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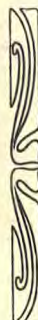
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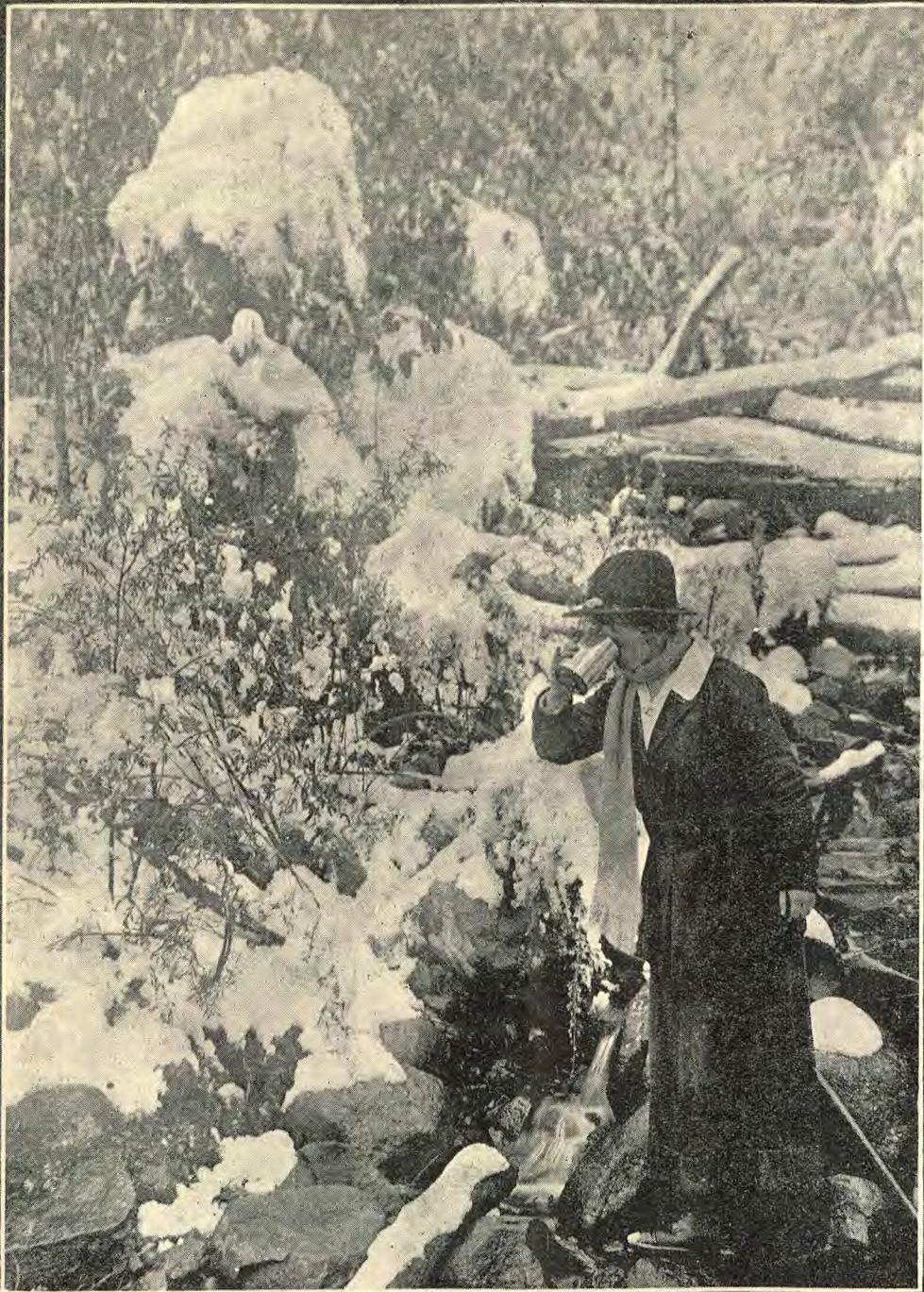
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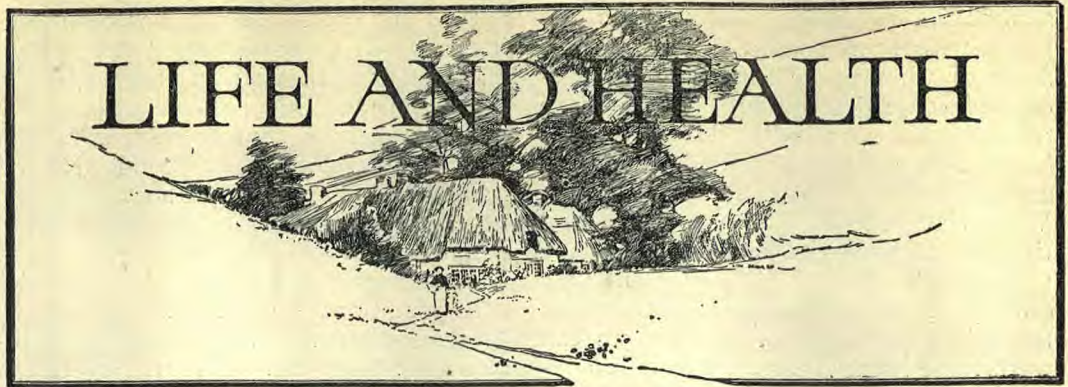
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WHERE NATURE SITS ON A THRONE OF ROCKS, IN A ROBE OF CLOUDS,
WITH A DIADEM OF SNOW



Vol. 10

July-August, 1920

No. 4

Editor: CHARLES M. SNOW

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

LIFE is one long warfare against dirt—dirt without and dirt within. Every hour of the day and night the scavenger system of our bodies is busy cleaning us up inside. The burned up tissue, the unwholesome particles in the system, the poisons secreted in the processes of digestion, assimilation, and oxygenation, are being industriously shovelled to the outside by lungs, skin, kidneys, and alimentary canal. The unwholesome things within the system kindly nature, when the body is in health, takes care of; but the unwholesome things without kindly nature expects us to deal with, and has provided us with the facilities for doing it—a brain and reasoning powers, eyes, hands, and feet. If we refuse to attend to the dirt without, the work of tired nature is greatly increased and her efforts tremendously handicapped. We have heard of one person who declared himself a great believer in cleanliness and regularity of habits, and stated that he made it an un failing practice to take a bath regularly every fourth of July. This might be considered regularly, looking at it through a distance of decades, but the cleanliness part of his contention is certainly open to the gravest of questioning.

An idle mind has frequently been called the devil's workshop; but a dirty skin is the breeding place of all manner of dis-

eases. A slight scratch on an unclean skin may send one to the hospital with blood poison. An unclean finger nail may open a road through some itching portion of the epidermis for a million microbes of disease to enter and set up the business of decay and ruin.

The Japanese were the first to give particular attention to this idea in its application to armies. Before going into action against the Russians in the Russo-Japanese war, Japan's soldiers were required to bathe and put on clean clothes. The result was a revelation to all the other nations. A very small percentage of her wounded men died. The great bulk of them were restored to health. What is good for a soldier in this particular is good for a civilian. Every hour of the day the pores of our bodies are pouring out upon the surface poisons which, if they remained in the system, would kill us in a few hours. The system does its part to rid our bodies of these poisons; let us go and do ours.

But we have not done it all when we have established the custom of bathing regularly. There are these hands of ours. They are always handling articles of whose cleanliness we cannot be certain. We grasp the handle of a door. It may have been handled by fifty persons that

same day, every one of whom has shaken hands with from one to twenty persons, some of whom were suffering from disease of some description. Or we have travelled in a tram and held on to a strap handled by perhaps a hundred persons in a day—and never or seldom cleaned. What are we to do? Never touch anything that anyone else has handled? We would certainly die of starvation very quickly if we adopted that plan. But there is something we can do; we can wash those hands before we handle anything that goes into our mouths. The rule of the ancient Israelites was a good one—never to eat with unwashed hands. They made it a religious ceremonial, or a fetish, and lost sight of its real purpose—a health measure. But they got the benefit of it just the same, and thus kept disease down to a remarkable degree.

AND there is that mouth, a splendid breeding place for the germs of many diseases. Germs love a warm place and a moist place, and were it not for the somewhat germicidal properties of the saliva itself, none of us would spend a very long time on this earth. But it is possible to overwork every outpost of defence our systems have established. Our mouths are good servants, but often grossly overworked; and their very powers of defence against germ invasion are often weakened by us through the concoctions we admit. Dirty teeth are a deadly menace to good health. There is little or no excuse nowadays for anyone having such teeth. Tooth brushes, tooth powder, tooth paste, teeth cleansers in liquid form, and anti-septic mouthwashes are to be had in the smallest villages and country places. Let us use them, and help the system to keep itself cleaned up.

ONE of the most important scavengers of the body is the lungs. Without interruption this pair of automatic bellows keeps going from the first moment of our birth until the moment when the flame of life is flicked out and the breath goes out never to return. All these years that

patient and tireless servant has been forcing poison-laden gases out of the system and bringing in fresh air to oxygenate the blood and make life possible. But often men and women shut themselves within four walls, close their windows, and breathe back again into the system the very poisons which the system was expelling with every breath. We could not blame nature if she gave up the job under such conditions—and often she does long before she intended to, through sheer inability to keep on. Give the system a chance. Ventilate your sleeping rooms and your living rooms as well. Moving air will carry off these impurities, and your system will be clean and fresh. Many a morning headache is due to sleeping in an unventilated bedroom. Then a drug is admitted to the system to throw off the headache, and the system has to do double work to throw off the drug. Pure air would have prevented that headache and the drug as well, and you would be brighter and better into the bargain.

But don't make the other blunder of thinking your room is not ventilated unless your windows and doors are wide open. You can't possibly breathe all the air that can come through one window half open. It is possible to abuse a good thing. Air is good; but to sit or sleep in a heavy draught is dangerous. The bed should be out of the direct current of air. It is not enough to open a window. We must make sure that air enters the room. The breeze may be striking your house on the east while your window is on the west. An open window in this case is not sufficient. An open fanlight or a door partly ajar may let the air enter from the other side.

These are simple things; but attention to them will make life worth living, and may postpone the time of our departure for many years. Let us keep clean.

BACON has said in "Advancement of Learning": "For cleanness of body was ever esteemed to proceed from a due reverence to God, to society, and to ourselves."

A Chat on Some Diseases of the Skin

THE causes of skin disease are mostly very obscure. They no doubt are largely connected with the development of germs, for generally antiseptic remedies are essential in their treatment. The skin, it should be remembered, is an excretory organ ridding the body of many waste products. When the liver is overtaxed by animal food, sweets, and fats, the skin is called upon to do extra work; frequently this work is too much for it, and an unhealthy sluggish condition supervenes which gives the various germs on the surface of the body opportunity for developing and producing their several characteristic features. Various rashes, such as acne, frequently appear on the body through unsuitable clothing, clothing that will not allow the perspiration to evaporate and which irritates the skin, thus causing further sluggishness. Underclothing should always be of an unirritating and porous nature; coarse woollen garments are a frequent cause of skin eruptions. The skin, to do its work efficiently, needs a sponging daily, with a hot bath at least once a week. Thus in all skin diseases a proper diet should be selected in order to reduce the work of the skin in expelling waste products; proper clothing should be adopted so that the excretions of the skin are not retained on the surface of the body; and daily cleansing of the skin should be the rule in order that the delicate skin structures should not be hindered in their work.

Eczema

In eczema the skin is more or less red, moist, and more or less itchy. Usually very small vesicles (blisters) not larger than a pin's head can be discovered which, on breaking, discharge a fluid that stiffens linen and dries up into their yellow crusts. If no vesicles can be seen by the naked eye, they may be revealed by a lens. In eczema when the skin is pinched up by the fingers, it will feel thick. Eczema may appear on any part of the body; it

is very common on the head and face of children, about the genital organs, and on the legs associated with varicose veins.

Causation.—The active cause of eczema is undoubtedly parasitic, although no special germ has been demonstrated. Eczema is not as a rule contagious, although nurses carrying infants with eczema may contract the disease. A person suffering from eczema may inoculate himself from the discharges of the rash and thus produce eczema in some other part of the body. There is always a predisposing cause, such as poor digestion, a sluggish skin, worry, mental strain, other nervous conditions, or affections of the womb. Anything that interferes with the proper nutrition of the skin, such as anæmia with deficiency of fat under the skin, and seborrhœa, a disease of the glands of the skin, is likely to be accompanied by eczema. Any irritant, such as excessive sweat about private parts, armpits, or discharge from some ulcer, will predispose to the disease.

Treatment.—The digestion, general health, and the bowels must be attended to. The chief treatment is local. All crusts and scales that prevent local applications from having free access to the seat of the disease must be removed. Oil applied on strips of lint or weak solutions of bicarbonate of soda (one teaspoonful to half a pint of warm water) will effect this. No irritant should be used, and all parasitic remedies consequently must be of a mild nature.

As the irritation subsides the strength of the application may be increased. Where there is much discharge a weak solution of boracic acid (a couple of teaspoonfuls to a pint of boiled water) makes an excellent wash. Use a soft boiled linen cloth. The parts should not be washed with water, especially in the acute stage. When there is much redness and weeping, it is also advisable not to use soap of any kind. Sulphur is the best application where there is seborrhœa. To

begin with, ten grains of sulphur should be mixed with one ounce of zinc ointment and applied to the parts on strips of thin linen, laid evenly on the parts, and bandaged. The amount of sulphur may be gradually increased. We have found the following lotion very useful:—

℞ Calamini ʒi
Zinc oxidi ʒvi
Liq. Plumbi Subac. Fort. ʒiiss
Glycerini ʒii
Aquæ Calcis ad ʒx

Before applying a fresh application, remove the old with weak boracic lotion already mentioned. If there should be much itching one dram of pure carbolic acid should be added to the above. A tar wash (liquor carbonis detergens) will frequently lessen the intense itching or nitrate of silver 20 grains in one ounce of spiritus ætheris nitrosi. In eczema of scalp or other hairy parts, the hair should be cut very short, all crusts removed, and sulphur and zinc ointment applied. When the parts (especially about the genitals) are inflamed and painful, the calamine and lead lotion are to be recommended. On the face a mask should be constructed of cotton wool or other suitable material with openings for the eyes, mouth, and nose, to keep the applications in position. In chronic patches of eczema the following ointment in the writer's hands has proved very effectual:—

℞ Ung. Zinci
Ung. Plumbi Subacetatis
Ung. Hydrag. Co. āā ʒj

The clothing should be light, as excessive clothing diminishes the activity of the skin. Only silk, fine linen, or soft wool should be worn next the skin.

Seborrhœa (Dandruff)

Dandruff is unmistakably an evidence of seborrhœa of the scalp, but there are other forms of the disease not associated with dandruff. Seborrhœa is a condition of over activity of the fat (sebaceous) glands of the skin; there is an increase and an alteration of their secretion. There are two forms, the dry and the oily.

The Dry Form.—In this form the solid fatty secretions of the sebaceous glands are in excess, and form dense scaly masses. Dandruff is a typical example of this kind. It may occur on the body and be difficult to diagnose from another skin disease called psoriasis. In psoriasis the disease begins usually about the elbows or knees and extends upwards, and the scales are bright and silvery, while those of seborrhœa are more greasy, softer, and less glistening. In seborrhœa the disease almost always begins in the scalp and extends downwards.

The Oily Form.—In this form the fluid part of the secretion predominates, and the skin looks and feels as if it had been anointed with oil. Both forms are more common in the scalp. The large dirty patches on the heads of infants, especially about the front part of the head, are well known examples of seborrhœa. There is frequently more or less itching. Dandruff generally results in loss of hair, which loses its gloss from want of its natural lubricant and falls out. The eyebrows, the moustache, and the beard are also frequently affected, although not as much as the scalp.

On the face—especially the middle part—the oily form is more common; the corners of the mouth and ears are also frequent seats of this variety. The skin looks dirty, greasy, and is covered with scales and often reddish pimples. Seborrhœa may attack the body and especially the private parts.

Causation.—It is most probably a parasitic affection. Constipation and digestive troubles which keep the skin sluggish are certainly predisposing causes.

Treatment.—The scales should be removed by oiled pieces of old linen. Sulphur should be applied either as lotion or ointment. One-half to one ounce of sulphur may be added to half a pint of water rubbed in gently with a little brush. Apply at bedtime on account of the smell of the sulphur. When the application forms crusts on the skin by uniting with secretions, they should be removed by some oily application. The following makes a good ointment for this trouble:—

R Sulphur Præcipita ʒss (half a dram)
 Resorcin gr. x
 Adeps ad ʒj (lard up to 1 oz.)

Rub into scalp and, if necessary, the face at night. During the day the following application is recommended:—

R Ichthyol ʒiss
 Pulv. Calaminæ ʒj
 Pulv. Zinc Oxidi ʒj
 Glycerini ʒij
 Aquam ad ʒviii

Shake well before applying to the face.

Comedones (Black Heads)

Comedones are small masses of fatty matter plugging the ducts of the sebaceous glands. They are found in young adults mostly, but sometimes in children. The black head is the result of hardening of the superficial cells of the skin and dirt. They are found in the neck, side of the nose, forehead, the cheeks, and on the back and chest. When squeezed out they look something like dead maggots. Sometimes a parasite is found embedded in the thickened secretion. Comedones cause no other harm than disfigurement. When they inflame they give rise to acne. Those suffering from the oily variety of seborrhœa are particularly liable to comedones.

Treatment.—They should be gently squeezed out with the finger nails, for if roughly handled they may inflame. After removal the parts should be thoroughly washed with soft soap and hot water, using vigorous friction, and a weak sulphur ointment applied. The bowels should be kept regular and rich foods avoided, especially fats and sweets.

Acne

When the sebaceous glands become inflamed and matter forms, the disease is called acne. After healing they often leave a small scar, but this only takes place when the suppuration (the formation of matter) has been extensive and deep. Sometimes the inflammatory process extends to the tissues around the sebaceous gland and a small purplish lump forms which slowly disappears.

Acne is found mostly on the cheeks, nose, forehead, the back of the neck, between the shoulders, and on the front of the chest. It may exist, however, wherever there are sebaceous glands, as on the back of the thigh and arms. The parts are tender, but do not itch, and the skin around the papules is usually greasy.

Causation.—There is special activity of the glands of the skin in puberty, resulting in the growth of hair in certain places of



London Times

A GOOD MOTTO FOR ALL TIMES

the body. Acne is really due to an over-activity of the sebaceous glands, and consequently the conditions producing seborrhœa are also the conditions favouring the production of acne.

Overeating, animal food, rich articles of diet, and sedentary occupation certainly favour the development of acne. Probably some micro-organism is at the root of the trouble, for frequently a special vaccine prepared from the acne secretion will entirely cure the disease.

Treatment.—Frequent washings with hot water and soap are essential in order to clear away the coarse skin cells, to keep

the mouth of the ducts open, and to stimulate the circulation of the parts. An ointment of sulphur (ten grains to one ounce of lard, vaseline, or lanoline) should be rubbed into the parts. Alcohol, tea, coffee, stimulating foods, and smoking must be avoided. All comedones should be squeezed out before the application of the ointment. Resorcin may be used instead of sulphur—fifteen grains to half an ounce of vaseline and the same quantity of lanoline. The pustules should be punctured with the point of a sharp knife and each pustule treated separately with tincture of iodine or other disinfectant. The vaccine referred to is usually successful when all other treatments fail. Turkish baths or other hydropathic treatments are useful to keep the skin active. Often frequent washing and unirritating clothing will cause the acne to disappear without other treatment, especially about the body.

Boils and Carbuncles

Boils are primary inflammations of the glands of the skin. These inflammatory swellings are caused by special germs. When they constantly appear in different parts of the body, the condition is called "furunculosis." At first they appear as red pimples which are very tender, and pain arises from the slightest movement. When the inflamed lump subsides without matter forming it is called a "blind boil." As a rule the boil "points" in the third or fourth day, the surrounding inflamed area tends to increase, the skin on the surface of the boil becomes purple, tense, and shining, and breaks in one or more places about the eighth day. The core (a white pulpy slough) in the centre is thrown off in a day or two, and healing rapidly takes place. Very often the glands in the neighbourhood of the boil become swollen and painful, but these subside after the boil breaks.

Treatment.—The treatment varies according to the stage of development of the boil. At the commencement the boil may be aborted by painting with equal parts of the weak and strong tincture of iodine, or pure carbolic acid. A compress

steeped in spirits of camphor applied for a few minutes at a time several times a day will frequently prove successful. Glycerine of belladonna relieves the pain and may also stop the inflammatory process. When matter forms in the boil it should be incised with an absolutely clean knife. As much of the pus should be got away as possible and some antiseptic dressing applied to the interior of the boil and around the opening. Iodoform or boracic acid make good dressings. Poultices and fomentations after the boil has opened do harm, for by increasing the infective nature of the boil they may help to produce others in the vicinity. Poultices and hot fomentations before the boil breaks certainly help the boil to mature and relieve the pain. The general health should be attended to and the bowels kept regular. One grain of sulphide of calcium pills may be taken with advantage four times a day. If patient is anæmic, some form of iron should be given.

In the carbuncle the inflammation is deeper and more destructive than in the boil and when matter does form it finds its outlet in more than one opening. In a boil there is as a rule only one opening. Carbuncles form where the skin is thickest, as on the nape of the neck, the back, buttocks, shoulders, and forearms. Sometimes they are seen on the face. In the boil the inflammation subsides directly it opens, but in the carbuncle it may continue to spread. In the centre of the carbuncle there is generally a very much larger and more offensive smelling core than in the boil; there is also more fever and debility. In weakly or old persons death may result, especially if the patient is suffering from diabetes. Carbuncles are often the result of diabetes and are then much more serious.

Treatment.—In small carbuncles the treatment is the same as for boils. When matter forms a larger incision is necessary, usually a crucial one (form of a cross). The interior should be swabbed well with pure carbolic acid. Smear well the external parts with vaseline to prevent burning of the skin, and apply the carbolic

acid on a pledget of wadding attached to a silver probe (a thin penhandle will suit the purposes). Some antiseptic dressing should follow the above treatment, such as iodoform or boracic acid powder. The following makes a good ointment:—

℞ Acidi Boraci ʒj
Zinc Oxidi ʒj
Tinc. Iodi. Fort. ʒj
Paraff. Molle ʒj

Apply the ointment daily.

In many cases attention must be paid to the general health, especially if there be sugar in the urine (diabetes) or if the patient be debilitated or old.

Itching of the Skin (Pruritus)

Itching is frequently the most troublesome and the most difficult symptom to deal with in many skin diseases; often it is so bad that the patient gets rest neither night nor day. Where there are no other signs of skin disease intense itching is called *pruritus* and as such is often found about the private parts.

Flannel or rough garments should not be worn next the skin; silk or the best merino-silk should be used for the under-clothing. In the intolerable itching about the private parts there may be nothing to see, but often the itching seems to start from one special point and spreads. This point may be touched with pure carbolic acid after first protecting the adjoining skin with vaseline. Menthol or cocaine will give temporary relief. When the irritation is about the opening of the bladder the urine should be examined for sugar. In diabetes the parts should be washed with very hot water, thoroughly dried, and an ointment of ichthyol (ten per cent in lard or vaseline) should be applied. Other causes of itching about these parts are threadworms, piles, leucorrhœa, lice, or itch mites.

When no local cause can be found, the diet must be carefully regulated. Animal food should be omitted from the diet or partaken of only sparingly, and abstinence from coffee, tea, sugar, and alcohol be enjoined. Shell fish, pickles, and all highly seasoned, salted, or preserved foods,

as well as all indigestible articles of diet, should be prohibited.

For general itching Turkish and electric light baths through the sweating produced and the removal of irritating matter from the skin often give great relief. Long continued emollient or alkaline baths are also very useful. The former may consist of two to six pounds bran, or one pound potato starch, or one pound linseed to thirty gallons of warm water. An alkaline bath may be made by adding two to ten ounces of bicarbonate of soda, two to six ounces carbonate of potash, or three ounces borax to thirty gallons of water. The patient may lie in the above for hours. We have found sulphurated potash (two ounces to thirty gallons) an excellent remedy in some cases. The alternate use of hot and cold water will give relief to itching in many cases. Vinegar and water on pieces of linen kept constantly applied give relief in many cases. Carbolic oil (five per cent) is an excellent remedy. The following is a useful lotion:

℞ Acidi Carbolici ʒj
Glycerini ʒii
Sp. Vini. Rect. ʒiii
Aqua Camphoræ ʒv

Apply on compress every hour or two.

A solid cone of menthol previously wetted with alcohol or water and rubbed on the parts produces a cooling numbing effect, or five to ten grains may be dissolved in one ounce of weak alcohol. Tar applications are often very useful. The following are useful prescriptions:—

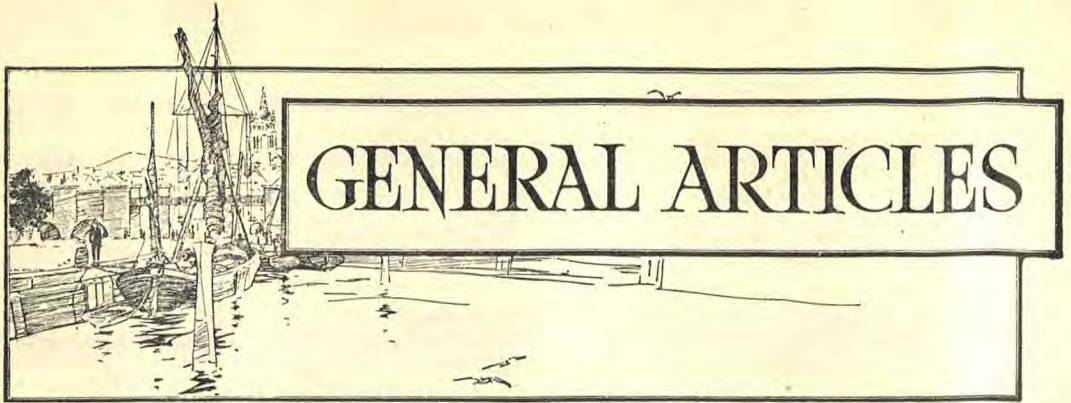
℞ Liq. Carbonis detergens ʒj
Aqua ad ʒiii

℞ Liq. Carbonis detergens ʒiv
Calaminæ ʒj
Aq. Calcis ad ʒviii

Two and a half per cent of carbolic acid may be added to the latter.

Where there is redness or inflammation of the parts, ichthyol is the safest remedy to begin with. A solution of ichthyol in water (one in ten) may at the commencement of treatment be applied, and the strength gradually increased up to equal parts.

W. H. J.



GENERAL ARTICLES

The Importance of Teeth Preservation

ALFRED W. McCANN

SOUND teeth are the foundation of health building. The six-year molar is the corner-stone. The school children of today are building upon defective corner-stones or without corner-stones at all.

A hundred eminent authorities whose brilliant demonstrations have never been heard of by the plain people now stand on record with these statements: "Defective teeth are symptoms of malnutrition. They indicate that something is wrong with the food supply. The normally nourished possess sound teeth."

We need not speculate as to the prevalence of disease and pain. All over America and Europe public school children are being examined by physicians in search of disease.

Half the children in a school in Leeds were found by Dr. Hull suffering from mineral starvation. Their food had been refined.

Of 10,500 school children examined, the British Dental Association found 86 per cent suffering from defective teeth, the result of a diet lacking in mineral substances upon which bones, teeth, and tissues depend.

Of 1,694 children examined in six clinics, 1913, by Dr. A. Freedman Foot, eleven were found to possess normal teeth. Dr. Foot, in reporting to the Second District Dental Society of New York, declares: "The six-year molars of nearly every child were broken down wholly or

in part. In many instances the molars were decayed through the gums. So extensive and far advanced were the defects that corrective treatment, even if it were applied, would have been of little value."

The New York Department of Health through Dr. T. Van Wincke examining the teeth of 231,081 school children of New York City, outside the dental clinics, found 131,747 defective.

What are the future health chances of these children? Are they to be useful to society or a drag upon the race?

Full proof is at hand establishing the incontrovertible proposition that defective teeth or sound teeth may be had at will, depending entirely upon the character of food consumed prior to and during the entire period of dentition.

The same character of proof is at hand determining the fact that defective teeth constitute but one of the many symptoms of the grave systemic disorders traceable to refined food.

The natural bond between all the animal and human feeding experiments, reported during the past year, and the teeth of our children is not difficult to locate.

Dr. Louis Goldstein, New York City, says:—

"After examining the teeth of not less than 400 school children in my home neighbourhood here in the Bronx, I have yet to see a perfect set of six-year molars (first four permanent teeth to appear in childhood).

These teeth in nearly every instance were entirely decayed. I have never observed a perfect set of teeth in any American child and have but one adult patient showing extremely good teeth. She is a young woman."

Dr. Burtice E. Lawton, New York City, declares: "Our faulty teeth are undoubtedly the result of an impoverished diet. We see many defective teeth among those in the best walks of life. Heredity does not seem greatly to increase the con-

dition, for at present I have a patient undergoing treatment—a girl—who is the child of strong, robust parents.

City, declares: "The six-year molars are decayed and in many cases completely gone by the time the child attains the age of seven or eight years. It is almost impossible to save these teeth in any instance.

Dr. Robert W. Taggart, New York



"WORK FIRST—AND THEN REST"—*Ruskin*

For the past three years I have observed her teeth on an average of once a month. Her teeth have virtually been starved and are suffering from the absence of a sufficient quantity of lime salts. Had she been fed on good, old-fashioned whole grain breads and breakfast foods when a youngster she would not be compelled to come under my care now."

Dr. E. A. Crostic, New York City, declares: "No one in New York City is

German parents, who grew up on the whole wheat and rye bread of their native land, prior to the introduction of refined bread, have better teeth than their children."

Dr. Samuel C. Newman, New York City, declares: "You cannot beat the Italians for good teeth. They rarely have

more than one or two teeth missing, the others being perfect and as hard as rocks.

"To drill into their hard tooth substance means to dull burr after burr in the attempt.

"Among the city children of my locality I find soft and sensitive teeth. The six-year molars are usually gone and in some instances I have observed that they do not last longer than six months after their eruption."

Dr. Anton J. Haecker, New York City, declares: "Twenty-five years ago I had the opportunity of examining the teeth of the school children of Worms, Germany; 250 families, existing entirely on whole grain and vegetable foods, were living within a school district at that time.

"I could pick out the children of these families from among the others readily for the reason that their cheeks were rosy and they were the picture of health. The fine condition of their teeth as compared with the others was little short of amazing.

"Their diet consisted exclusively of whole grain bread, vegetables, and fruit. The inhabitants of the famous Black Forest district of Germany and the lumbermen of the Vogelsburg Mountains have wonderful teeth and are in rugged health.

"On Sunday quite often one pound of meat must suffice for the appetite of eight people, the main foods being black bread, potatoes, and rye flour soups."

Dr. W. E. Andrews, New York City, declares: "The teeth of Slavs, Bulgars, Russians, and Poles are ordinarily perfect. I have lately seen the grinders of an old Slav, sixty-one years of age, who works in a nearby coal yard. Not a tooth was missing. His childhood diet of black bread and fish had given him an indestructible tooth structure."

Dr. C. R. Kelly, New York City, declares: "Periods of disease in children marked for general nutritional disturbances in which tooth nourishment is for a time completely shut off, leave their traces like sign-posts on developing teeth."

Dr. Charles A. Dubois, New York City, declares: "The elimination of starch and sugary foods, including candies and syrups,

from the diet is essential to treatment of pyorrhœa. There is no such thing as local tooth disease. The condition that leads to decay is always systemic."

Dr. F. A. Sterling, New York City, declares: "Natives of Africa whom I have examined have possessed teeth in perfect condition, due entirely to their living on coarse, natural foods. I have observed that the nearer people are to primitive Nature the better are their teeth. Savages all have good teeth. The coloured race, particularly those living on whole corn-meal and the unrefined sugar cane diet of the southern plantations, have good teeth.

"In one generation, in advancing from the southern corn fields and cane brakes, the teeth of our coloured children become very poor."

Dr. J. Archambeau, New York City, declares: "The people of the British West Indies (Jamaica), subsist on yams, vegetables, bananas, sugar cane in abundance, a little salt fish and very little meat. Decayed teeth among these people are very rare. Most of their teeth look as though they were fashioned from ivory. Only poorly nourished people develop pyorrhœa.

"Since the natives of the British West Indies have begun to import American delicacies I have had much fear for the future condition of their teeth."

If there is a commercial conspiracy to keep the teeth and tissues of our children as unsound as possible the infamous movement is not destined to pass altogether unnoticed in high places.

[The writer of this article shows that a veritable conspiracy exists among the great millers of America to frighten the common people away from the use of wholemeal bread and breakfast foods, and then continues.]

"Not content with this new process, which simply got out the starch more readily, the millers later invented an artificial bleaching process for the purpose of further refining the already deathly pallor of their product. This is refinement run mad and the housewives of America have

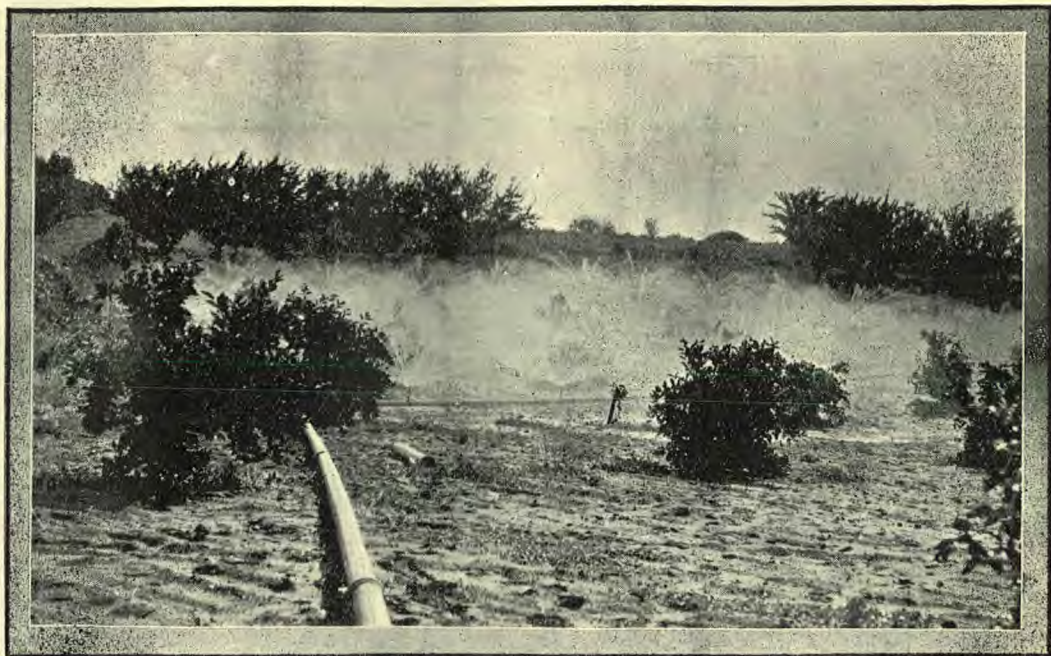
been led through ignorance to believe that the whiter the flour the better or purer the product.

"A pale, anæmic generation of people has grown up under its continued use, as any medical man can testify who has had extended opportunities to examine hundreds* and thousands of American boys physically, comparing them with the youths of the nations of Europe who have a whole grain diet.

"Our forefathers ate whole wheat bread

produce muscle, blood, bone, and nerve tissue, enabling them to do pioneer work and to live to old age, might well ask the starch contingents what sort of tissue starch makes, advising them that if starch has any advantage in this line it would be well to present evidence of its superiority instead of abusing the champions of whole wheat as quacks.

"These patent flour people are not quacks. They are rather apostles of the doctrine of frightfulness, and if they are



THE MOVABLE SPRAYING SYSTEM FOR AN AUSTRALIAN ORCHARD

Pathé Photo.

for nearly three centuries, and if the absurd shrieks of the patent flour prophets of disaster were worth controversy it would only be to say that our hardy ancestors, men of brawn and vigour, who knew nothing of the bleached white wheat flour sold today, ought to have starved or died of typhus fever, and the lucky survivors should have built a museum to exhibit the last loaf of the old, deadly bread for their descendants to gaze upon.

"These athletic grandsires of ours who got the elements from the wheat which

successful in forcing the American public to live on denatured cereals, America will eventually become a race of physical degenerates."

The whole philosophy of white flour and unsound teeth is summed up in this message to the American people in the voice of Senior Surgeon Banks. The remedy does not lie with Surgeon Banks; it lies with the people themselves. If the teeth of their children and all that sound teeth signify mean anything to the people they will act for themselves.

Various Types of Germ Disseminators

Disease Carriers a Constant Danger

G. H. HEALD, M.D.

THE disease germs that locate particularly in the intestines, such as the typhoid and the cholera germ, differ from those which have their headquarters in the nose and the throat, such as the diphtheria or the influenza germ, in that they are capable of living for comparatively long periods outside the animal body—in sewage, in drinking water, in oysters, etc. But even these intestinal germs probably do not maintain a continuous existence outside the body. A well once contaminated with typhoid germs is not therefore destined to be a continuous menace, unless the source of contamination remains. Water, after a longer or a shorter period, gradually frees itself even from typhoid germs. If a well continuously has in it typhoid germs, sewage contamination is continually adding fresh supplies of the germ.

The Typhoid Carrier

This brings us to the subject of the typhoid carrier. A person in good health may for years discharge typhoid germs with the discharges from the bowel or the bladder or both, but especially from the bowel; and the typhoid germ can propagate almost without limit in the gall bladder, which furnishes an especially favourable medium for its growth.

There is great variation in the length of time a patient convalescent from typhoid will remain a carrier. Probably at least ten per cent of the patients still discharge active typhoid germs when they are dismissed as cured.

If persons who are not scrupulously cleanly take up the occupation of cook, or if they handle fruits or milk, or other foods commonly eaten raw, they are in a position where they may transmit the disease to many without the source's being suspected.

How long may the convalescent typhoid case continue to discharge typhoid germs?

In a series of four hundred cases studied by one investigator, there were six, or one and one half per cent, who were still carriers at the end of ten weeks, and who, after that time, became free of the germ. There were fifteen, or three and three-fourths per cent, who, so far as the examination showed, remained permanent carriers. If one person in every twenty-six who recover from typhoid remains a permanent carrier, the prospect for eradication of the disease is not very encouraging; for many of these carriers must handle either milk or some food that is eaten in the raw state, to say nothing of the opportunity, in many places, for their discharges to contaminate the drinking water, or for them to infect others by direct contact. It would seem that women, especially married women, tend to become carriers. It is said that eighty-six per cent of all chronic typhoid carriers are women.

In the case of carriers, the typhoid germs not only inhabit the lower intestinal tract, but are found in large numbers in the gall bladder, also in the stomach, the mouth, on the tonsils, in the lungs, and in fact they seem to have made themselves at home pretty much all over the body. They have become a permanent guest.

It is hardly true to say that they have ceased to be an enemy; for though the patient may be immune to typhoid fever, there is a distinct relation between typhoid infection of the gall bladder and gallstones. And though it has not been fully worked out, there is strong reason for suspecting that gallstone disease may, at least in a large proportion of cases, be dependent on a chronic typhoid infection of the gall bladder.

If a person complains of pain in the region of the gall bladder, ask him (more usually *her*) if he ever had typhoid fever.

And if so, be careful how he (*she*) handles the food you eat, especially the bread, the salad, and other foods that come to the table from her hands. But then there are the plates, and the silverware. If you have such a "typhoid Mary" as cook, and *must* retain her, you had better immediately have an antityphoid inoculation. It is protective for a time in most cases.

Unquestionably the unrecognised typhoid carrier is responsible for the transmission of numerous cases of the disease. One famous case in New York is known to have infected a large number of persons over a long period of years, she being a cook; and is supposed to have originated the outbreak at Ithaca which involved one thousand and three hundred cases.

When legislators or health authorities have handled this matter as it should be handled, no typhoid convalescent will be released until it has been definitely learned whether or not he is a carrier; and if he is such, he will be compelled to be registered and to notify the authorities of any change in residence, and will, in the interest of the community, be placed under certain restrictions as to occupation.

Pandora Boxes of Pneumonia

A quarter of a century ago, on account of the frequency of pneumonia germs in the mouths of healthy persons, and the infrequency of contact infections—that is, instances where one case of pneumonia could be traced to contact with a previous case—it was generally believed that a large proportion of pneumonia cases were due to auto-infection, that is, infection from the germs habitually in the mouth of the patient.

But more careful study of the pneumonia germ discredits this belief. There are now known to be a number of dis-

tingent types of the pneumonia germ, and the types that cause pneumonia in its severer and more fatal forms are not found in healthy mouths except during an epidemic. Careful laboratory work has served to distinguish between several types of the pneumonia germ, which have been designated as type 1, 2, 3, and 4, respectively. Type 4, which is a mixed class containing all pneumonia germs not included under types 1, 2, and 3, is pres-



DRYING TRAYS OF THE RAISIN INDUSTRY

Pathe Photo.

ent in about twenty per cent of the pneumonia cases, usually mild cases. The pneumonia germs commonly found in healthy mouths belong to this class.

But the types which produce the severe pneumonias with high mortality are rarely if ever found in the mouths of healthy persons, except during an epidemic; and then, it would seem, they must have come, directly or indirectly, from a pneumonia patient.

The pneumonia convalescent may harbour the pneumonia germ in his air passages for periods varying from twelve up to ninety days from the onset of the disease.

Persons who have been exposed to the pneumonia patient but who have not themselves contracted the disease may have the germ in their nasal and throat secretions. The pneumonia germs type 1 and 2 are rarely found in individuals who

have not recently come in contact with a pneumonia case.

Dangers of a Cold

It has been estimated that there are nearly half as many healthy pneumonia carriers as there are pneumonia patients. These pneumonia carriers are probably capable of transmitting the disease to others as long as they carry the germs—a period varying from seven to forty-five days.

Occasionally pneumonia germs of types 1, 2, and 3 have been found in cases of common cold. Just why, in these cases, the germs did not involve the lungs, is not known; but it indicates the possibility that a person suffering of what seems to be a "common cold" may possibly transmit a fatal pneumonia to some one else. At any rate, we should never forget that a "common cold" is not nearly so harmless as we are sometimes inclined to regard it. One who has an infection that causes coughing, sneezing, and nose blowing, may be carrying a germ that has all the possibilities of a grave and fatal epidemic. We should ever bear in mind that every epidemic starts from some one case.

Regarding the mode of infection, there is reason for believing that it may not only be by droplet and direct contact, but that the dust of rooms, furniture, bedding, etc., where patients have recently lived, may have a part. In a few cases, pneumonia germs have continued to live in room dust for a longer period than they survived in the throat of the occupant of the room. So there is the possibility that one might be infected either by a pneumonia patient, by a pneumonia carrier (whether a convalescent or only a "contact"), or by the dust in a room recently occupied by a pneumonia convalescent or carrier.

For preventing the transmission of pneumonia, it is recommended that patients be isolated as much as possible from

the rest of the family. This will reduce the number of possible carriers. Then it is recommended that all who have to do with patients be required to wear face masks, in order to lessen the chance of infection. The liberal use of disinfectants in the patient's room or ward (which, of course, should be furnished as simply as possible), and especially on the hands of attendants, is an additional precaution. For the advantage of all, the patient should be transferred to a hospital as soon as the nature of the disease is recognised, and his room should be disinfected.

Father, Here's to You!

WE happened in a house the other night, and over the parlour door saw the legend, worked in letters of red, "What is Home Without a Mother?" Across the room was another brief, "God Bless Our Home." Now, what's the matter with "God Bless Our Father?" He gets up early, lights the fire, boils an egg, and wipes off the dew of the lawn with his boots while many a mother is sleeping. He produces the weekly allowance for the grocer, the milkman, the baker, and his little pile is badly worn before he has been home an hour. If there is a noise during the night, father is the one who is expected to go downstairs, find the burglar, and capture or put him to flight. Mother darns the socks, but father bought the socks in the first place, and the needles and the wool afterwards. Mother does up the fruit. Well, father bought it or raised it, and jams and sugar can't be got for nothing.

"What is Home Without a Mother?" Yes, that is all right; but "What is Home Without a Father?" Ten chances to one it is a boarding-house. Father, here's to you. You've got your faults—you may have lots of them—but we owe you a lot, and we'll miss you when you're gone.

CHATS WITH THE DOCTOR



NOTICE TO SUBSCRIBERS: All questions for this department must be addressed to the EDITOR, "LIFE & HEALTH," WARBURTON, VICTORIA. Subscribers sending questions should invariably give their full name and address, not for publication, but in order that the Editor may reply by personal letter if he so desires. Because of this omission several questions have not been answered. To avoid disappointment subscribers will please refrain from requesting replies to questions by mail.

371. "Reader's" Questions

1. *Vitamines.*—Of late years we have been learning that chemical analysis can only give us a rough idea as to the value of foods; there are principles in food that do not lend themselves to the ordinary analysis of the chemist. Wholemeal bread, according to chemical analysis, has not an equal calorific value to the fine white bread. The estimation of value of food according to calories gives us no idea of mineral ingredients of our food, such as lime, iron, etc.; neither does it reveal the value of the vitamins in our food. The estimation of vitamins, however, is certainly in its infancy. In answer to "Reader's" question we believe that granola, granose, and grainut do contain vitamins. We are doubtful about white zwieback. Zwieback is of great value, as its carbohydrates are so readily digested; it also excites flow of saliva and quickly enters the blood, even preparing digestive juices for the digestion of the meal with which it is eaten.

2. *Ptomaines.*—Ptomaine poisoning is due to micro-organisms in food. In airtight tins such as canned meats these germs are not destroyed in the canning but remain dormant. The opening of the tin and the admission of air allows the germ to develop, and the warmth and moisture in the alimentary canal of the eater cause a further development. It is a fact that food may cause ptomaine poisoning and yet taste and smell all right.

3. *Hydatids.*—The hydatid is not spoken of as a "germ," for it is an animal and not a vegetable organism. One stage of the disease is passed in the dog and one in man. The tiny hydatid worms passed by the dog are white thread-like bodies and contain about five thousand eggs. These eggs taken into the stomach of man in water, vegetables, etc., have their shells dissolved in the gastric juice. This sets free a tiny six-hooked embryo which may find its way into the liver or any part of the body and develop the cyst—a fluid bladder—known as *hydatids*. The hydatid may remain alive for possibly twenty years in the system, but breaks down into matter forming abscesses. The dogs herding sheep are mostly responsible for the disease in Australia.

4. *Hyperpiesia (High Blood Pressure).*—"What causes high blood pressure? Are only full-blooded folk liable to it?" One of the great advancements in modern medicine is the measuring of the blood pressure. Often high blood pressure exists when the individual feels really well; in fact, high blood pressure in the brain may produce a feeling of increased vigour. Full-blooded patients, however, are not the only cases with high blood pressure; often the individual is pale, thin, and sallow. If taken early within the first five or ten years high blood pressure can be cured and thus death from apoplexy, heart disease, or pneumonia can be pre-

vented. High pressure is due to constriction of the small arteries and increased viscosity of the blood. Dr. Haig has shown that flesh eating increases the viscosity of blood and thus makes it more difficult to circulate through the tissues; thus uric acid and other rheumatic waste products are deposited around the joints and muscles. Excess of food of any kind, however, will bring about the same results. Coated tongue, foul breath, constipation, and headache generally show error in dieting. It is much better to lessen the amount of food or change its character and thus prevent decomposition in the alimentary canal than to neutralise poisons after they have been formed.

Dr. Allbutt, who is one of the leading authorities on high blood pressure, gives as causes of this condition: Excessive nitrogenous foods (flesh foods), tea, coffee, alcohol, tobacco, and bulky starchy foods. Exercise graduated according to the strength of the patient, especially hill climbing, is excellent for those with high blood pressure. Exercise with some sweating is especially good, such as wood-chopping. Exercise must not be too sudden as it may throw too much work on the heart which has already too much to do to overcome the viscosity of the blood and the smallness of the terminal blood vessels. If the radial artery [the artery in the wrist] be felt on starting to climb a hill, the blood pressure will be found to be increased, but suddenly it dilates and "second wind" is the result. This means that the blood pressure is lessened. Massage is very useful where exercise cannot be taken.*

5. Chief Dangers of Weak Heart.—Many weak hearts owe their disability to high blood pressure. The digestion should always receive careful attention. Sudden exertion, such as in lifting or quickly rising from the recumbent position, should be avoided. Hot, close rooms are hurtful. All bedrooms should have plenty of sunlight. The general health must be attended to in these cases.

6. Paralysis.—"Does Nature give many premonitory warnings before a stroke of paralysis? If so, what are they? If heeded, would they avert it?" Paralysis is due to the breaking of weakened blood vessels in the brain; they cannot stand the pressure. All over the age of forty should have their blood pressure taken every four or five years. When it is found to be high, the case should be constantly under the guidance of a reliable physician and the blood pressure be taken frequently.

7. Cataract.—Cataract is a disease of the crystalline lens, which becomes opaque and obstructs the entrance of light to the retina, the essential part of the eye. It is a degeneration of tissue and can only be counteracted by attention to the general health. It does not occur on the lens but through the lens. Operations for the removal of the lens are mostly successful, but glasses must subsequently be worn—one for long distances and one pair for reading, etc.

8. Pterygium.—The fleshy bits spoken of by "Reader" are due to enlargement of the blood vessels of the mucous membrane of the eyeball; the enlargement is generally of a triangular shape, the apex being directed toward the cornea (front transparent part of the eye), and the base toward the corner of the eye. Sometimes they are the result of inflammation, but mostly are due to irritation from dust, smoke, or overuse of eye. Some cases can be removed by using some astringent wash, as alum, a teaspoonful to a pint of water four or five times a week. When very large, an operation by a skilled surgeon is necessary. As a rule the sight is not affected and no harm except the disfigurement results.

9. "Is cotton seed oil a nutrient? Would it supply the place of olive oil?" Our answer to both questions is in the affirmative.

372. Teething

"Mrs. J. T. T." writes: "My baby of eleven months has been very ill with her teeth for a month. She has six teeth, is

*This subject will be dealt with more fully in next issue of LIFE AND HEALTH.

feverish and cross. Though I give her cooling and operating medicine, her breath is very offensive and she will not take half her food. Her gums are sore or ulcerated where the teeth are not coming through."

Ans.—The teeth are not the cause of the disorder. The baby's system is changing at the time of teething, preparing for more solid food and is more liable to become deranged at this time. Probably the cooling and operating medicine is not required. If the breath is bad give very much less food until it improves, and add to her diet the juice of an orange several times a day. Give the baby a fair amount of water to drink. This is a good time to begin with granose biscuits. Half a granose biscuit with warm milk would make a good meal for baby twice daily.

373. Irregular Menstruation

"Emelie" writes concerning the above. The intervals are from two to four months and the periods last a month or more. She was curretted eight months ago.

Ans.—General tonic treatment is needed in cases of this description. Gentle exercise out of doors and daily cold sponge with thorough drying are recommended. Twice a week before retiring take a hot sitz bath (water kept at 100° F. for twenty minutes). Make the water considerably colder during the last two minutes of the bath. The feet should be kept in water at 105° F. during the sitz bath. When there is much discharge, rest as much as possible and take the following mixture:—

℞ Extract Ergotæ Liq.
Syr. Aurantii aa ad ʒii
One teaspoonful twice daily in water.

"Rockhampton" also suffers from the above. She has had several operations and asks if sanitarium treatment would be advisable. A long list of symptoms is

contained in "Rockhampton's" letter. We believe the sanitarium treatment the ideal one in this case, which is a complicated one and needs the personal attention of a physician.

374. Weak Bladder and Constipation

"Coogee" writes: "I have been a sufferer from a weak bladder since childhood; am twenty-three years old and otherwise healthy. I do not take tea or coffee. I tried a vegetarian course for



GRADING MACHINE IN A RAISIN PACKING HOUSE Pathé Photo

thirteen months without benefit. A friend of mine with a baby sixteen months old suffers from constipation, sometimes going three days. Castor oil and cascara have no effect. The pills given her by the doctor affect the baby."

Ans.—In regard to the "weak bladder," we have not sufficient data on which to advise. There may be some displacement of the womb that should be rectified. The leaving off tea and coffee is certainly advisable in all kidney and bladder troubles, as they irritate to some extent the kidney structures. Take fruit for breakfast and tea and vegetables at mid-day meal. Keep the digestion in good order and the bowels regular by suitable dieting. Flesh foods and all highly nitrogenous foods, if taken liberally, cause increased acidity of urine and thus irri-

tate. Milk makes an excellent food in these cases; take half a pint at each meal.

Constipation should always be treated by dieting. Instead of white bread use wholemeal bread (not simply brown bread which may not be made from the wholemeal) or granose biscuits. Take fruit with breakfast and the evening meal. Drink freely of water between the meals. After each meal chew a little agar agar and swallow. Figs, prunes, dates, and raisins with the meals are helpful. Exercise in the open air, daily cold sponge, and all procedures that build up the general health are advised. Often constipation is due to lack of muscular power. Avoid boiled milk, hard cooked eggs, fried foods, tea, and coffee. Tea and coffee are decidedly constipating. If a warm enema (with or without brown soap) be taken for the relief of the bowels, follow it by the injection of half a pint of cold water (i.e., after the bowels operate), and retain. Cascara is the best drug in these cases, and while often the tabloids are ineffective, the liquid extract is better in doses of fifteen drops to a teaspoonful or more. Cascara should be taken before the evening meal or at bedtime.

375. Pains All Over Body

"Annel" writes about her daughter. "She is seventeen and complains of pains all over her body. She is apparently thoroughly healthy. The pains move about and are sharp and stabbing, attacking any part of the body. All the joints crack very much, especially the wrists and ankles which are also weak. This condition has been going on for about nine or ten weeks and has gradually become worse. She has just begun to diet herself, taking no meat or tea and only a little sweets."

Ans.—This case requires a personal medical examination. The symptoms may simply point to anæmia or there may be something more serious, such as rheumatic arthritis. We would recommend fresh milk to be taken three times a day,

also the use of wholemeal bread and granose biscuits, together with outdoor exercise and daily cold sponging.

376. Diet for Child Six Months

"Annel" cannot continue nourishing her child with her own milk and asks if granose biscuits are suitable.

Ans.—Good cow's milk with one-third water or barley water should be sufficient for another two months. Granose biscuits are decidedly good after the eighth month. One meal a day of granose may be tried at six months and the effect watched. Pour hot milk on a quarter of a biscuit, mix well, and strain through fine strainer. The biscuits often contain some rough particles of wheat which are not good for young children. Mellin's food makes a good addition to milk for infants. Lactogen, Glaxo, and Benger's Foods are reliable foods.

377. Chronic Cough

"McC." writes: "My mother, aged fifty-four, has had a chronic cough for twenty years. She is painfully thin. While having the appearance of a delicate woman she is never really ill. A local doctor states she has slight prolapse of stomach, a displaced kidney, and catarrh of the big bronchial tube. My mother is very hard to prescribe for as she cannot take drugs and is a very bilious subject. She cannot drink much milk without feeling sick. Is there any hope of her ever putting on a little flesh?"

Ans.—As far as one can gather from the above letter the mother is suffering from chronic digestive trouble, probably brought on by improper food. Even though much food be taken in these cases, the system remains impoverished, and often the lessening of the amount taken will improve the health. These cases are frequently tea and coffee drinkers. All fried foods and dishes cooked with fat or grease of any kind should be avoided, also hot toast, fresh scones, and pastry. There is probably some catarrhal condition of

the throat kept up by imperfect digestion. In these cases the ordinary symptoms of indigestion, such as pain, acidity, flatulence, etc., are often absent, but mostly the tongue is more or less coated. A month at a sanitarium to get into proper dietetic habits would do much good in this case. All food should be thoroughly masticated, and consequently the teeth should be kept in good order. The "kidney trouble" is a part and parcel of the digestive trouble, consequently "kidney tablets or pills" are not needed. Very often a little acid fruit juice after each meal does good in these cases.

378. Granola

"Plain diet" wishes to know how to cook granola in the lightest and most digestible form.

Ans.—The more granola is stirred the heavier and more indigestible it becomes. We recommend the following: One cupful of granola mixed with washed and cut-up dates. Place in pie dish and gently pour over the granola two cupfuls of boiling water to which a little salt has been added. No stirring whatever should be done, for the boiling water will find its own way to every particle of granola. Place the dish in a warm place and allow to stand for twenty or thirty minutes. Thus cooked granola is light, pleasant to take, and readily digested.

379. Catarrh and Dyspepsia; Chilblains

"Maagpyn" writes: "I am forty-three. About four years ago I had influenza which left me with catarrh of ear, nose, and throat for a considerable time. I now have an incessant throbbing sound in the right ear; it never ceases, and the left ear becomes quite deaf with the slightest cold. I am greatly troubled with flatulence, wind being constantly passed down, the tongue is always coated, and the breath is sometimes offensive. I take from half to one teaspoonful of Epsom salts or sulphate of soda every morning for the bowels. I take very little outdoor exercise. My household duties do not

cause fatigue unless I hurry, when invariably I have a sensation of oppression in the region of the heart almost amounting to pain." Correspondent also has discharge like "white of egg" from womb. "For some days I have been suffering with pain (not severe) and discomfort in the stomach, relieved by eating but discomfort setting in from two or three hours after. I used to be a great sufferer with rheumatism but since dieting (leaving off flesh foods and tea) I have been much better. Fingers are quite deformed with chilblains."

Ans.—Dyspepsia,—especially that form associated with coated tongue and constipation,—heart symptoms, and catarrh of the upper air passages are frequently associated. The treatment of the digestive trouble will relieve other conditions also. The catarrhal condition of the upper air passages, although the result of influenza, is kept up by the intestinal dyspepsia. The advice given to "McC." under "Chronic Cough" should be followed. Regular outdoor exercise should be taken, the bedroom should be well ventilated, and a cold sponge should be taken daily. Use a large teaspoonful of alum or sulphate of zinc to a quart of tepid water at night for the womb. A teaspoonful of a mixture of equal parts of these salts is sometimes more satisfactory.

Chilblains.—For the chilblains paint the parts with equal parts of the strong and weak tincture of iodine. Peroxide of hydrogen (ten vol.) diluted with equal parts of previously boiled water, still hot, applied for fifteen to twenty minutes twice daily is excellent. Another method is to immerse the parts in warm water twice a day, then gently massage with camphorated alcohol and powder with one part of salicylate of bismuth to nine parts of starch.

380. Obstructed Bile Secretion

"Maagpyn" also writes: "My daughter, aged nine, was a perfect specimen of a baby till four years ago, when she got influenza which left her with catarrh and

abscess in both ears (specialist operated to save her life). Since then she gets attacks of jaundice with dark rings under eyes, complete loss of appetite, very coated tongue, abdomen distended with wind, icy cold face, hands, and feet, and is very weak. Stools are almost white, either constipated or diarrhoea with nausea and thirst."

Ans.—Fasting is good treatment during these attacks; we would, however, allow fresh ripe fruit if it can be taken. It is a better disinfectant than the medicine you mention. This is a case of catarrh of the duodenum (first part of small intestine) which blocks up the excretory tubes from the liver. Alternate hot and cold applications to the abdomen at this time would do good; the hot fomentations remaining over the abdomen eight to ten minutes and the cold compresses two minutes. Give four hot fomentations and four cold compresses twice daily. Finish each treatment with a cold compress. Restrict sweets and fats in the diet. Fried dishes and all foods cooked with or in fat must be avoided. The fat necessary for the system is better taken in the form of separated or raw cream and milk. Avoid use of much butter, jams, and pastry. Avoid the coarser vegetables such as cabbage, carrots, parsnips, and turnips; other vegetables are good. Keep the bowels regular by dieting. Outdoor life and exercise are essential.

381. Stomach Troubles and Constipation

"Engineer, N.Z.," has suffered for years with constipation, full stomach, and wind. Fruits, hot or cold water, have no effect. Cascara, senna tea, and oils only have a temporary result. Recently he has had pains in stomach and under shoulder blades from two to three hours after meals. Whole wheat boiled causes pain. Has recently stopped using tobacco, does not eat much meat. Has bleeding piles after purgative medicines.

Ans.—In this case the digestion must be treated first before paying especial attention to the bowels. Tea and coffee

must be prohibited, as they increase the digestive trouble and also constipate. Reduce the diet considerably until the digestion is better. Probably "Engineer" would be better without the evening meal for a short time. All food must be thoroughly masticated. Sponge the abdomen well night and morning with cold water, and follow by vigorous rubbing with rough towel and hands. "Engineer" does a good deal of sitting work and should take as much outdoor exercise as possible. Chopping wood, gardening, and walking would be good exercise. Exercise that brings the abdominal muscles into play is the best. If necessary, open the bowels with a teaspoonful or more of cascara evacuant (Parke Davis) every second or third night. An enema of hot water and brown soap may be taken occasionally in place of the cascara. After the bowels have been opened with the enema, inject half a pint of cold water into the bowel and retain. "Engineer" should remember that the following foods and drinks are liable to constipate: Tea, coffee, hard boiled or fried eggs, boiled milk, and white bread. The substitution of granose biscuits for white bread often has a remarkably good result. The coarser vegetables, such as cabbage, parsnips, carrots, and turnips, cause flatulence and should also be avoided.

382. Bile Trouble

"M. McD." also writes about "stomach troubles," and is troubled about passing dark green stools.

Ans.—The stools from hæmorrhage are of a black tarry nature, but in this case the colour is due most probably to bile. "M. McD." should, as advised by her medical man, take a rest. We would suggest sanitarium treatment. "M. McD." should follow advice given above. The following mixture would probably help:—

℞ Bismuthi Carb.
Sodii Bicarb. (Hwd's.)
Mag. Carb. Pond. ʒi ʒii
Spt. Ment. Pip. ʒi
Inf. Gent. Co. ʒviii

S Tablespoonful in water half an hour before meals.

383. Digestive Trouble and General Debility

"R. T. (W. A.)" also has stomach trouble. Had a nervous breakdown after smoking two packets of cigarettes daily for some time. He has given up smoking and drinking and is endeavouring to live a Christian life. He writes: "The food I take is tea and bread and butter for breakfast, sometimes the same for dinner, and for evening meal soup, meat, and vegetables. I get hot flushes and go giddy if I stoop down, get headache across the eyes and forehead at times and spots floating in front of the eyes and want to cry for nothing. Am very weak in the legs and sometimes have bad dreams. I had influenza two months ago; it was after that I became so shaky."

Ans.—"R.T." is suffering from digestive trouble and general debility. He is certainly not taking the right food. Tea will only continue his troubles. We would advise a cup or more of fresh milk with his bread and butter; in fact, the milk would do good at every meal, but the soup should be excluded from the third meal. Follow advice as given above throughout "Chats." There is sufficient in bread and butter to sustain life, but not a vigorous constitution; variety in food is essential for good vigorous health.

384. Sores on Legs

"Wekamu" writes: "Whenever my little girl scratches her leg it festers very quickly and is very hard to heal. Sometimes after usual treatment the sores heal over, but fester underneath and break out again. Otherwise the child seems well."

Ans.—Undoubtedly in these cases of

festering sores much of the trouble is caused by germs in the skin and under the finger nails. Probably the food taken is too rich. Animal food, fats, and sweets should be avoided. Fat should not be cooked with food nor should food be cooked in fat as in frying. Cream, especially separated or raw, and good fresh butter are quite sufficient without any other fats in the food. We would advise the daily washing of the legs with germicidal soap (Parke Davis), or other good antiseptic soap, and the painting of every scratch and sore with tincture of



Pathe Photo.

A CAMP SITE IN THE GREAT OUT-OF-DOORS

iodine. See that the child gets a good supply of fruit and vegetables.

385. To Grow Hair on the Body

"G.I." wishes to know what can be done to increase the growth of hair on his body.

Ans.—We are afraid we cannot help correspondent much, as the trouble is an inherited peculiarity. Anything that brings blood to a part will increase the tendency to grow hair. Vigorous rubbing and especially when some stimulating liniment is used will increase the growth of hair. Tincture of cantharides, mustard, and turpentine liniments might

help to some extent. Cold bathing with vigorous rubbing is certainly good.

386. Pelvic Operation and Debility

"Joan, N.Z.," has had extensive pelvic operation; her general health is very poor. She writes: "I have swollen or poisoned gland at the left side of the neck and I can feel something like little marbles under the skin. I still have a burning sensation at the back of the womb; I get pain on the left side where the ovary was removed; the womb is still very low."

Ans.—The operation described in the letter was a very extensive one and months will elapse before our correspondent can expect to have anything like good health. The enlarged glands are due to general constitutional weakness, their size may be reduced as suggested by the daily use of iodine. A mixture of equal parts of the weak and the strong tincture is the best strength; leave off the application when the parts get tender but continue again after a few days. Plenty of nourishing food, as milk and fresh eggs, should be taken. Sponge the body daily with cold water and dry by vigorous rubbing with rough towel. Get out in the open air as much as possible and sleep in a well ventilated bedroom. If the gland gives much pain or enlarges it may be necessary to have it removed.

387. Post Nasal Catarrh

"Anxious" asks for treatment of catarrh. Hard lumps of mucus fall from the back of the nose into the throat. Mouth fills with froth which turns to liquid. In the morning she expectorates soft yellow mucus.

Ans.—Keep the nose and throat clean with the following douche and gargle: Equal parts of common salt, baking soda, and borax. Of this add one teaspoonful to half a cup of warm water. Use morning and night. Paint the throat with argenti protein ten grains to one ounce of

distilled water once a day, using a good-sized camel hair pencil. It is very important to attend to the bowels and digestion, especially avoiding fatty foods and sweets.

388. Sciatica

"Eugowra" asks for a remedy for sciatica.

Ans.—In cases that have existed for a long time, the treatment has to be very thorough and continued for some weeks. There is nothing equal to large fomentations to the lower part of the back and the outside of the thigh. Three or four of these should be used night and morning. Hot salt water baths (3½ lb. of salt to 15 gallons of hot water) at bedtime are helpful. Relief is gained by using five or six small blisters (size of shilling) along the course of the nerve or the seat of pain. The advantage of small blisters is that they heal quickly and fresh blisters may be used every three or four days. The galvanic current will be found helpful in some cases. Instead of the blisters the liniment of iodine may be painted over the painful parts daily until they become tender, and after two or three days continue the painting again. Generally, rest in bed is helpful, the patient keeping off the affected side as much as possible. Capsolin or other stimulating liniments are of service in some cases. Best results are obtained by a course of hydropathic treatment at a sanitarium.

389. Self Abuse

"Kalgoorlie," although not guilty of the above, will find treatment given under the above heading in last issue of LIFE AND HEALTH helpful. He should take daily cold sponge, sleep in a well-ventilated bedroom, have regular outdoor exercise, and use light bed clothes. The special foods that are helpful in these cases are raw or very lightly cooked eggs, fresh milk, and wholemeal preparations.



QUIET TALKS WITH MOTHERS

Keeping the Outposts Clean

"Health is the sunshine of the home. It is, therefore, our manifest duty to preserve our good health, or to relieve weakened or diseased conditions, and thereby to promote health in ourselves and in those for whom we may be responsible."

IN a booklet entitled "Germ Disease and Self-Protection," written by William Lee Howard, M.D., the following significant paragraphs occur:—

"Yet in all these recent and vital discoveries for protection of the body and wounds from germs, one or two of the important channels through which some of the most destructive bacilli gain entrance to the body, have remained as outposts, apparently welcoming instead of warding off all kinds of attacks by germs.

"These entrance gates are the mouth and the active glands of the throat—such as the tonsils. Then there is the mucous membrane lining the throat, besides partly hidden crypts and surfaces where destructive germs lodge and multiply.

"In children these are particularly comfortable places for germs to lodge and thence to go on their harmful way. And this they do month by month, year to year, until, when adult age arrives, we have some form of chronic catarrh, ear infection, partial deafness, or some of the physical defects now recognised as great evils in the school children. And while we are examining all the school children to discover and rectify these drawbacks to health and mental progress, how infinitely better it would be, at the same time, to *prevent* the troubles."

To the two above mentioned outposts or entrance gates of the mouth and the active glands of the throat, should also be added the nose, for in the moist mucous membrane of the nasal surfaces germs find an excellent breeding ground. It is highly important that the nose, mouth, and throat be kept *clean*, for it is claimed that over ninety per cent of our bodily diseases develop from germs which are taken into the nose and throat by inhalation.

When we stop to realise that the air we are *continually breathing* is in a greater or less degree surcharged with dust particles and disease-breeding germs, this high percentage of disease by germ inhalation is not so astonishing as it first appears. Some time since, the International School of Hygiene held a meeting in the City of Buffalo and among the other mottoes displayed about the walls were the following which contain much scientific wisdom in capsule form:—

Good air contains 2,000—8,000 dust particles in one cubic inch. Janitors sweeping with broom or brush made 100,000—3,000,000 in a cubic inch. Dust particles and pus germs help on catarrh and adenoids, sore throat and eyes, coughs and colds, tuberculosis, besides the so-called "dust diseases."

Dust is made of small particles of mineral matter from pavements, steel and iron from wheels, car tracks and horse shoes; vegetable matter, tobacco, soot, ashes, glass. Dust is full of pus germs.

It is more important to brush the teeth after each meal than to wash the face on rising.

School diseases, anæmia, catarrh, and nervous diseases are invited by dusty, overheated, arid, stagnant air.

An unclean mouth contains: cavities and pockets holding fermenting refuse from previous meals; pus from abscesses and diseased gums; bacteria of many diseases; the mouth is the gateway to the body. Keep it clean.

Most disease germs enter the body through the mouth. Over twenty varieties of disease germs have been found in the mouth including those of diphtheria, tuberculosis, typhoid, pneumonia, influenza, etc. A clean, healthy mouth is the best insurance against disease.

A clean tooth never decays.

All communicable diseases are caused by the entrance of a specific germ into the body. These are minute organisms invisible to the naked eye.

All the deaths resulting from fevers are as but a drop in the ocean when compared with the number who perish from bad air.

Children's diseases occur as a rule just at the period of greatest neglect of the mouth. A child with an uncaared-for mouth is inviting disease. Protect the child.

Don't live, work, or sleep in a room where there is no fresh air.

Every life is entitled to a clean environment and a fair opportunity.

It is in the power of man to cause all germ diseases to disappear from the world.—*Pasteur*.

Babies are like plants. They cannot thrive without plenty of sunlight and fresh air.

Flies carry disease to everybody. Baby cannot protect himself. His parents should protect him.

If you permit flies in your home, you are either ignorant or filthy.

Keeping the mouth clean involves regular care of the teeth. It is now proved beyond all doubt that diseased teeth cause imperfect mastication, indigestion, and various other serious ills which are the natural result of the absorption of pus pockets at the roots. Decayed teeth are excellent places for germs to lodge and multiply. Toothache and pain lower the vitality of the whole system. A defective tooth may be decayed from lack of care; it may be of perishable structure because of lack of proper mineral foods when it was forming; or it may be so placed in the jaw as to make chewing difficult and to crowd the other teeth.

Among the causes which lead to unsound teeth in children are sicknesses such as scarlet fever, diphtheria, measles, whooping-cough, and other diseases. If food is left in the mouth it gets between the teeth and decays, causing the enamel

of the tooth to break down in a short time. If tartar is allowed to collect around the necks of the teeth they hold the germs which cause decay where they can best get in their harmful work. Where many small cavities appear at the neck of the teeth next the gums the indications are that the secretions of the mouth are acid. In this case, milk of magnesia, a solution of salt and water, or of baking soda and water used daily will help counteract the acid secretion and alkaline it.

As soon as baby's teeth appear they should have daily care. A small, soft, fine toothbrush of good quality is best. Before using a toothbrush at all it should be scalded and soaked in a solution of boric acid water to ensure its being sterile.

Upon arising in the morning and before retiring at night the little one's teeth should be carefully brushed with cool, boiled water which has a few drops of some mild liquid antiseptic dentifrice shaken into it. Most preparations of this kind hold a pure soap in solution or something of a cleansing nature which removes greasy substances.

Up to four years of age the smallest sized tooth brush will be adequate. When old enough, the child should be taught to use his brush after dinner and shown how to brush his own teeth. Teach the children to clean the tops of the teeth and the insides or back of the teeth, also to brush from the roots to the end, otherwise matter which should be removed will be driven under the tender gums. After each using, the brush should be thoroughly rinsed and hung in a draught of air. Once a day it should have boiling water turned over it. Cheap brushes in which the bristles are glued will not stand this treatment as the hot water will melt the glue.

Desserts of raw apple and fruits for children who are old enough, have a distinct dental value as they have a tendency to leave the teeth clean. With older children a toothpaste or powder should be alternated with a liquid dentifrice, and care should be taken in selecting these

that they contain no harmful ingredients. Plain precipitate of chalk mixed with a little castile soap and seasoned mildly with wintergreen, makes a very good, inexpensive powder. Sugar should be omitted, for while it improves the taste, any remaining sugar will ferment in the mouth. Powders containing orris root are not favoured because, being a finely-powdered vegetable matter, it gets between the teeth and decays there.

Toothache is simply the signal that something is wrong. A dentist should be consulted regularly, for upon the condition of the teeth largely depends the health and the susceptibility to disease. Crooked, diseased, crowded, or improperly placed teeth are now known to have a marked influence upon the health and the mental development. Keep the child's teeth clean regularly and encourage a pride in clean, even, white ivories.

Just what the purpose of the tonsils may be is not perfectly clear to medical science, but these soft, spongy bodies stand at either side of the throat ready to take up many of the germs which may have found entrance by the nose and throat route. The tonsils contain little crypts or crevices which sometimes become plugged with a yellowish, waxy material laden with germ life. Where they are present sore throat is sure to exist and frequently tonsillitis. Rinsing the mouth and throat is ineffectual. Gargling is not always pleasant. One authority on the subject says:—

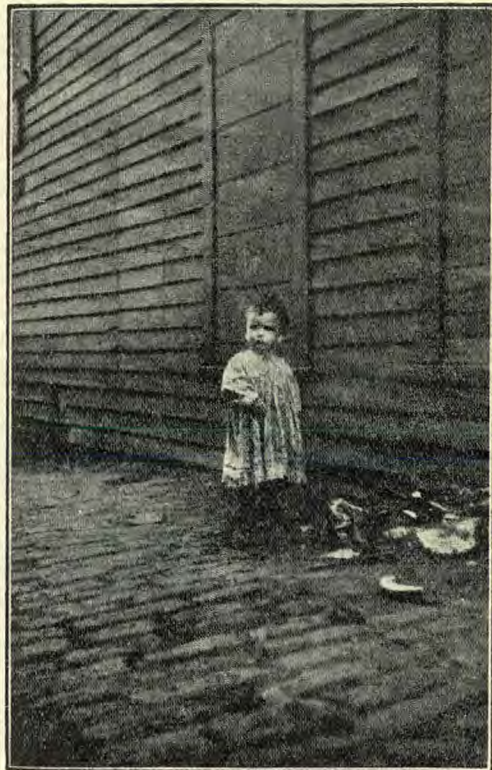
“To reach every part of the nose and throat, to relieve irritation, to free these cavities effectively of all infectious particles, to cleanse the membranes thoroughly and effectually, and finally to strengthen the disease-resisting powers of the membranes, is simply to spray the nose and throat regularly with a reliable and anatomically correct atomiser, using an antiseptic, mild, and non-irritating solution.

“In health the frequent use of the atomiser is the ‘stitch in time’ which protects the nose and throat against irritation, inflammation, or infection—giving

the tissues new life, preventing disease, preserving health.

“In sickness, the regular use of the atomiser relieves, soothes, and cleanses—bringing positive destruction to disease-breeding germs, freeing the nose and throat completely of these contaminating germs and other particles, promoting health most effectively.

“As it is so important from the stand-



THIS CHILD HAS THE WRONG VARIETY OF OPEN-AIR LIFE

point of hygiene and health that the teeth should be brushed regularly, likewise it is vitally important from the same standpoint and as a prevention against contagion of practically all kinds that the nose and throat should be sprayed occasionally, if not daily.”

It is a matter of common observation that colds frequently attack one member of the family after another. This could be prevented largely by proper disinfection of the nasal passages of the ailing

one, care of soiled handkerchiefs, and also preventive means on the part of the well ones. A child with large tonsils and adenoids or with crooked and diseased teeth is sure to "catch" everything in the way of disease with which it comes in even indirect contact.

While many of the germs find entrance through the nose and throat, they may obtain entrance to the body through the glands of the neck, and so suspicious swellings should be promptly investigated. In the same way an ear which discharges is unhealthy and should not be neglected.

It is estimated that one hundred and sixty thousand people die each year in the United States from tuberculosis. It is a communicable, preventable germ disease and children should be protected by requiring older people who have it to be careful of the sputum. Flies, careless sweeping, children creeping on dirty floors, putting money and pencils into the mouth, may all be the means of infection.

Children should be taught not to put their mouths close to a telephone mouth piece; the danger of the public drinking cup and roller towel; the necessity of keeping the hands and finger nails clean; and the grave danger which may lurk in the uncovered seat of the public toilet. Teach children discriminating care and pride in their toilet possessions, always including the individual towel!—*American Motherhood*.

The Child Who Stutters

Emma Gary Wallace

SCIENCE is doing so much to help everybody, that mothers of children who stutter have reason to be encouraged. Stuttering is distressing for the child, because the function of speech which should be spontaneous becomes a painful effort.

If the tendency to stutter is an inherited one, great pains should be taken to teach the child to speak slowly and distinctly. A physician may also be able to suggest treatment especially suited to the individual case, and special training in proper breathing and vocal exercises under a capable teacher should prove helpful.

If the habit arises from imitation, as it sometimes does, the child's companions should be observed closely and intercourse lessened or if possible entirely stopped with the one who is setting the faulty copy. Anything or any one who irritates or makes a child nervous will aggravate the tendency.

It is sometimes noticeable that a child who has learned to talk normally will suddenly commence to stutter. This is more frequent in the third and fourth years before the child has thoroughly mastered the sounds and their combinations.

Disturbances of nutrition may be accompanied by stuttering. Such a reactionary nervous disturbance is somewhat related to a condition of chorea. Again stuttering may follow acute illness or severe fright.

If it follows illness, it is generally relieved with complete convalescence. If it follows a fright, the services of a specialist in nervous diseases is in order, for it is now held that while the immediate memory of the shock or terrifying incident may be lost, the subconscious memory of that fright is retained and preys upon certain nerve centres in such a manner as to cause stuttering. Cure has been effected by skilfully leading the patient to recall and if possible to relate in full detail, the cause of agitation or fright. It may take days or weeks to draw out the incident and only the trained expert knows how to lead from clue to clue until the incident is located and the mind fully freed, relieved, and reassured, and the subtle nerve pressure removed.

Stuttering is a difficulty in voicing combinations of syllables. Stammering is difficulty in producing individual sounds. Lipping is faulty articulation. Boys are said to be much more subject to speech disorders than girls.

No time should be lost in determining the cause of speech defects before faulty habits are established.

The hearing may be impaired, or local conditions of mouth, throat, and nose may need attention. If the trouble arises from malnutrition the food should be carefully regulated under medical advice.



Your Good Health

ELIZABETH I. ADAMSON, B.A., M.D.

How many of our mothers and fathers know of the Modern Health Crusade?

It is a system of education being introduced into thousands of elementary schools, a movement in which nearly three million American school children, qualified as crusaders by the daily practice of health classes, are participating. In view of the fact that we are controlled more by the *habits* formed in our youth than by the knowledge acquired, it is simpler as well as more effective to develop habits conducive to good health than it is merely to teach and preach health.

Twenty years ago public health organisations were either unformed or in their infancy. The adults of our country have, consequently, not formed "good health habits" as the children are now doing. Many of us have reached middle life without the knowledge that good health is a condition arrived at by using common sense and by forming sane habits of living. We must discard the insanitary and senseless rules of our youth and adopt the newer and more efficient ones.

Many persons are greatly disappointed if they seek a physician's advice and he prescribes only simple rules of living. They wish for medicine or a complicated course of treatment. Keeping good health is *not* an intricate process. We adults must have our Modern Health Crusade, and adopt habits that may appear unnecessary or unwise according to the early teaching we received.

Civilisation is tending to make us creatures of comfort. We are learning to obtain the most enjoyment from a lazy life. The manner of living is being made too convenient. We even shrink from the discomfort of sufficient ventilation. The average business man sleeps in an ill-ventilated room, goes to work in a closed street car or train, works in an office of a temperature of 70° F., returns home in another "stuffy" car, eats a hearty meal and retires. How much real fresh air has he inhaled during the day? This routine of life goes on day in and day out and inertia, often ill health, follows in its train. Fresh air is unquestionably the cheapest and the best tonic that was ever known. It stimulates the appetite, is conducive to sound and restful sleep and promotes both the feeling and the condition of well being.

In small towns and the rural communities as well as our cities, few houses are built with sleeping porches. Yet the porches most houses have might be built or remodelled to serve as sleeping porches. Let us remember that practically one-third of our lives is spent in bed and how important it is that during that time we should breathe absolutely fresh air, especially if necessity demands that the other part of our time is spent indoors. A sleeping porch should be considered as essential to a house as an adequate heating system.

If, for reasons of economy (there is no other sound one), a sleeping porch cannot

be had, the best substitute is a bedroom with exposure on two sides. Open all the windows at night as much as possible.

Such ventilation, however, demands suitable bedding. There is a strong tendency for people to tire themselves with too heavy bedding. Bed clothes should be clean, light in weight, but warm. Woollen blankets or comforters are warm and yet not heavy. A very unclean and insanitary custom of our forefathers was to



WHY HIRE A MAN TO DO WORK YOU CAN DO YOURSELF?

sleep between blankets that were washed probably not more than once a winter. The bedding that is in contact with the individual should be of cotton or linen and should be changed at least once a week. Clean sheets are not only more sanitary but they are more restful and promote a sounder sleep. If the sheets seem cold do not discard them but wear heavier night garments. A short-sleeved, low-necked gown cannot afford adequate covering, regardless of the amount of bedding. If one has a tendency to cold feet, sleeping stockings will cure this. Do not

lessen the amount of ventilation simply because one is cold. The remedy is to be had in warmer bedding or night clothing.

Another injury that civilisation is inflicting upon us is in the matter of decreasing our necessary physical work. Do not hesitate to perform as much physical work as you are able. If you have a front yard, why hire a man to rake the lawn or gather in the leaves when it is the ideal exercise for the average woman or man? If you have no lawn, then do not allow a day to pass without walking at least three miles, preferably in the country. Indoor exercise is never so beneficial as that taken out of doors, but great benefit can be had by throwing open the windows and going through vigorous calisthenics for a half hour twice a day. Join a gymnasium or swimming class or in some manner take a sufficient amount of moderate exercise daily. Because a man or woman has passed thirty is no reason why their time should be spent in a sedentary fashion.

Another invigorating habit is a cool spray or shower every morning. It not only makes one feel more energetic but it lessens the tendency to colds. It increases circulation, thereby aiding the digestion and assimilation of foods. The skin is not only a covering for our bodies but it is intended to be an accessory waste disposal system. If kept in healthy condition it throws off a very appreciable amount of waste products, thus aiding the kidneys and lungs. To keep the skin fit, a warm bath at least three times a week is necessary. With warm baths at night and a cool shower upon arising, a person is made vigorous and energetic. If one should find that he is cold and blue after the cool shower, this means that he has not reacted properly or that he has not had a sufficiently brisk rub afterwards. Such a person should not attempt cool bathing, but there are, fortunately, few people who do not react well.

Suitable clothing is essential for good health. The great trouble in winter is often that the houses are too warm to permit of our wearing heavy underwear,

consequently when we go out our bodies are chilled. Light wool-and-silk underwear (or the best substitute the purse will afford, as fleece-lined cotton) should be worn in a cool climate. If it is found uncomfortably warm indoors, the houses can be kept cooler. A house with a temperature of between 60° F. and 65° F. is comfortable if a person is dressed properly, as no chilling occurs upon going out.

It is an unwise policy to overdress when taking exercise. For example, the same amount of clothes should not be worn for an automobile ride as when one goes walking. The body generates much heat when one is exercising and less clothes are needed accordingly. Likewise, in warm weather one must not over-burden himself with clothes; it is fatiguing and weakening. Underwear should be changed at least three times a week and in warm weather a daily change is desirable. Clothes that bind the body are necessarily less cool than loose ones.

With frequent bathing, suitable clothing, and sufficient exercise one can aid in the prevention of constipation with its attending headaches and drowsiness. No other result from careless living can produce a longer train of symptoms than constipation. With perseverance and patience it can usually be corrected by a suitable diet. The correct diet, however, may be a matter of individual need. If the constipation persists despite exercise and the ordinary anti-constipating diet, such as whole wheat and fruits, a physician's advice should be sought. Do not allow yourself to become habitually constipated. Have a regular time for attending to the needs of your body, for this part of our daily routine is far from being unimportant or insignificant.

For those who have not formed good health habits, or who through hurry and much business are likely to forget them, a set of rules which embody the advice given in this article follows. Hung up in one's bedroom they will serve as a reminder at first, but this teaching should soon become a definite part of daily life.

These simple rules are enjoyable ones and they should mean better health and happiness, a longer and more efficient life.

A good idea is to have a system of marking the children for keeping the rules—or breaking them.

Daily Health Rules

1. Sleep or lie in bed at least eight hours daily, between ten p.m. and six a.m. Relax completely, do not think of the day's worry and business. Get up smiling.

2. Keep windows open or stay out doors to exercise and work and sleep, if possible. Breathe fresh air always and through your nose. Take at least thirty deep breaths every day.

3. Take at least one hour's exercise daily in the open air. Try to walk three miles out of doors.

4. Three meals at regular intervals eaten slowly. Take at least a half hour for each meal. Chew your food thoroughly. Do not wash it down with liquids. Eat wholesome food including coarse breads, cereals, green vegetables, fruit and thoroughly cooked starchy foods. Avoid pickles, spices, meat diet, much pastry, fried or soggy foods, and much sweets. Do not eat between meals.

5. Drink a quart of water daily. Drink a glass full before each meal. Do not drink coffee or tea. Avoid alcoholic drinks and soft drinks containing injurious drugs. Drink a quart of milk daily.

6. Brush your teeth thoroughly at least twice a day, use dental floss at night. Watch for cavities and have them attended to by a qualified dentist as soon as discovered.

7. Take three hot baths a week and if possible a cool shower or spray every morning. Have a regular time for attending to the needs of your body. Do not allow yourself to become constipated.

8. Wash your hands before each meal. Whenever you cough or sneeze, turn your head and cover your mouth with your handkerchief. If you must expectorate do so only where it can be removed before person or fly can touch it.

9. If you feel tired, do not take a

"headache pill" and keep going, but relax, go to bed, and rest. If that tired feeling continues, call a physician.

10. Remember that a healthy, normal individual feels rested in the morning and

only slightly fatigued after the day's work. Enjoy your work, get the fullest amount of satisfactory service out of each day. Create a mental attitude to show others that you are well and happy.

Hygiene of the Mouth for Children

EMMA GARY WALLACE

A CLEAN, well-cared-for mouth is of much greater importance than fancy clothing or fine furnishings. There is always a direct relation between the condition of the teeth and the general health.

A well-cared-for mouth is one of the essentials to good health. An unclean mouth and decayed or diseased teeth make a fine camp ground for dangerous germs and furnish the means to poison all the food and air taken into the body.

Sound, clean teeth mean so much to the happiness, health, and prosperity of every person that proper care should be given them systematically from infancy to old age. To neglect the teeth is to store up trouble sooner or later. The child with poor teeth or sore gums will masticate imperfectly, and indigestion and nervous troubles are likely to follow. Cavities in the teeth have been shown to be the lodging place of the bacteria of diphtheria, pneumonia, tuberculosis, influenza, typhoid fever, and many other germ diseases. When a neglected condition of inflammation is present in the mouth, it may spread to the Eustachian tube (connecting throat and ear) and affect the hearing. It is also claimed that tonsillitis and adenoid vegetations are sometimes due to neglected teeth.

The mother who fails to give proper attention to the care of her own mouth is not self-sacrificing to a good purpose. Her health is sure to suffer and so she is bound to rob subsequent offspring of part of their birthright of vitality.

It is such a common thing to hear the family of a little one rejoicing over "baby's first tooth," that we sometimes quite forget that every child is born with teeth.

Of course, these are not visible at first as they are enclosed at birth in little sacs which rest in the depression of the jaw. Once in awhile the papers report a case where a child is born with a well-developed tooth and Dr. Holt records a family in which this peculiarity manifested itself for three successive generations.

As baby grows and thrives, the teeth become fixed in place by calcification of their roots and gradually push their way upward through the gums. Breast-fed babies usually cut their teeth earlier than those fed artificially. At the time of the cutting or eruption of the teeth there may be swelling and inflammation of the gums, an excessive flow of saliva, and some digestive disturbance. It is decidedly unsafe though to attribute all systemic disturbances between six months and two years to difficult dentition, as other troubles of a serious nature may be overlooked. The responsibility of decision should rest with the physician.

At two and a half years of age the child should have as many teeth as it has fingers and toes, and these should have regular attention. Even before the coming of the teeth, baby's mouth should be cleansed twice each day very gently with a fresh piece of sterilised gauze and a solution of boiled water and boric acid.

As soon as a tooth presents itself, it too should be cleaned and the gums carefully massaged. If the mother or nurse uses a piece of gauze over her finger for this purpose, her hands should be scrupulously clean. A swab of cotton over a toothpick is sometimes recommended, but whichever is employed, extreme care should be taken

not to injure the delicate mucous membranes.

As soon as the little one is old enough, he should be taught to use a small toothbrush of his own. Purchase one of good quality and soak it first in boiled water to tighten the bristles. A child learns to dislike and to fear a brush which sheds bristles in his mouth and throat.

The teeth should be brushed the first thing in the morning, the last thing at night, and after each meal. Once the habit is established, nothing is thought of the very few moments' time it takes. The morning cleaning is important because during sleep the tongue and mouth-fluids are not assisting in keeping the teeth clean. The night cleaning is also important so that impurities present in the mouth may not be drawn into the system. This is a good time to teach older children to use dental floss. Teach them to know that if it comes from between the teeth ragged and frayed it means that there is a cavity hidden from sight, or tartar, or a defective filling and that the dentist should have an opportunity to repair the trouble at once.

A good tooth powder or paste should be used once a day. Toothbrushes should be hung in a current of air and frequently sterilised. Once a day clean the teeth with a solution of bicarbonate of soda (common baking soda) and water, or milk of magnesia and water. Decay is often caused by an acid condition of the saliva. This acid attacks and dissolves the enamel especially about the "necks" of the teeth—that is, near the gums. Such places are painful to repair and when the dentine beneath the protective enamel covering is reached, the decay is rapid. The nerves of teeth, eye, and ear are connected, and so poorly cared-for teeth may occasion earache, headache, and pain in the eyes.

The first teeth should be attended to by the dentist so that he may make timely

correction of threatened irregularities as well as to repair defective places. The premature loss of needed chewing surfaces is serious, and if extensive, means an undeveloped jaw and a change in the contour of the face.

Thorough mastication of food should be insisted upon, that the saliva may be thoroughly mixed and so do its part in digestion, so that the surfaces of the teeth may be polished, the jaws and muscles developed, all old lodgments of food removed, and the food be presented to the



TOOTHBRUSH DRILL IN AN AMERICAN SCHOOL

stomach in a condition for assimilation.

By proper attention to the mouth and teeth during the period of gestation, the expectant mother need not sacrifice her teeth. Her physician will give her something to replace the limes and phosphates now required for other purposes, and her own care to keep the mouth secretions thoroughly alkalined will do much to keep them in order.

According to a most helpful bulletin issued by the New York State Department of Health, statistics gathered from all over the world, estimate that from seventy to ninety-five per cent of all school children have decayed teeth; that time spent in putting teeth in order was far less than time lost and disability caused by diseased teeth; that the cost of keeping the teeth in order is more than compensated by better health and consequent reduction of medical expenses.

The teeth are too valuable to neglect. The mouth is the great intake of the body and should have scrupulous care to keep it healthy and clean. Here as elsewhere, a stitch in time saves nine, and in these days good teeth will save doctors' bills.

First-Aid Equipment for the Home

THE success with which one is able to cope with an emergency depends, not alone upon knowing what needs to be done, but upon having at hand the facilities to do it with. When the suburbanite's home caught fire it might have been saved had fire buckets been in readiness for use. While the family were scurrying hither and thither, rushing to the neighbour's for utensils in which to carry water, the fire got beyond control and the home was destroyed.

In cases of "sudden illness" or of "accidents" in the family, measures of treatment which can *at once* be put into operation often turn the scale between life and death. Every home may well include as a part of its furnishings an equipment for giving simple treatments for the relief of pain and first-aid in case of sickness and injury. Fortunate indeed would be the household where such an equipment is never needed; fortunate also that home where it is at hand when needed.

No great outlay is necessary for such an outfit, but to be available with the least possible delay when wanted it is essential that it have some permanent location, a cupboard shelf, or a set of drawers unused for any other purpose, and so arranged that each separate article has its own special place, where, even in the dark and when one is in a hurry, it can be sure of being found. The following is a list of first essentials:—

- Clinical or fever thermometer.
- Bath thermometer.
- Ice bag.
- Hot water bags (one large, oval, one long bag).
- Enema outfit.
- Fomentation cloths.
- Cheese cloth, mackintosh and flannel for compresses and packs.
- Two Turkish towels.
- Roll of adhesive plaster.
- Sterilised absorbent cotton.
- Sterilised gauze, one package.

Three or more rolls of bandages (varying width).

Medicine dropper.

Atomiser.

A package each of bicarbonate of soda and boracic acid.

A bottle of some bland sweet oil.

Tube of vaseline.

Two white enamelware bowls.

Camphor ice.

Castile soap.

A good pair of scissors.

Hand and nail brushes.

Other useful articles may be included, but with these as a beginning one is fairly equipped for ordinary emergencies.

In many cases of accident and in communicable disease a thorough disinfectant is required for cleansing wounds and hands. Strong soap suds disinfect, and in many instances are all that is needed, although not sufficiently powerful to be depended upon for destroying disease germs. Most chemical disinfectants are highly poisonous, and while needing to be at hand when required should be kept out of reach or securely locked away, where children may not have access to them. Lysol answers the purpose of disinfection, printed directions for use being on each bottle. A finger cut with a clean knife needs only to be washed with soap and water before dressing. A wound made with an unclean instrument ought to have a cleansing that will be destructive to germs.

Germ diseases are so often accompanied by fever that when a person, particularly a child, is indisposed it is of first importance to know the body temperature. When taking this by mouth the end of the clinical thermometer containing the mercury is placed under the tongue, on either side, the lips being kept tightly closed during the entire time of taking the temperature, which should be from two to five minutes.

With a baby or a delirious patient it would be unsafe to take the temperature

in this way, as he might bite off the bulb and swallow the mercury. Should such an accident occur, give white of egg to the patient and send at once for a physician. For small children, it is best to place the thermometer in the rectum, after first oiling the bulb, for five minutes. The temperature may also be taken by placing the thermometer in the child's arm pit, after having wiped it dry. Hold the arm tightly to the side, flex the elbow, and place the hand on the opposite shoulder, allowing ten minutes for registration.

The normal temperature of the adult body is 98.6° F., that of a young child slightly higher. A temperature above 100° is called fever; that above 105° indicates a serious condition. The temperature taken by rectum will be one degree higher than when taken by mouth, the axillary temperature about half a degree lower. A subnormal temperature is a matter for much concern, a temperature below 95° being extremely dangerous.

Before being returned to its case a thermometer should be washed in cool soap suds, well rinsed in clean water, and dried. In case of communicable disease a disinfection before washing is also essential.

A regular bath thermometer is incased in wood to protect it from breakage. If such a one is not obtainable the ordinary atmospheric thermometer can be used for obtaining the temperature of water for baths or treatment.

No article on the list is likely to be more frequently needed than the hot water bag, which when filled is an effectual means of relief in case of pain, earache, stomach ache, toothache—almost any ache, indeed, is subdued by its soothing influence. In cases where moist heat is required, a flannel cloth wrung out of hot water and then wrapped about the bag affords a very effective means for a prolonged application of heat.

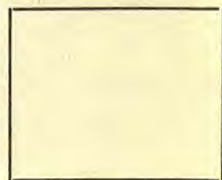
The cloths employed for giving fomentations should be about a yard square, all wool and of soft texture. A single blanket cuts into four good fomentation cloths, which is not too many to have for general use, although thorough treatment can be given with but two cloths.

The quantity of material to be provided for compresses and packs must depend upon conditions and the size of the family. One may begin with a yard of mackintosh, two of flannel and ten of cheesecloth, adding more before this is entirely used up.

Bandages can be prepared from the good parts of worn sheets or pillow slips if perfectly clean. Rolls six to eight yards in length are most convenient—one inch wide for fingers, two inches for feet, two and one-half to three inches for head and arms, and four inches for legs. A good way of keeping them in condition for use is to seal the rolls in a perfectly clean glass fruit jar.—*Good Health Magazine.*

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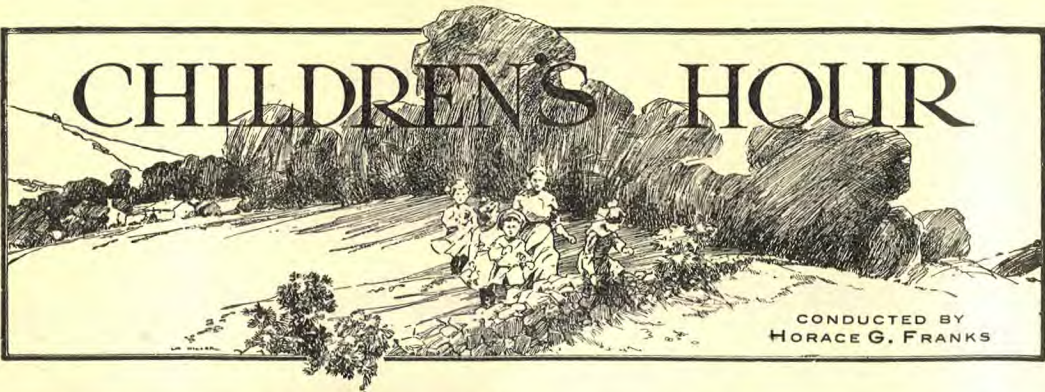


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Fighting Jack Frost

VERY few children are fond of cultivating a too close acquaintanceship with Jack Frost, because although his appearance is bright and sparkling, his nipping fingers are often all too cruel. Indeed, they are so cruel that they sometimes pull the oranges off the trees in some countries, as, for example, California.

California, you all know, is a land where oranges and lemons grow by the thousands, and since the fruit crop brings in to the growers £11,000,000 a year, they have banded themselves together in a great army to fight this relentless enemy, Jack Frost. He does not often visit them,—only once, perhaps, in five years,—but when he does he finds a warm welcome waiting him. Night after night orchardists on motor cycles patrol the district, and at the least sign of frost they telephone to every orchardist in their section. All along the routes travelled by

these midnight watchers there are thermometers attached to trees and telephone poles, about three to every square mile, placed of course in the very coldest spots. Each rider covers about twelve miles at a round, records his readings on a card, and gets back to headquarters within fifty minutes. At the first sign of frost every orchardist is notified within half an hour. And then the work begins!

Placed in readiness all along the orange and lemon groves are gasoline heaters with long spouts out of which the flame bursts, and on the frost alarm being given, the whole family turns out of bed to light these heaters. Jack Frost, of course, does not scatter his cold particles broadcast, but strikes in certain spots, and since these danger spots can be determined almost to the inch, it is an easy task to light the special "flame-throwers" in the sections of the orchard that are threatened. The heaters are kept alight for about three-



THE WHOLE FAMILY LIGHTING THE HEATERS
IN THE ORANGE ORCHARD

quarters of an hour, and then put out, while the tired orchardist and his family go back to their beds, after taking off their "gas-masks" which they wore to keep the fumes of the oil from entering the lungs.

One enterprising orchardist stretched large sheets of white cloth over his groves until the orchard looked like a huge tent. It certainly kept the frost away, but the idea proved too costly to continue, for one good wind ripped the whole awning to pieces.

So we can see that, while it would be pleasant to live in a Californian orange orchard during the day when oranges were ripe, it would sometimes be far from pleasant to be called up in a frosty night! It is said, moreover, that some orchardists are so lazy that even after the telephone has rung twice, they refuse to get up, although their neglect might result in the loss of a crop of oranges valued at £1,000.

An Invading Horde

I WAS reading recently a most interesting description by a naturalist of a marching army of ants. The writer, Mr. William Beebe, has travelled extensively in the jungles of British Guiana, and relates the following experience in one of his works:—

"I was dozing quietly in my hammock, glad to escape for an instant the insistent screaming of a cicada which seemed to have gone mad in the jungle heat, when a low, rustling caught my ear—a sound of moving leaves without wind; the voice of a breeze in the midst of breathless heat. There was in it something sinister and foreboding. I leaned over the edge of my hammock, and saw coming toward me, in a broad, irregular front, a great army of ants, battalion after battalion of them flowing like a sea of living motes over twigs and leaves and stems.

"I knew the danger and I half sat up, prepared to roll out and walk to one side. Then I gaged my supporting strands; tested them until they vibrated and hum-

med, and lay back, watching to see what would come about. I knew that no creature in the world could stay in the path of this horde and live. To kill an insect or a great bird would require only a few instants, and the death of a jaguar or a tapir would mean only a few more. Against this attack, claws, teeth, poison fangs would be idle weapons.

"In the van fled a cloud of terrified insects—those gifted with flight to wing their way far off, while the humbler ones went running headlong, their legs, four, six, or a hundred, making the swiftest pace vouchsafed them. There were foolish folk who climbed up low ferns, achieving the swaying, topmost fronds only to be trailed by the savage ants and brought down to instant death.

"Even the winged ones were not immune, for if they hesitated a second, an ant would seize upon them, and, although carried into the air, would not loosen his grip, but cling to them, obstruct their flight, and perhaps bring them to earth in the heart of the jungle, where, cut off from their kind, the single combat would be waged to the death. From where I watched, I saw massacres innumerable; terrible battles in which some creature—a giant beside an ant—fought for his life, crushing to death scores of the enemy before giving up.

"They were a merciless army and their number was countless, with host upon host following close on each other's heels. A horde of warriors found a bird in my game bag, and left of it hardly a feather. I wondered whether they would discover me, and they did, though I think it was more by accident than by intention. Nevertheless, a half dozen ants appeared on the foot strands, nervously twiddling their antennæ in my direction. Their appraisal was brief; with no more than a second's delay they started toward me. I waited until they were well on their way, then vigorously twanged the cords under them harpwise, sending all the scouts into mid-air and headlong down among their fellows. As far as I knew, this was a revolutionary manœuvre in

military tactics, comparable only to the explosion of a set mine.

"But even so, when the last of this brigade had gone on their menacing, pitiless way, and the danger had passed to a new province, I could not help thinking of the certain inexorable fate of a man who, unable to move from his hammock or to make any defence, should be exposed to their attack."

While we are talking about the strange manners and customs of the inhabitants of the ant realm, it will be interesting to note another extraordinary march by an ant army, the following account of which I read recently in an English paper:—

"In the summer of 1911, after scouting had continued for some time, Emery noticed one afternoon a growing excitement and the issue of a platoon of sixty Amazon ants. But they only went a couple of yards or so, and then returned. About an hour afterward there was another sally, which made straight for a colony of brown ants and came back laden with prisoners (babies and children, as usual). Going and coming several times, the Amazons got over 450 prisoners that evening. It is rather a despicable business—this kidnapping of children for slaves—but the Amazons do it well. In one raid, which began about 5 o'clock in the afternoon, over a thousand prisoners were taken before a quarter to seven, when Professor Emery's son stopped counting."

The Amazons are not the only species of ants which act as slave-raiders, neither are their raids as cruel as you might expect. The captured slaves are not treated as cruelly as men have treated their slaves in the past, because the ants are trained in their new homes to become good workers. Indeed, they are made members of the family and live as contentedly as though they were the children instead of the slaves of their captors.

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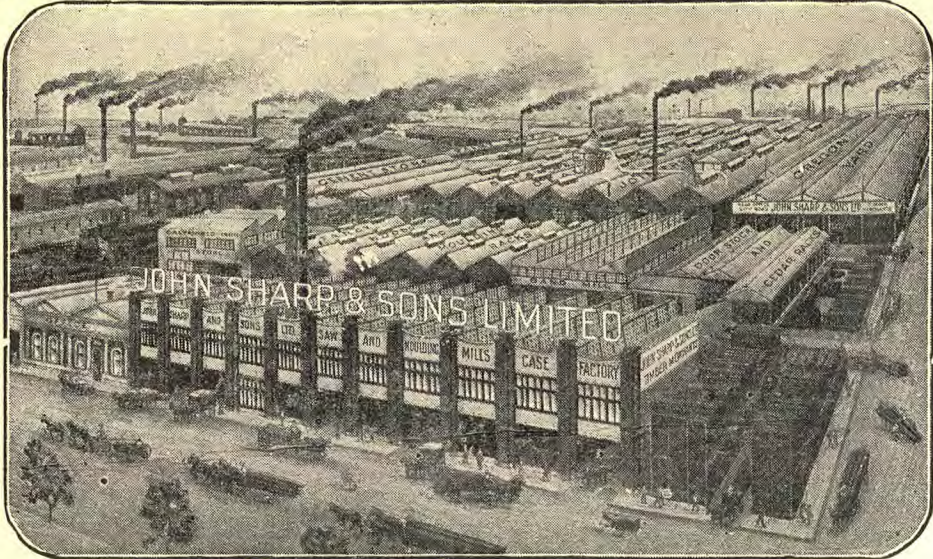
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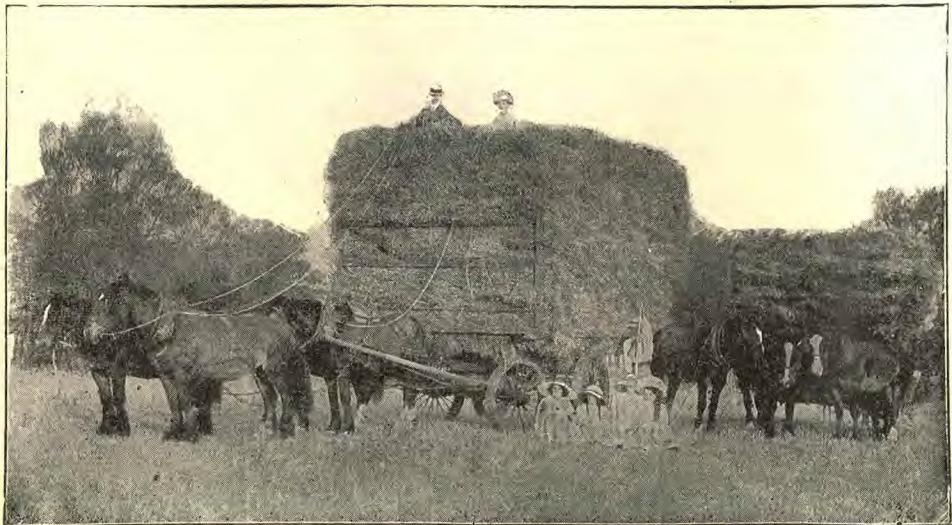
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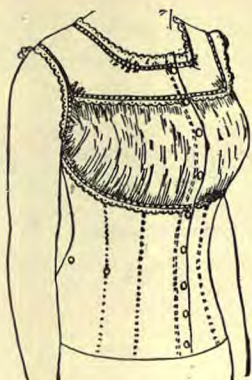
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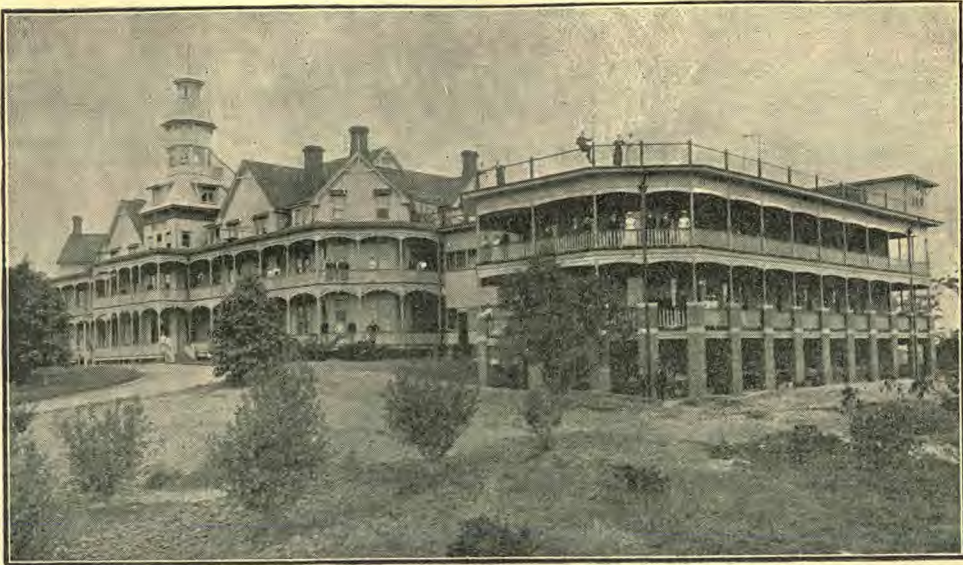
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THIS Institution is located among the picturesque hills of the North Shore-Hornsby railway line, and stands over 600 feet above the level of the sea. It is about twelve miles from Milson's Point, and is one of many similar institutions scattered throughout the world. The Institution has been established for about eighteen years, during which time it has been patronised by thousands of people from every part of Australia and New Zealand, who have highly appreciated the help derived from the various treatments prescribed, including Hydrotherapy, Massage, and Electricity

Among the cases successfully treated are disorders of the nervous system,—such as nervous prostration, neurasthenia, etc. All the life at the establishment is adapted to the building up and reconstruction of the nervous system.

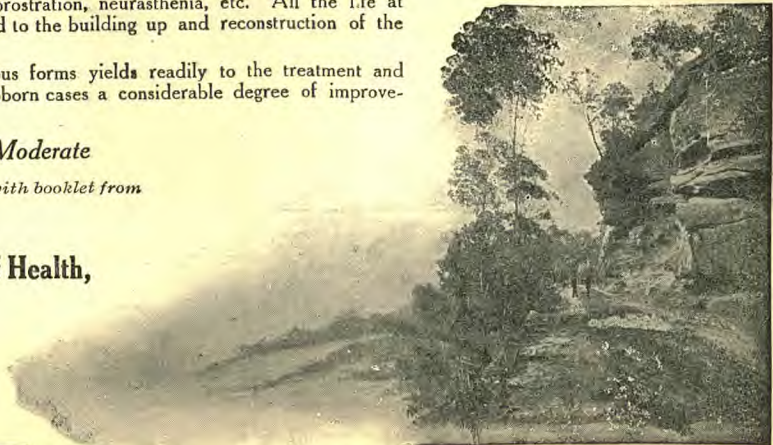
Rheumatism in its various forms yields readily to the treatment and diet; even in the most stubborn cases a considerable degree of improvement will be secured.

Rates Very Moderate

Further information with booklet from

**The Manager,
Australia's Home of Health,
Wahroonga,
Sydney, N.S.W.**

Phone. Nos. 683 and 684
WAHROONGA



One of the Adjacent Beauty Spots

GRANOLA



PLACE
GRANOLA

№1 INTO BASIN
WITH DRY
SPOON
(See Recipe)



POUR
BOILING WATER
OVER **GRANOLA**
And stir quickly with
fork to separate grain

№2



№3

PLACE COVER
QUICKLY OVER
BOWL TO RETAIN
STEAM, LET STAND
A FEW MINUTES.



№4

RESULT—TASTY
SOFT GRAINS—
NOT MUSH!

ADD MILK, CREAM OR
STEWED FRUIT TO TASTE

What could be easier?

ALWAYS READY



Nature's Breakfast Food

Enriches the Blood
Strengthens the
Nerves
Forms Bone and
Muscle
Supplies the needs
of growing children

ALWAYS READY
NO COOKING

Saves fuel and time

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