hazards of happiness and life to meet its demands. There is no reason, physiological or otherwise, for the life of any young man to be other than chaste and controlled. Those who argue for such "necessity" are laying the foundation for wrecked bodies, ruined homes, and a weakened nation.

When intelligence replaces ignorance, when conscientious education lifts the satanic pall of false modesty which has enshrouded the study of sex hygiene, then shall we have a nation the "price of whose virtuous women is far above rubies."

CHATS WITH THE DOCTOR



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157. Substitutes for Flesh Foods

"Health" asks: "What food would you advise in the place of meat?"

Ans.—Meat is taken as a nitrogenous food. Nitrogenous foods are essential for health, as no tissue can be maintained or growth effected without nitrogenous foods. Foods containing nitrogen are called proteids, which contain 16% of nitrogen. The machinery of the body is perfect and its tissues work with a minimum of friction; consequently the wear and tear on the tissues is very slight. From the experiments of Chittenden not more than about 50 or 60 grammes of proteids are necessary for perfect health in a man of medium weight. Voit has a much higher standard, viz., 118 grammes. As there are 30 grammes to the ounce, two to three ounces of proteid only are needed daily. It must be remembered that practically every food we take contains proteids. Rice contains 8%, boiled rice 2.8%, boiled potatoes 2.5%, tapioca pudding 3 3%, and these are considered as purely starchy foods. A little more than a pound of bread and a pint of milk would contain sufficient proteid food for one day according to the standard of Chittenden. Skim milk is richer in proteid than fresh milk. Even though we reckon three or four ounces as the standard proteid dietary, it is easy to construct a diet free from all flesh foods. Two eggs would contain more than half an ounce of proteid; three ozs. of oatmeal would contain another half ounce. Add the oatmeal and eggs to the bread and milk and you have over three ozs. of proteid. A short list of non-flesh foods and their percentage will show how easy it is to obtain the two to three ozs. of proteid required daily without recourse to butcher's meat:—

	Percentage		Percentage
Whole wheat bread	9.4	Dried lima beans	18.1
Macaroni	13.4	Dried beans	22.5
Fresh hen's eggs	13.4	Dried peas	24.6
Whole cow's milk	3 3	Green peas	7.7
Oatmeal	16.1	Boiled potatoes	2.5
Rice	8.0	Bananas	1.3
Wheat flour, entire wheat	13.8	Almonds (edible portion)	21.0
Boiled rice	2.8	Peanuts	25.8
Apple pie	3.1	Brazil nuts	17.0
Custard pie	4.2	Soft shell walnuts	16.6
Tapioca pudding	3.3		

There is much more danger of taking excess of proteids than too little.

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158. Indigestion, Palpitation, and Constipation

"F.A.M. (W.A.)" complains of indigestion with a great amount of flatulence, constipation, and catarrhal condition of nose and throat with loss of hearing, and weak voice, and great lassitude. Her breakfast suits her best and her symptoms are more severe after the evening meal (dinner).

Ans. — Probably the omission of the evening meal for a time would be beneficial, or substituting for it a glass of fresh

IN these hard times freshen up your willow and sea-grass furniture with bright slip-covers of inexpensive cretonne.

milk and a granose biscuit. Soft, mushy foods, drinking with meals, rich foods, foods cooked in or with fat, butter, or grease of any kind, sweets, pickles, spices, new bread, and hot buttered toast should all be avoided. See that the teeth are in good condition; obtain artificial teeth if necessary, and masticate all food thoroughly. Use butter sparingly; it is better to take fat in the form of fresh milk. A glass of fresh milk, sipped, with each meal would be beneficial. If only granose biscuits are taken a couple of glasses of *fresh* milk would be advisable. Gluten gruel agrees with many dyspeptics. We have had good results from gluten and milk alone for a few days. Cauliflower and pumpkin are about the best vegetables. If granola is taken—add double quantity of boiling water to a measured quantity and allow to stand in a warm place without any stirring whatever. Stirring always makes granola heavy.

Read article on "Indigestion" in last issue of LIFE AND HEALTH. The palpitation and nasal trouble are largely due to the sluggish digestion. Read directions under "Catarrh" in this issue of LIFE AND HEALTH. Toasted corn flakes with a little raw cream are very suitable for breakfast. Bread cut into slices and baked in a slow oven (zwieback) will agree better than ordinary bread. Zwieback should not be tough but crisp. The taking of water (or bran tea) flavoured with a little fruit juice, prunes, ripe or stewed fruits will help the bowels. If medicine is necessary the liquid cascara is the best, as the dose has not to be increased like most purgatives; generally it is better to take in small doses two or three times a day—ten to thirty drops. The smaller the dose of purgative medicine the better. Omit the cascara occasionally and take an enema of hot water with, if necessary, a little soap. The general health should be kept up by cold sponges every day, and outdoor exercise. See that the bedroom is well ventilated.

LENGTHEN the life of your curtains by making the hems on both ends the same width so that either end of the curtain can be put on the pole. After each washing hang them by the other end.

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159. Auto-intoxication

"Osborne, W.A.," wants advice for the following: (1) Run down feeling with pains in the back of head; (2) skin in greasy state with pores open, and nose red with veins showing; (3) hair falling, tired feeling after meals.

Ans.—This case is probably also one of imperfect digestion. With imperfect digestion the blood becomes loaded with impurities absorbed from the alimentary canal, and these naturally affect the nerve centres, producing feelings of lassitude and weariness. A very light diet with attention to general health would prove beneficial. Read advice given under "Indigestion, Palpitation," etc., above.

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160. Gastritis and Eczema

"E.M.F." writes about her husband. He has had three or four attacks of gastritis during the past eighteen months. He has a good appetite but eats hurriedly. He is a hard worker and looks very tired and dark round the eyes at night. Smokes only once a day and is a very moderate drinker. He has attacks of eczema on the leg. His diet consists of half a pint bread and milk for breakfast, varied sometimes with porridge, two eggs poached or boiled, toast or bread and butter, dates, fruit, and cup of tea. For lunch (eaten away from home) sandwiches, cake, and fruit. The evening meal (about six o'clock) a little meat, fish, brains, or tripe with vegetables, a milk pudding or baked apples, tea, and on going to bed a wine glass of wine and nothing else to eat. His bowels are very regular as a rule."

Ans.—Recovery in this case will only

take place with some self-denial. Meals should not be taken hurriedly, this habit is a frequent cause of gastritis. The smoking, wine, tea, and coffee should be omitted altogether; they are all harmful. There is excess of proteids (eggs, milk, and flesh foods) in his diet. We would suggest a pint of milk for breakfast and omit the eggs. Avoid taking too many dishes at the one meal. The evening meal should be much lighter. Tea is especially injurious when any form of flesh food is taken at a meal. With a better dietary the eczema will probably cease. The following ointment will probably be found very beneficial:—

℞ Ung. Zinci Oxidi
Ung. Plumbi Subacitatis
Ung. Hydrag. Co. aa (equal parts)

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161. Vomiting in Child

"Mrs. H." writes: "My boy, aged 3 years, 6 months, after almost every meal vomits. He is the picture of health, and vomiting does not seem to injure him. He eats no meat, but lives mostly on boiled rice, sago, bread and milk, or custard and bread and butter."

Ans.—The vomiting is probably a mere habit the boy has got into. Reduce his diet considerably for a short time. See that the meals are small—it may be better to give four instead of three meals for a short time. See that the food is not taken hurriedly. If possible, keep him quiet for an hour after meals.

"Mrs. H." also writes about herself. Probably another minor operation will be necessary. An examination is necessary in her case before any treatment can be advised.

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162. Ulcer of Leg

"J.B." writes: "I have a bad leg, an ulcer on the inside of my left leg, and have had it for two years. It is getting larger and is about the size of a two-shilling piece. I have easy employment and keep my leg in horizontal position as much as possible. Ointments of different kinds do me no good. I am seventy years of age and have had perfect health all my life, never had earache, toothache, or headache."

TEST all left over seeds for germination by soaking in water for a few hours; this will save you much disappointment.

Ans.—We never find ointments of any use in these cases. If there are any varicose veins they should be attended to, operated on and suitable bandage applied. The horizontal position should be maintained as much as possible. Boil a piece of lint about the size of the ulcer in water, apply the smooth (not the woolly) side to the ulcer, and cover with oiled silk and bandage. This simple water treatment is better than any ointment.

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163. Swollen Ankles

"Mother" writes that her daughter's ankles and sometimes the feet swell. She is a big strong girl and seems healthy in every way. She is thirteen years of age, has a good colour, and never complains of a pain or ache. She weighs 8 stone 4 lb. and is 5 ft. 3 inches high, sleeps outdoors, and has a very good appetite.

Ans.— Swollen ankles and feet in a young girl are generally due to poorness of blood. Other causes are heart or kidney disease. This girl seems perfectly healthy, and consequently it is difficult to account for the symptoms. Any constriction around the legs from garters, etc., would tend to cause a swollen condition of feet and ankles. She should be examined by a medical man.

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164. Flatulent Dyspepsia

"Severn" writes: "I suffer with belching of wind after everything I eat; in

LINEN covers, stencilled, pen painted, or plain, keep dust and scratches off the polished furniture. It pays to use them nowadays, when good tables, sideboards, etc., are so costly.

fact, belch it up while I am eating at times. I also have palpitation at times which comes on quite suddenly and is very troublesome. While the palpitation is on I pass a lot of urine. The attacks last for three or four hours at times, and leave me feeling quite done up for a long time after. I find eggs, taken either cooked or raw, do not agree with me, they give me wind quicker than anything else; neither does fruit, cooked or raw, suit me. I can take milk but no soups of any kind."

Ans.—While the attack is on sips of very hot water, with perhaps a few drops of spirits of camphor, peppermint, or cinnamon, will give relief. The hot water bag over the stomach will also help. Charcoal tablets taken after meals absorb the gas and give great help with some. As milk agrees with our enquirer, fresh milk with granose biscuits for three or four days as a sole diet would help. All cooked foods should be prepared without milk, eggs, baking powders, or fats of any kind. This will simplify the diet very much. Avoid tea, coffee, and cocoa; also vegetables and fruit. Marrow and cauliflower are less objectionable than other vegetables. Read advice already given in this issue of Chats under "Indigestion," etc.

OBTAIN a barrel from the grocer. Knock the top and bottom out of it, and fasten into the bottom end a cone of wire screening extending up the barrel about one-third or half way. Cut off the apex of the cone to make a hole about one-half inch in diameter, and cover the top of the barrel with a hoop of wire screening. Set the barrel on blocks two or three inches off the ground, and place a good bait, such as sugar, treacle, jam, or even banana skins on the ground under the barrel. Now you will catch flies by the barrel full. Attracted by the bait they fly to the trap, and then, instead of leaving as they entered, they fly up into the cone and thence into the barrel, whence escape is impossible. After a few days dispose of the countless flies in the most convenient way, such as by placing the barrel in water, or by covering the top and suffocating with smoke from burning newspaper.

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165. Diet for Acute Rheumatism

"Mrs. M. B." asks for "diet required for acute rheumatism in a girl of twelve years."

Ans.—Acute rheumatism is really rheumatic fever. For a few days the diet should be confined to milk and water (equal parts), fruit, and fruit juices. There should be an interval between the giving of the milk and the fruit. Plenty of water should be taken, and, of course, the patient must be confined to bed. In rheumatism where there is no fever and the pain does not necessitate going to bed, the diet, of course, should be more liberal. All foods difficult of digestion should be avoided. Fruit drinks should be taken in place of tea, coffee, and cocoa. No flesh foods of any kind should be taken, the proteid element of the food should be taken largely in the form of milk. Sweets clog the liver and should be avoided; also all foods cooked with or in fat of any kind. Vegetables are good if well digested, especially potatoes. Rice, sago, tapioca, macaroni, and oatmeal are all good foods when properly prepared. Do not give more than one egg a day, and this should be raw or only lightly cooked.

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166. Filariasis

"H.J.P. (Q'ld.)" writes: "I am writing you in connection with a complaint I have been suffering from for a long time—filaria. I was operated on for the same about six years ago, and had a small lump in the left groin removed, which was supposed to be the cause of the trouble, but it was not twelve months after the operation that the lump was back again the same size as before and is still there, but it disappears periodically. This complaint gives me a great deal of trouble at times, a sort of weakness in the left leg from the groin down."

Ans.—This is a disease found in tropical climates, and is due to a parasitic worm (*Filaria Bancrofti*) which is found

in the human tissues, chiefly the lymphatics. It produces at times chyluria (milky urine) and lymph-scrotum and elephantiasis (enormous developments of scrotum and leg). The worm (the female) is three or four inches long and the thickness of the human hair. Multitudes of larvæ (eggs) are produced by the mature filaria and pass into the blood, where they are known as *filaria sanguinis hominis*. These are about 1/100 inch long and have a diameter of 1/3,500 of an inch (the diameter of a red corpuscle). In the usual variety these larvæ are only found in the blood of the surface of the body at night. In one drop of blood several hundred of these larvæ may be found actively moving. They show themselves about 5 p. m. and increase in number up till midnight, but disappear by 8 or 9 o'clock in the morning. In another variety (*filaria diurna*) these larvæ appear in the circulation of the surface of the body only in the day time. In a third variety (*filaria perstans*) they are found day and night. Mosquitoes play an important part in the dissemination of the disease; they gorge themselves with blood, and the larvæ develop in the stomachs and blood into the mature worm which, on the death of the mosquito, find their way into drinking water. From the human stomach they burrow into the circulation. Sometimes the adult worm is communicated by the bite of the mosquito, but this is thought to be very unusual. The larvæ never develop into the mature worm in the human body. The parasite is developed in three stages: (1) The ova—the eggs within the body; (2) the larvæ (in the blood); (3) the adult worm in the mosquito. The animal is viviparous, i.e., it brings forth its young alive (as larvæ); these do not obstruct the circulation; if, however, by accident the ova are deposited in the lymph current, obstruction takes place, and milky urine and other symptoms of obstruction of the lymph circulation occur, such as abscess, enlarged glands, enlarged scrotum, or elephantiasis (an immense development of a leg).

There is no drug that is known to have any curative power on the disease. Enlarged glands should be removed. When the urine becomes of a milky colour (chyluria) there must be rest, warmth, fluid nourishment, warm drinks, and elevation of the pelvis. Abscesses, enlarged scrotum, and elephantiasis come under the treatment of the surgeon.

DO not throw away the rinds of your lemons and oranges. Cover the peel with cold water, add two tablespoonfuls of salt to every quart of water, place in a cold place for twenty-four hours; then drain off the liquid, cover with boiling water and boil slowly for one hour. Drain again, cut into thin slices and spread on a plate to dry. Now boil one cupful of water with one cupful of sugar for three minutes; add the skins and boil for fifteen minutes; remove from the syrup, spread on a plate, sprinkle with granulated sugar, and dry in the hot sun or a cool oven. Pack in a glass jar for use in other seasons.

167. Diabetes

"New Zealander" writes: "Have had diabetes for three years or more in a bad form. Would olive oil be the best fattener? If so, how much should I take daily. Could I take minced peanuts as well? How much a day? Is glycerine (in Ayer's Sarsaparilla) harmful to kidneys or in diabetes?"

Ans.—The greatest success in the treatment of diabetes is attained by the fasting treatment. The fast is continued till the urine is free from sugar. Several days is generally advisable. Many authorities allow clear broths during the fasting, as they contain absolutely no nourishment. Sometimes it is beneficial to approach the fast gradually, first of all leaving off carbohydrates, then fats, and finally proteids. Even wasted and emaciated patients have borne fasting with apparent benefit. One fast day in each week is found beneficial in some cases. Not more than four ozs. of fats should be taken in the day. The taking of large quantities of flesh foods by

diabetics is decidedly a mistake. The diabetic should be a spare liver, and does not need more fat or more proteid than the healthy individual. A cutting down of the diet is beneficial in all cases. The bulk of the diet is beneficially made up of vegetables which contain less than five per cent of carbohydrates. The following are examples: Lettuce, cucumbers, spinach, asparagus, rhubarb, endive, marrow, silver beet, celery, tomatoes, brussels sprouts, water cress, cauliflower, cabbage, radishes, leeks, french beans, and broccoli. Dr. Joslin recommends that they be thrice cooked: "The vegetables are cleaned, cut up fine, soaked in cold water, and strained. The vegetables are then tied up loosely in a large square of double cheesecloth—large enough so that the corners of the cloth, after it has been tied up with a string, makes conveniently long ends, and also large enough to allow the vegetables to swell without sticking together. They are then transferred to fresh cold water, placed on the fire, and brought to the boiling point, at which temperature they are maintained for from three to five minutes. This water is then poured off and replaced by fresh, and the vegetables again boiled a similar length of time. Three changes of water are usually sufficient to remove the carbohydrates. The pots for the vegetables should be of sufficient size to hold a large quantity of water." "If the vegetables are cooked with the cover left off the pot they will be lighter in colour and the flavour not so strong." Half the weight of peanuts should be reckoned as fat. There can be no good result from the taking of glycerine or patent medicines. Sleepiness, drowsiness, and a peculiar smell in the breath and urine denote "acidosis," a serious condition which is an indication that fats must be left off and some addition made to carbohydrate (starch and sugars) in the diet.

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168. "Health and Strength"

We do not think the discharge spoken of is due to syphilis. We would recommend a wash of perchloride of mercury. One of Burroughs and Wellcome's eight-grain tablets to a pint of water, twice daily.

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169. Fatty Tumours

"A. W." complains of small fatty tumours about the body. He has had one twenty years.

Ans.—There is no remedy outside surgery for these fatty tumours. They can do no possible harm except when their size makes them inconvenient.

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170. Questions by "W.B.L."

Abscesses.—"Is there any possible way of avoiding a recurrence of abscesses in the ear, or about the body generally? Do they indicate malnutrition? If so, what would you recommend as nutrients for children?"

Ans.—Abscesses are not due to malnutrition as a rule. Mostly the diet should be restricted and the meals should be very simple, avoiding fatty and all rich foods, pastries, cakes, flesh foods, eggs, etc. The skin should be kept active by hot baths followed by cold shower or cold sponge and vigorous friction twice weekly. Every day a cold sponge is advisable. Colds should be avoided, as a congested state of the throat is often a precursor of the same condition in the ear. Fresh air night and day and outdoor exercise are necessary. Let the children have plenty of fresh fruit, vegetables, and water.

Soft Corns.—The boots must be well-fitting, neither too small nor too big. Big boots will cause corns quite as readily as tight ones. The feet should be thoroughly washed and thoroughly dried every day. If the soft corn is between the toes, separate them by a piece of lint. A circular hole should be cut in the lint over the corn and filled with salicylic acid. Often simply painting the corns once a week with flexile collodion will cause them to disappear. Salicylic acid in flexile collodion is the general application for corns in strength of one dram to the ounce of col-

lodion. Cannabis indica is generally added (10 grs. to the ounce) to ease pain. Hard corns should be carefully cut with a knife and glacial acetic acid applied to the corn by a wooden toothpick.

Malnutrition.—"If one is suffering from malnutrition, yet cannot take oils in any shape, does it benefit to rub it well all over the body; if so, how often and what oils would be best? Olive oil is almost unobtainable now."

Ans.—We believe the rubbing into the skin of sweet oil is beneficial. Cotton seed oil will do just as well as the olive oil. There is nothing better for malnutrition than the addition of one or more glasses of fresh milk to each meal. Beaten-up eggs are also good.

Intense Nervousness.—"Can you tell me the best way to overcome intense nervousness and excitement in children? Is there any home treatment that would benefit beyond ordinary care?"

Ans.—All causes of excitement should be avoided, such as evening parties, flesh foods, condiments, tea, coffee, and cocoa. The children should have as much sleep as possible, and have a cold sponge once daily. Excessive study should also be avoided; home lessons are better omitted. Firmness without severity is necessary in dealing with excitable children.

Dextrinised Foods.—"Would you recommend a dyspeptic to live solely on dextrinised foods, especially one who suffers inconvenience from starchy foods not so prepared? Please give a list of dextrinised foods obtainable."

Ans.—Appetite should be considered in these cases. Dyspeptics tire of a monotonous diet and require changes. Mostly the dextrinised foods suit the dyspeptic better than non-dextrinised, starchy foods. No general rule that will suit all dyspeptics can be given in regard to foods. Fats and proteids are also necessary in addition to the carbohydrates of dextrinised foods. Toasted corn flakes, granose biscuits, wheatmeal biscuits, and gluten are among the best of the dextrinised foods. Puffed wheat makes a nice change and is nutritious as well as digestible.

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171. St. Vitus's Dance (Chorea)

"Jacques" writes: "I am now 25 years of age. When I was about six years of age, I suffered from St. Vitus's Dance. I had the advice of a doctor, and after two years the trouble disappeared to a great extent. When I was about 17 years I suffered with a great deal of blinking of the eyes, especially when I felt tired or became excited. I have been taking tonics off and on for a number of years, and they temporarily relieve me. I am in good health otherwise and never suffer with headaches. My trouble never gives me pain. Do you think a kick I received from a horse in my younger years would have any connection with my blinking trouble?"

Ans.—Blinking is a symptom of quite a number of conditions such as epilepsy, chorea, exophthalmic goitre, hysteria, neurasthenia, tumours pressing on facial nerve, and reflex irritation, as in worms, decayed teeth, etc. Probably in this case it is the remains of the original trouble, chorea. The general health must be attended to, all stimulants, including tea and coffee, should be avoided. A non-flesh diet would be decidedly beneficial. Fresh milk, raw cream, general massage, outdoor exercise, and gymnastic exercises (Swedish movements) are recommended. The only cure is to improve the general health.

The Figure-of-8 Bandage

THE figure-of-8 is a more elaborate bandage to apply than the reverse, but it is a much firmer one, and allows much less opportunity for the slipping of underlying dressings. It consists, as its name implies, of two sets of turns made in different directions, each turn overlapping the one below it by about two-thirds the width of the bandage. In applying a figure-of-8

to the hand and forearm, a couple of circular turns should first be made around the wrist to fasten the bandage, then the roller is carried diagonally across the back of the hand, from within outward, and a circular turn made at the base of the fingers, leaving the thumb free. The roller should then be carried back to the wrist, in the opposite direction from that in which it was brought down, then across the inner side of the wrist, and back to the fingers in such a way as to exactly cross the upward turn. It then crosses the inner side of the fingers, passes inside of the thumb, and follows the former turn back to the wrist, overlapping it about two-thirds. This is repeated as many times as may be needed to cover the hand, after which a few circular and spiral turns are made about the wrist.

For an injury to the elbow, the proper bandage is the hinge-joint form of the figure-of-8. The elbow should be bent, and a couple of circular turns made directly over the point of the elbow. The third time around, on reaching the outer side of the arm the roller should be carried upward, making a turn whose lower edge, even with the point of the elbow, is in the centre of the previous circular turn. The next turn is downward, exactly meeting with its upper edge the lower edge of the turn just made. The following turn is directed upward, overlapping the upper two-thirds of the first upward turn; the next is downward in a similar manner. This is continued until four or five complete turns have been made, as may be required, when the bandage is cut, and the end turned neatly under and fastened with a safety pin.

The bandages of the lower extremity are almost exactly similar to those of the upper. Leg bandages may be applied in the same ways as those of the arm, and the hinge-joint figure-of-8 bandage of the knee is the counterpart of that of the elbow. The figure-of-8 bandage of the foot is called complete or incomplete, according as it does or does not cover the heel. For the complete bandage the roller is first fixed at the ankle, then carried diagonally across the foot in an outward direction to the base of the toes, where a circular turn is made. The roller is then carried backward across the foot to the heel crossing the latter in such a way that the lower edge of the bandage reaches exactly to the sole of the foot. The next turn brings the roller across the upper surface of the foot, crossing the turn just made; the bandage passes under the foot and proceeds to the heel as before, the procedure being repeated, each turn overlapping two-thirds of the preceding one, until the whole foot is covered, with the exception of the toes. When it is not necessary to cover the heel, the backward turns, instead of beginning at the level of the sole of the foot, are made around the ankle.

QUIET TALKS WITH MOTHERS

If the Baby Could Speak

DELLA T. LUTES

IF the baby could speak and voice his own desires what do you suppose he would say? For one thing he would implore in tones of entreaty that you would not take him into crowded shops. How can you help that, do you ask? Why, either leave him at home with someone whom you can trust, or else plan to have someone go shopping with you with whom you can leave the baby while you visit the shops. Oftentimes two mothers can manage to go together; then one can take care of the children of both while the other does her errands.

Women shop aimlessly. Two women will go together, each with a little child. They will wander vaguely into this shop and that, saunter about the aisles, pulling things over, looking at this and that with no intention of buying. They drag the children along by the arm and scold them if they fret. But if the child wants to stop and look at something that attracts him, he gets jerked along very shortly and told to "hurry; mamma can't wait."

I have seen babies not more than four or five weeks old carried in their mother's arms amongst a crowd where they were jostled and crowded and jammed. You seldom go into a large shop but what you hear some child's fretful wail, and looking around you wonder where he is. Threading your way through the ill-smelling, jostling crowd you come across him, poor little mite way down amongst the big people, his face red and perspiring, his arms nearly jerked out of joint, his eyes pitiful, his voice raised in protest. He can't see out, he can't breathe. Poor little tot! His mother doesn't realise that she's being cruel to him. She'd run in front of a car or an automobile in a minute to save him, even at the expense of her own life. But she doesn't realise that she's making him nervous, fretful, ill, and cross by the treatment she is inflicting upon him. Imagine yourself smothered down amongst the ill-smelling, fusty, hot garments of a crowd of moving, jamming, crowding beings three times as big as yourself, and have more mercy upon the little things you take along on your shopping tours. If you *have* to take them, try to keep away from bargain counters and crowded shops. Bargain counters are no place for children—if they are for any one. Go into places where you can get exactly what you want without much looking around. Put the child on a stool or into a chair if you can. If you can't, let him sit on the floor and don't fret about his clothes. His legs are of more importance. Take him to a toilet frequently and give him a drink often. Have a good lunch for him if he is at the eating age, and if not, see that he has good milk to drink a little oftener than he would under ordinary circumstances at home. Under the extra exertion he will be hungrier. If it is to be an all day's

visit in town, as many country women have to make of their shopping, take him somewhere where he can have a nap and a good long rest. If there is no rest room for country women in your town you can always go to a coffee palace.

A little humanity shown to children when it is absolutely necessary to take them into unusual places will save them much nervousness, irritability, and excitement. But the best place for very little children is at home, and under all circumstances leave them there when possible. I have even seen little babies at the circus! Of all the impossible places to take a baby. I can understand it of course. The grown people want to go and as there's no one to leave the baby with they must take it along or stay at home. It's hard to stay at home when everybody else is going, and particularly when there are so few things to "go to." But remember that the babies will occupy but a few years and you can afford to give up some of the things you'd like to do for their sake. A quiet day spent at home with a hobby or a book or some piece of work you've wanted to do is vastly to be preferred to a day amongst the noise and dirt and confusion and crowd with a tired, wailing, cross baby or little child.

SHE WILL SOON BE ABLE TO TELL IT IN WORDS

Another thing that the baby would lift his voice in protest against if he could, would be the way you dress him, or, more particularly the way you let him wear his clothes. He'd beg you to take flannel off from him during the hottest weather and put on something that didn't prickle and burn. He'd implore you to let him wear clothes that he could play in without being scolded if he got them dirty. He'd say, "*do* make them comfortable, whether they look pretty or not." The two *can* be combined if one tries hard enough, but comfort is to be preferred to beauty if one has to choose. Don't let any straps hang down over the shoulders. I don't know anything more maddening than to have a shoulder strap hanging down over one's shoulder on a hot day. Keep the stockings fastened up firmly with elastics that do not draw on the legs. On almost any day in summer you can see little children at their play stopping every minute or two to give a hitch to a tied up garter or to a stocking that persists in coming down over the hot little leg. I don't know how children keep as sweet and loving and patient as they do. I saw a woman travelling on a train with two little children. One could walk about and help herself, and the other was in her arms but able to sit up and try to make herself understood. It was a hot day and the car was stuffy and dusty. The larger child took off her hat and flung it onto the seat the minute she entered. Her mother ordered her to pick it up and put it on her head, but she didn't do it. The other child cried and fretted and pulled at its bonnet—a hot silk and lace affair. The mother slapped its hands and told it

to "keep paddies down." The larger child said, "She wants her bonnet off, mamma, it's hot." But the mother told her she "couldn't bother." And slapped the child's hands again. Utterly exhausted the little thing fell asleep after a while.

And then mothers ask how they can make their children "mind"! Don't try to "make them mind" when the thing you want them to do is against all reason, or when the thing they want to do is harmless. The way to make children mind is never to give commands unless they are absolutely meant to be obeyed, and given because such a command *must* be obeyed. I am sick of hearing mothers say, "Now you *must* do so and so or else I'll send you to bed"; or, "I'll send you home"; or, "I won't take you"; or some other thing that the child knows perfectly well will never be carried out. Such ceaseless, meaningless commands, and such ceaseless disobedience, such useless threats, idle shouting, make one wish that mothers would use a little *backbone* in their government, and less noise. It makes the children disliked when they are in no way to blame, and the parents themselves gain only disparaging comment.

AN EARLY OUTLOOK ON LIFE

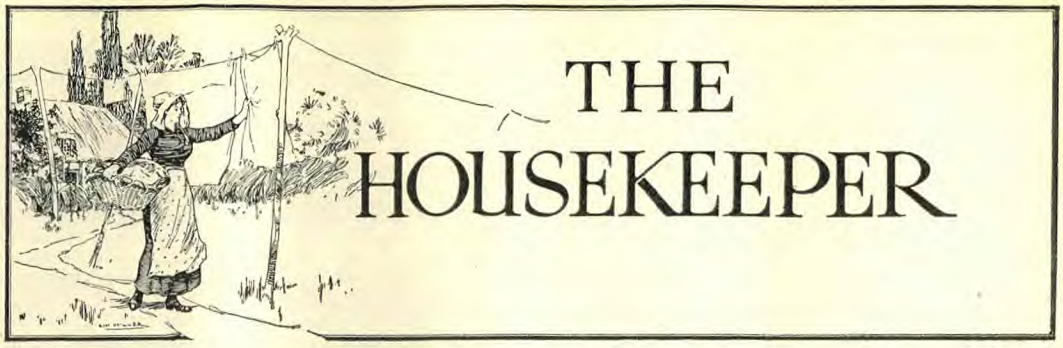
Perhaps the baby might have something to say, if he could talk, about the way you talk to him. He might be just as well pleased to have you say, Mother's dear little son, as to become accustomed to "Muzzy's itty, pitty, singy wing," or something else similar. What is the sense in making a child learn two languages when one of them will never be of any earthly use to

him. If you want to talk jargon to him let it be Chinese and then perhaps it may be valuable at some later date.

Another thing that he might have a voice on would be the go-cart. He'd ask you if you'd ever read or heard anything about the microbes and germs that infest the earth; if you noticed that man who just passed coughing and spitting and how close some of the death dealing stuff came to his little head. He'd remind you that on a windy day or in a crowd the dust was stirred up and his lungs were filled with germ laden dirt. He'd also tell you that his legs became very tired and ask you to be careful to adjust the step exactly to his feet. And he'd suggest that you take him to walk where the streets were kept sprinkled, or in the park or some place where he wouldn't have to take all the filth of the road.

He would ask for water very often—cold water, given slowly. He would advise you against giving him candy—if he could use his judgment. He'd say, Don't jerk me by the arm when you step up a curb. I think he'd use very forceful language in giving that request. You have seen that done, haven't you? A man or woman leading a little child along and they have to step up into a street car, or up a step or up a curb. Up goes the child swung by his little arm. Very likely he cried out. Who wouldn't if the arm is nearly jerked out of its socket? And also, very likely he gets scolded, or jerked again, or perhaps even slapped. Oh, I tell you "Childhood" isn't all it's thought to be—by the poets—who have forgotten their own childhood. It depends on *whose* child it is and what kind of parents he's got. Many a child's first conscious reasoning is, "Just you wait till I'm grown up and I'll show *you*."

We don't intend to be cruel or unkind to the children, but we are so ignorant, so thoughtless, so forgetful of their *littleness*. Suppose we try to remember sometimes, even when we're tired and cross ourselves, what the baby might say if he could express his own desires and feelings.



THE HOUSEKEEPER

Potatoes—Tasty and Otherwise

THE diet of the Irishman is fast becoming the diet of the world. Now that flour and cereals are so scarce and almost unobtainable in many countries, the potato has fast come into prominence as a useful food. And it is cheap. Given fair conditions and a little trouble, potatoes are easily grown, and they will repay the home gardener. In these days of the high cost of living, even in Australia, a few facts about the potato and its use will more than make up to you the cost of this magazine.

The following is the chemical composition of the vegetable under consideration :—

Water	72 parts
Starch	17 ,,
Fibrous matter	9 ,,
Other substances	2 ,,
Total	100 Parts

Can You Cook a Potato?

Of course you can! To boil a potato is surely simple enough. But the majority of people do not *cook* potatoes; they *waste* the valuable properties and cook the rubbish. In the first place, choose your potatoes. It will save time and material and possibly disappointment at the table if all green or black, frozen, and softish potatoes are rejected for eating purposes. A good healthy potato is firm and white. To obtain a good finish you must make a good start, and this is best accomplished by cooking together those of even size, medium preferably. Small potatoes can be used for salads, etc. If you have no choice of size, remember that the small ones are "cooked to death" before the large ones are even soft; therefore make the cooking a handicap race. Give the large tubers a few minutes' start, and put the small ones in later.

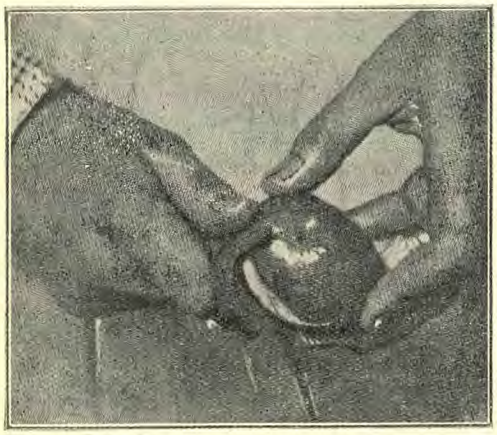
Hot or Cold Water—Which?

Many housewives are often in a quandary to know whether hot or cold water produces the best results. Science will answer the question for us. The potato contains gluten, which is very similar to the albumin in the white of an egg. Everyone knows the effect of boiling water on the albumin — it hardens it. Likewise with the gluten. To save the gluten in the potato, it must be hardened by putting into boiling water; otherwise it will soften and melt in the cold water before the water gets hot enough to harden it. Use plenty of water to allow the starch grains to swell, use salt to taste, and boil gently and steadily for about half an hour in a saucepan with the lid tightly closed. Try them with a skewer or knitting-needle, but not with a fork, if you wish to serve up whole potatoes.

Making "Balls of Flour"

There is a secret in the process, but a simple one. Drain the potatoes dry; but not down the sink! The water from potatoes that have been pared makes good foundation for cream soups or broths. Now give the saucepan a sharp shake to break the outside coating of gluten.

This exposes the white starchy inside, producing what looks like a pan of snowballs. Put the saucepan back in a warm place with a clean soft cloth on top of the potatoes to absorb the steam. Do not put the lid on, as it keeps the steam



DON'T PEEL TOO DEEPLY

in. Potatoes may be kept warm in this way for about ten minutes without spoiling.

Peel Carefully!

But all this will be useless unless you have preserved the gluten in peeling the potatoes. This gluten, which is the most nutritious portion of the vegetable, lies in an uneven layer just underneath the skin, so that if the skin is peeled off in chunks, the most useful part of the potato is being lost. Scrub all potatoes well before peeling them, and, if possible, do not peel them any longer before cooking than necessary. After peeling drop them into hot water until needed, to harden the gluten and to prevent their going black. A slice of lemon added to the vegetable while cooking prevents the tubers from turning black.

Below are some very useful recipes for cooking potatoes, and in the next issue will be given other scientific and economic methods of cooking this favourite dish, as well as further recipes. H.G.F.

Some Potato Dishes

Potato Sandwich—Potatoes, cold haricot beans, tomatoes, salt.

Cook the potatoes as if intended for mashed potato. Place a good layer at the bottom of a tin. Mash the cold beans and tomatoes together, seasoning well with salt, put a good layer over the potato, and cover with potato. Brown nicely in the oven or under the grill.

Peas or lentils may be used instead of beans.

Breadcrumbs or savoury rice with onion and sage makes a nice sandwich filling.

Potato Pie—2 lb. potatoes, 2 or 3 onions, 2 tablespoonfuls tapioca, pinch of herbs, 1 teaspoon chopped parsley, about ½ pint of stock or water, 1 oz. butter, seasoning.

Soak the tapioca overnight in a little water. Peel and slice the potatoes and onions. Put half the vegetables in a pie dish, season well, add the tapioca, and put the rest of the vegetables on top. Pour in the stock or water, and put a few pats of butter on top. Cover with greased paper. Bake in a moderate oven for 1½ hours.

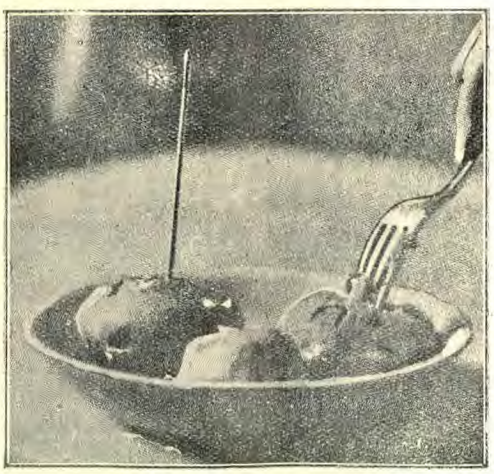
Potato Pastry—8 ozs. mashed potatoes, 4 ozs. flour, 2 ozs. butter, pinch of salt, milk.

Rub the butter into the flour. Add salt, then mix in the potatoes, adding enough milk to make a stiff paste. Roll out to ¼-inch in thickness. Use for covering pies, or savoury rolls.

Potato and Treacle Pudding—8 ozs. mashed potatoes, 4 ozs. flour, 3 ozs. butter, 2 ozs. breadcrumbs, 3 tablespoonfuls treacle, a little milk.

Mix the flour, breadcrumbs and butter. Mix in the potatoes and treacle, add a little milk. Put into a greased basin, cover with greased paper, and steam for 3 hours. This pudding can be baked in a greased Yorkshire tin in a moderate oven for 1½ hours. When baking make a softer mixture by adding 1 cupful milk.

Potato and Apple Pudding—1 lb. apples, 2 ozs. sugar, little water, ½ lb. cooked potatoes, 1 egg, grated rind of lemon, ½ oz. butter.



DON'T USE THE FORK

Peel and slice the apples and stew with the sugar and a little water till tender. Then beat up with a spoon, or rub through a sieve. Mash the potatoes and mix with the apple. Add the butter melted, the egg beaten, and the flavouring. Put the mixture into a greased pie dish and bake in moderate oven for 30 or 40 minutes. To make the pudding a little more elaborate, add the yolk only to the mixture. Bake

in the oven till firm. Beat the white stiffly, mix with two tablespoonfuls sugar, pile up roughly on the top, sprinkle with sugar, and dry off in a cool oven.

Potato and Lemon Custard—2 potatoes, ½ pint milk, 1 egg, 1 oz. butter, 1 dessertspoonful sugar, grated rind and juice of 1 lemon.

Peel the potatoes and cut into slices. Put into a pan with 1 gill of milk and cook till soft. Beat up with a fork. Add the remainder of the milk, the butter melted or in soft pieces, the sugar, lemon rind, and juice, and the yolk of the egg. Beat up the white stiffly, and fold lightly into the mixture. Pour into a greased pie dish and bake in a moderate oven for ¾ to 1 hour till the pudding is set and a light brown colour.

Some Home Hints

EVERY day the hard-working housekeeper finds something which acts as a piece of grit in machinery; something which takes away the smoothness of a well-regulated household. To know how to do this, or how to remedy that, is all that is needed; but the information is wanting. In this department this issue will be found a few simple recipes invaluable to the enthusiastic housekeeper who delights in order and cleanliness.

Removing Spots on Walls

Take a piece of fine number 0 sandpaper and rub the spots lightly. The marks will soon disappear, leaving the wall white.

Stains from matches may be removed with whiting, pumice-stone, and water; or rub the stains lightly with common chalk. When this is brushed off, the marks will be gone.

Blue or black pencil marks on wall-paper or white plaster may also be removed with chalk. With a piece of white crayon mark heavily over the streaks and then rub the places with a piece of cotton flannel cloth. Usually this treatment will remove the marks.

Smoke on the wall-paper or plaster may be removed in the same way.

Adjusting Doors and Windows

The following excellent suggestions for adjusting doors and windows that are out of order are given in *Good Housekeeping:*

"The sewing-machine is provided with a screw-driver and oil-can. Wonders can be performed with these tools. In an average house five years old, six doors out of the number will not work perfectly. Ten minutes on each door will fix them in most cases.

"1. The door has sagged a little, so the bolts cannot run into their accustomed sockets in the catch. Open the door, loosen the screws in the bottom hinge, and drive wooden wedges in between the hinge plate and the door.

"2. The door is warped so that the part carrying the lock does not shut in far enough to reach the catch. Prise off the 'stops,' or strips, that are nailed to the door-casing. Shut the door till the bolts catch; then nail the stop back in a new position, close up to the door.

"3. The door is shrunk until the bolt will not reach far enough to catch. Take the screws out of the catch plate and put pasteboard behind it.

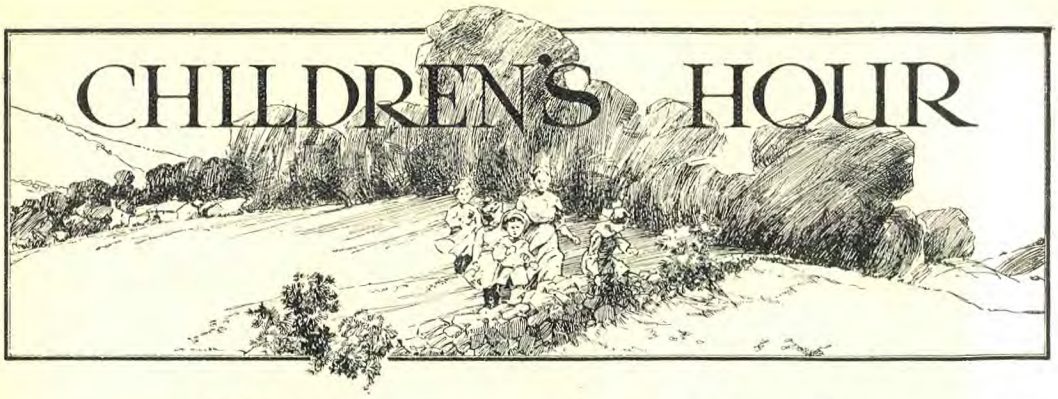
"4. The door does not shut tight without turning the knob. Try a drop of sewing-machine oil on the sloping side of the bolt, so that it will slip easily when it strikes the catch.

"5. The door squeaks. Put a drop of sewing-machine oil on each joint of each hinge. Work the door back and forth till the oil works in, and the squeak stops. Then wipe off the superfluous oil.

"6. When a door or window sticks, and is hard to open, a little lard or vaseline applied to the part which rubs will often make it open easily."

To Clean the Sewing-Machine

When the sewing-machine runs hard from being gummed with oil and dirt, remove the thread and saturate all the bearings, above and below, with kerosene oil. Then run the machine rapidly for two or three minutes. Repeat the operation, if necessary, to cut the gum and dirt thoroughly. Then wipe the bearings with a cloth, and oil with the best sperm oil. Dried, gummy oil is the most common cause of hard-running machines. You will be surprised to see what a difference this treatment will make.



Wagger

Clayton H. Ernst

WAGGER was so small when Harry Somes became his master that he would fit very comfortably into a two-pound grape basket. In fact, just such a basket, with a soft cushion in the bottom, was Wagger's first bed in the Somes's kitchen, where it had a warm place behind the stove.

Wagger was a white, smooth-haired terrier, with sharp, bright eyes and a funny way of making sounds in his throat that, to Harry at least, seemed to be nothing more or less than talking. He did not have much of a tail, but he made up for that, whenever Harry came in sight, by wagging the whole rear end of his body —and so he earned the name of Wagger.

He grew very fast, and learned a new trick almost every day. When the postman came with the mail, Wagger would run to the door and take the letters in his mouth; and although it was very seldom that any of the mail was for Harry, Wagger always took the letters to his young master. He could catch a ball in his mouth even when Harry threw it high into the air; he could play hide and seek; and he never was guilty of barking when he and his master went scouting through the bush.

But it was not until something happened at The House in the Tree that the members of the Somes family really believed that Wagger was an unusual dog. Of course Harry had known it all along, but his father and his mother and his elder brother did not know it until—well, this is how it happened : —

When the first smell of spring was in the air and the last little patches of snow by the stone walls were melting in the bright sunlight, Harry put on his oldest coat and, with Wagger at his heels, went down across the brown meadow behind the house, climbed the knoll beyond, and on the farther side selected a tree. It was a pine, with branches that spread out rather widely; and what Harry did there was a secret that he shared only with his dog.

Up in the green branches far above the ground he built a little house. He began by carrying the boards from the woodshed and pulling them up into the tree with a rope. By laying them from branch to branch and nailing them into place he made a firm platform.

All the while Wagger, on the ground below, gazed up at his master and whined eagerly, as if he, too, had wanted to climb the tree. He even stood up on his hind legs and barked; and Harry, looking down, had an idea. Presently he was running back to the house, and ten minutes later he was hauling Wagger up to the platform in a big market basket. He had tied one end of the rope to the handle, had climbed the tree with the other end, which he placed over a limb above his head, and, by pulling down hand over hand, had hauled Wagger up.

The terrier came bobbing through the branches, balancing carefully and making those little whining sounds in his throat that Harry liked to hear so well. When he reached the platform, he stepped carefully out of the basket and took his place beside his master, as much as to say,

"Now we can do this job properly."

For five days Harry and Wagger worked on The House in the Tree, building the walls, putting on the tar-paper roof and making the door and the windows. When it was finished you could hardly see it from the ground; yet from the house itself you could look out through the branches and see the fields and woods stretching away to the very sky line. You could sit in the door, with your arm round the neck of your dog, and imagine that you were an Indian chief, until you almost forgot that on the other side of the knoll across the meadow was a white house where you and your mother and father and brother really lived.

On the day when Harry finished the house it was cold for spring; in fact, Harry wore his red mittens to keep his hands warm. When he had driven the last nail into place, he put down the hammer and said:—

"Well, Wagger, it's done—unless we want to put a piazza on the front. Let's see."

While the terrier gazed at him solemnly, as if he had fully understood the matter in hand, Harry opened the door and stepped out on a branch of the pine.

"We could put the boards across this big limb to that smaller one," said Harry. "I'll step over there."

As he put his weight on the smaller branch, an unexpected thing happened: there was a sharp crack, and Harry suddenly found himself falling. He clutched for a hold, but his fingers caught thin little boughs that broke in his hands. Down he dropped, brushing against the limbs and trying vainly to stop his fall. And then the ground seemed to fly up and hit him.

Looking down through the branches, Wagger saw his master lying on the pine needles, silent and motionless. One limp red-mittened hand lay across his chest; the other rested on the damp ground. Wagger whined in a way that had always brought an answer, but there was no cheery word from his master now.

The terrier barked—and still Harry lay quiet on the ground.

It was then that Wagger proved that he was an unusual dog. He stretched as far out from the doorway as he could, and with a talky little whine, leaped for the fork of a branch five feet below. A cat might have kept its balance, but Wagger had no sharp claws with which to catch that slippery pine limb. He struck it squarely, bounced off, and spinning

LEARNED A NEW TRICK NEARLY EVERY DAY

round, fell through the boughs below. Once he almost got a footing on a big limb, and he scrambled with might and main; but it was of no use, for an instant later he fell, and landed squarely on all his four feet on a spot that was soft with pine needles.

Wagger gave a little yelp of surprise and ran over to Harry. His warm tongue on his master's white face brought no answer; neither did it do any good to tug at the red-mittened hand that lay so limp on the pine needles.

As the terrier pulled, the red mitten came off, and at that Wagger proved once more that he was not a common dog. With the mitten in his mouth, he ran swiftly up the knoll and out across the meadow to the house by the road.

Harry's brother was in the garden, burning a pile of rubbish. Wagger dropped the red mitten at his feet, whined, and ran back a few steps toward the meadow.

"What's this?" said Harry's brother.

Again Wagger whined in his talky way and started toward the meadow; and that time Harry's brother picked up the red mitten and ran after him.

Half an hour later Harry was sitting in the Somes's kitchen with his head against a pillow, sipping something hot that his mother was giving him by spoonfuls from a cup.

"There," said his brother, "I guess you're all right. You've got a bump on your head as big as a Brazil nut, but it won't stay long."

Wagger was there, too, and he was happy, for his master's hand rested softly on his head and played with his ears.

THE harp was the Highlander's instrument before the bagpipe. That point was insisted upon by a Scotsman of fifty years ago, the Lord Advocate of the time, who was anxious to disclaim his country's responsibility for the bagpipes, and to show that they were "English, essentially English." He appealed to Shakespeare, who often mentions the pipes, but not once in "Macbeth," his only Scottish drama; it is in Lincolnshire and Yorkshire that he localises the instrument. James IV's accounts contain an item for "Inglis pyparis," while our Edward I had his court pipers, and from his time on to Elizabeth's mention of such officials constantly recurs. Most Englishmen are thankful to have given the pipes safe conduct across the border.

The Duckbill

H. B. Dummer

"WHAT a strange-looking animal!" you will say. "It has a bill just like a duck." Yes, and it is that which gives the creature its name of duckbill. It also has webbed feet, and can swim and dive like a fish; but the strangest thing about the animal is that it lays eggs.

The duckbill is a good digger, and makes long tunnels in the ground. It makes them just big enough for it to crawl through; and so, if it gets halfway out and decides to go back to its nest, it has to run backward, for it cannot turn round. But it can run backward almost as fast as it can run forward.

The fur of the duckbill is like that of a mole; that is, it is set in such a way that when the creature runs backward the fur neither hinders it nor gets full of dirt.

The tunnels, or "subways," that the duckbill makes are often more than forty feet long; so you see that it is a great digger. The home of the duckbill is Australia.

When you go shopping you sometimes carry a bag in which to take home what you buy. What do you suppose Mr. Duckbill does when he wishes to carry home some food? Well, he just puts it into his mouth and tucks it away in his cheek pouches, where he can store a large amount. Then he rises to the top of the water and eats the food very slowly, as all wise and well-taught persons do.

YOUNG Arthur set off jubilantly to his first party, after having promised his mother that he would decline if offered anything to eat the second time. When refreshments were served, his hostess, noticing how eagerly he disposed of his ice cream, said:—

"Won't you have some more, Arthur?"

The little fellow looked up wistfully.

"I promised mamma I wouldn't accept the second time," he said, "but if you ask me the third time, I guess it will be all right."

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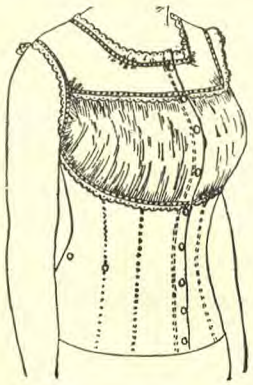

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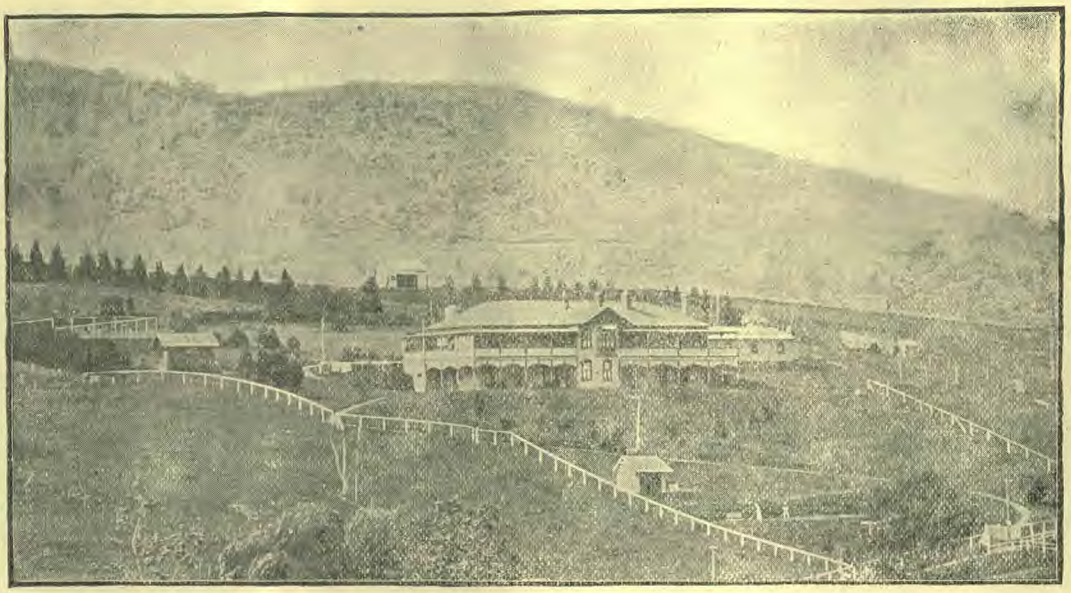

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