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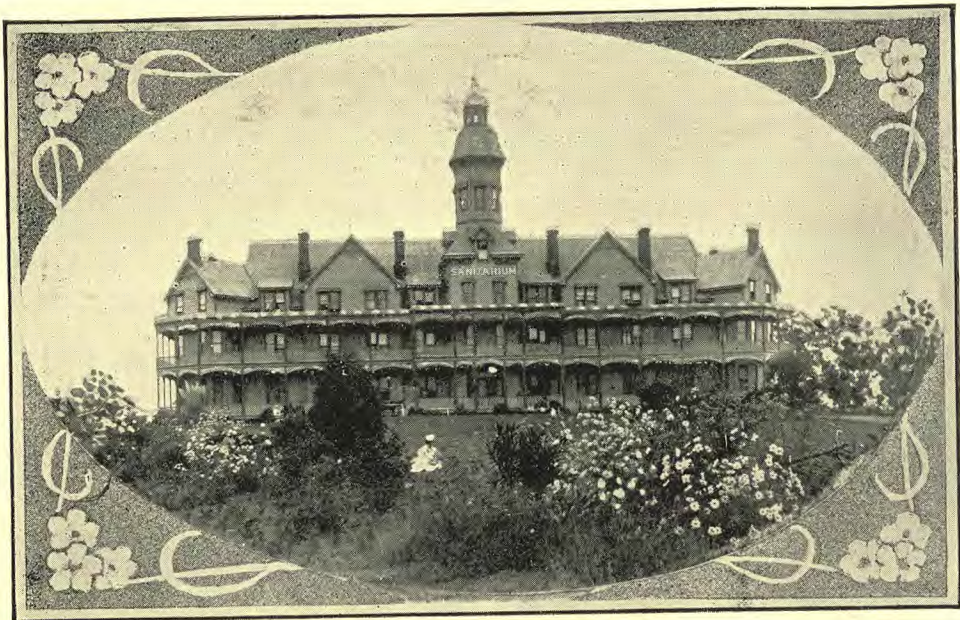
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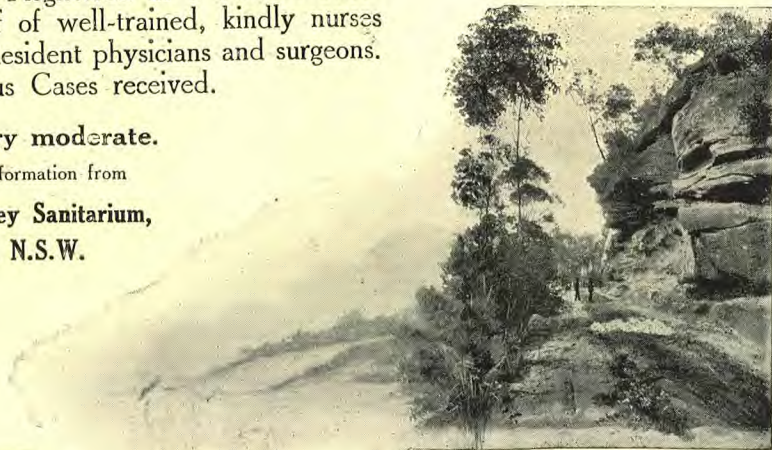
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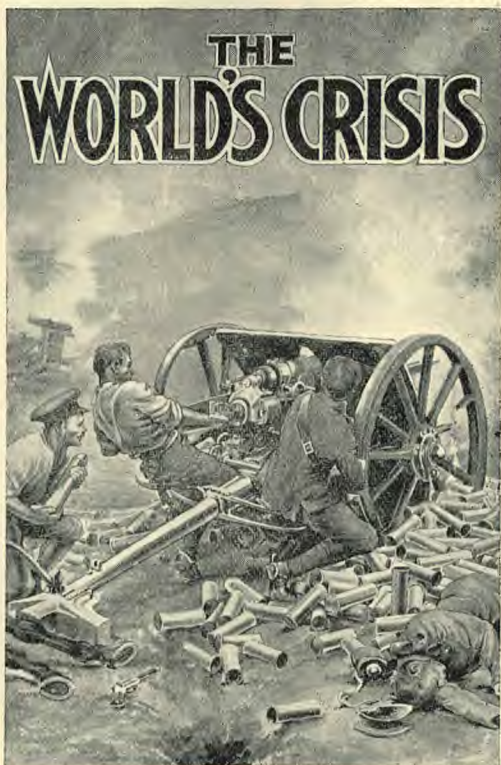
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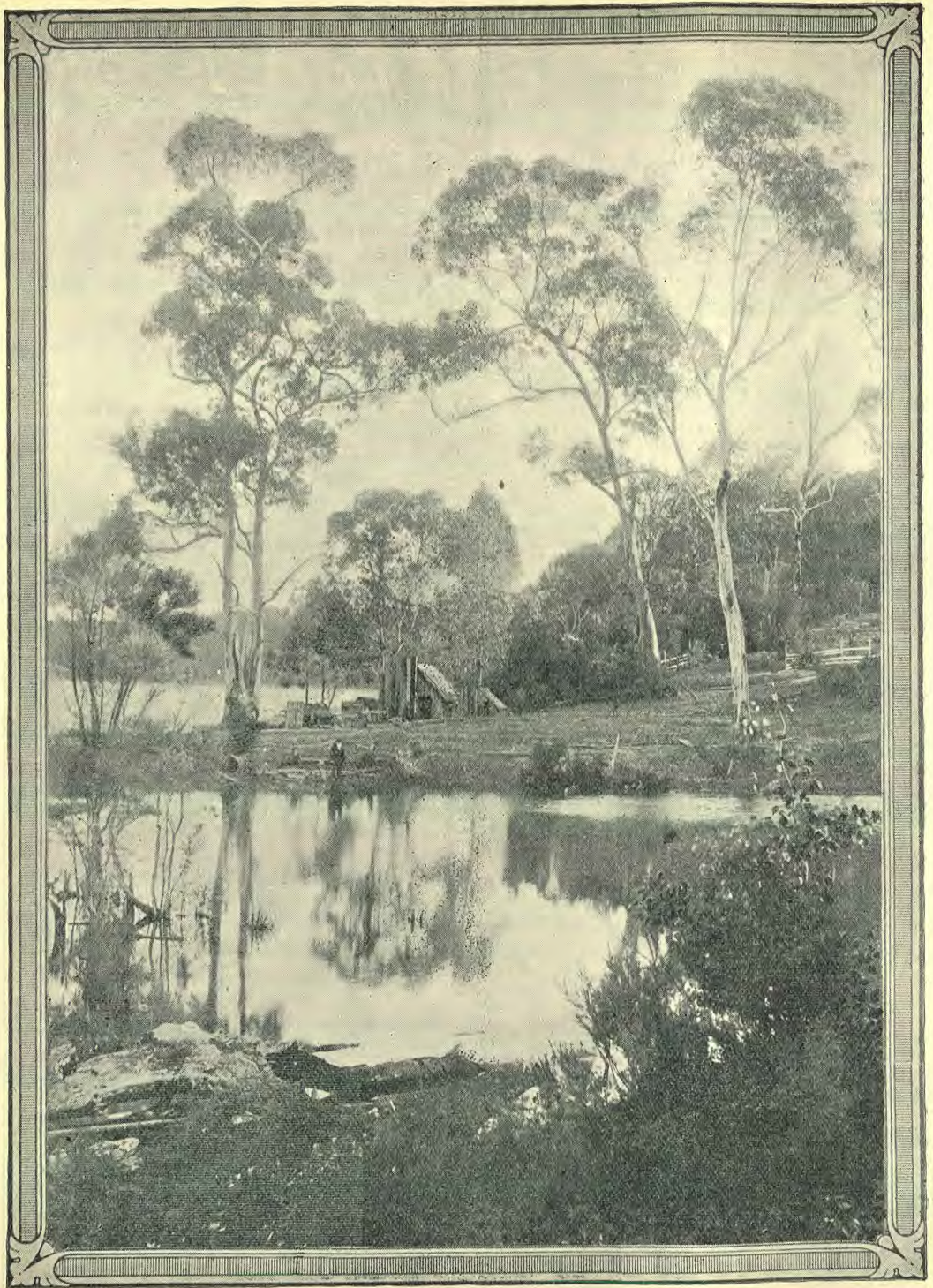
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LIFE &

HEALTH



Vol. 5

JUNE-JULY, 1915

No. 3

Milk

MILK is practically the only animal food that contains all the elements necessary for the development and upkeep of the body.

There is a considerable difference in the composition of the milk of the different animals, for the rate of growth and the climatic surroundings vary to quite a large extent. The calf, for instance, will double its weight in forty-seven days and the rabbit in seven days, but the human child takes 180 days to double its weight. The difference in composition is especially noted in the proteid element, that which is especially concerned in the building up of the various tissues of the body. The milk of the rabbit contains over ten per cent of proteid, that of the cow about three and a half, and that of the human being only one and a half. Again, one animal requires much more heat-producing food than another. Fat is the chief heat-producing element in our food. One gramme ($15\frac{1}{2}$ grains) of proteid or carbohydrate will when fully oxidised produce $4\frac{1}{10}$ calories of heat and energy, but the same quantity of fat produces more than three times that amount, viz., 9^3 calories. Thus we would expect that the milk of animals in the cold polar regions must contain more of this heat-producing ele-

ment than that of animals in the more temperate climates. The milk of the whale, for instance, contains 43 per cent of fat, while that of the cow contains from $2\frac{3}{4}$ to $4\frac{1}{2}$ per cent. Milk is essentially a food for the young animal, and its composition under normal conditions exactly corresponds with the body it builds. Hutchison, in speaking of the variations in human milk, writes: "The fact that a woman has a feeble child is no proof that the milk is at fault. On the contrary, it was found that the milk of women with feeble infants was rather richer than when the suckling was robust. It would almost seem as if there was here a provision of nature to supply the child which has only strength to draw a small quantity of milk with a food of proportionately better quality."—*Food and the Principles of Dietetics*, page 439. The fact that a quart of fresh milk is equal to nearly a pound of the best beef steak will show its importance as a food.

There is no food that varies more in composition than milk. "Milk," according to Pearman and Moor, "forms in many cases the entire diet of children and invalids, and under the present conditions it varies so enormously that a doctor, in prescribing so much milk per day, does not know within 30 per cent how much

nourishment is given." "Excepting meats," says another analytical writer, "there is probably no one article of food which is liable to so wide a variation in its percentage composition as the milk supplied to the consumer. The variations are so great, in fact, as to make it entirely possible that one man may pay nearly twice as much as his neighbour for the same amount of nutrients when both buy it at the same price per quart."—*The Use of Milk, United States Department of Agriculture, Farmer's Bulletin, No. 363.* When, however, we have a mixture of milk from several cows its composition does not vary to such an extent. One cow's milk may be productive of much harm, for it may be poor in quality or contain germs of disease, whereas with a number of cows there is an average composition, and if there be disease in one cow, it will be retained in a diluted form, and the system will the better be able to grapple with the diseased micro-organisms. However, for a family, there is nothing like a good, healthy cow, producing a fairly rich milk. The cow can be kept clean, well fed, and the milking can be done under good, hygienic conditions. As has already been stated, milk contains all the elements necessary for the building and the upkeep of the body, viz., proteids, carbohydrates, fats, and mineral matters. We will now deal with each of these important constituents.

Proteids

The proteids of milk constitute only about three per cent of its total weight. The chief proteid is casein, which is kept in solution by its combination with phosphate of lime forming not a clear but an opalescent fluid. There is no food so valuable in disease as milk. Its value does not depend wholly on its liquid nature and the ease with which it can be taken; its constituents are exactly what the body needs, and they are very easily digested. The proteids of milk are more easily digested than any other proteid either in the animal or vegetable kingdom. Advantage has been taken of this fact in

preparing many of the patent foods at present on the market, such as Plasmon, Protene, Sanatogen, Casumen, Brogene, etc. These contain about eighty per cent of proteid, chiefly in form of casein. Those who can take milk freely do not need these preparations, but they are certainly good, though very expensive. For those who need proteids, but cannot take milk in any form or who cannot take it in sufficient quantity, casein possesses some special advantages over other varieties of proteids. It is, for instance, readily capable of fixing acids, and so neutralising them and lessening their irritability. According to Brandenburg "the power of casein in this respect is three times greater than that of an equal weight of beef." This property makes milk and the casein preparations of special value in those cases of dyspepsia associated with too much acid in the stomach.

Again, casein contains phosphorus in the form of phosphate of lime and of potash, very essential constituents of muscle and nerve tissue. Phosphorus in casein of milk is in an organic form, and consequently readily enters the blood. All medical men now recognise that the natural constituents of our body, such as iron, phosphorus, potash, etc., are much more valuable in our ordinary food than when given in an inorganic form, as in the shape of ordinary drugs.

Again, casein, unlike the proteids of flesh foods and legumes, is incapable of yielding uric acid by its decomposition, and therefore it can be freely used in gout, rheumatism, and allied complaints. Lastly, the casein of milk is so easily and rapidly absorbed that there is little time for putrefaction in the intestine. Milk is undoubtedly a good food in flatulent dyspepsia. It should, however, be given with well-prepared cereal foods, and not mingled with other foods, such as eggs, meat, vegetables, etc. This statement, of course, especially refers to persons with disordered digestion. Milk and casein preparations should not be given with acids, which precipitate the proteid in coarse, indigestible flakes.

An invalid requires about eighty grammes of proteid daily, and this quantity would be covered by about 100 grammes ($3\frac{1}{2}$ ounces) of such casein preparations as Plasmon or Casumen. Sanatogen has about the same nutritive value as the other preparations of casein, but it contains in addition five per cent of glycerophosphate of sodium. Hutchison, in speaking of this preparation, writes: "The organic phosphorus which it contains appears to be fully assimilated, and is believed to exert a tonic effect upon the nervous system. Such an influence is conceivable, but is very difficult of proof, and the claims of Sanatogen in this respect rest upon a purely empirical basis, although it is only fair to add that numerous clinical observers have testified to the benefits from its use."—*Food and the Principles of Dietetics*, page 145.

Proteids of Human Milk

The proteids of human milk are in a much more easily digestible form than those of cow's milk. The calf is much bigger than the child, and develops more rapidly, consequently cow's milk is richer in proteid, mineral matter, and to some extent in fat. The two chief proteids of milk are casein and albumen. In cow's milk there is four of casein to one of albumen, but in human milk the proportion of the two are equal. Now albumen is much more easily digested than casein, and consequently cow's milk is never so suitable for the infant as its natural food. Advantage has been taken of this fact in the preparation of proteids for infants in a recent food prepared by A. Wulfang and Co. of London, called Albulactin. And again, the casein of human milk is actually different to that of the cow's milk. Cow's casein leaves behind an indigestible residue; human casein does not. When an acid is added to cow's milk the casein is precipitated in large flocculi, whereas under similar conditions fine flocculi are thrown down in human milk, and these are quickly dissolved by adding more acid. And again, the casein of human milk is richer in sulphur than that of the cow.

Fat

One of the most important ingredients of milk is fat, which is found in extremely minute globules. One drop of milk, the size of the head of a pin, is said to contain no less than 1,500,000 separate fat globules, and in human milk these globules are smaller still. Fat is taken into our systems in an unchanged condition, but to be absorbed it must be emulsified, divided into extremely fine particles by the secretions from the pancreas and the liver. There is no more perfect emulsion than milk, and the fat is consequently easily absorbed. In the formation of cream, especially when it is scalded as in Devonshire cream, the particles run together to some extent, consequently the fat of cream is not so easily assimilated, more especially when the duodenal digestion is sluggish. Butter when taken with bread is one of, if not the most easily digested of all fats, but this is only so when taken with bread. Its digestibility is due to the ease with which it is emulsified in the first part of the intestine (the duodenum). The quality of milk is gauged by the amount of fat it contains, which should range from 3 to $4\frac{1}{2}$ per cent of its weight. It is found that the other ingredients of milk, the proteids and carbohydrates, vary in exact proportion to the amount of fat, that a milk rich in fat is also rich in proteids and carbohydrates, and that a milk poor in fat is also poor in the other important constituents. In the feeding of young children water is generally added to cow's milk on account of it being richer in proteids and mineral matter, but this dilution makes the solution poorer in fat and carbohydrates (sugar) than human milk, consequently cream and milk sugar should be added. It should be remembered that, although it is important that the child should have a good supply of cream, that a percentage of six or over is liable to produce diarrhoea. This artificial mixture, however, is not so good as the natural food. The fat of human milk has a lower melting point, and is more easily digested than the fat in cow's milk, and again human



WINTER SCENE MT. DONNA BUANG, WARBURTON, VICTORIA

Sear's Photo.

milk contains much less of the soluble or volatile fatty acids than cow's milk. One of the most important differences we have already pointed out, viz., that the fat globules in human milk is in a much finer state of division than the fat droplets in cow's milk.

Carbohydrates

We depend chiefly on the carbohydrates (starches and sugars) in our food for the production of energy. The proteids are necessary chiefly for tissue building; fat is especially useful for the production of heat. All foods, however, are utilised for these three purposes, even fat is necessary for the development of the brain, nervous system, and the marrow of bones. Milk is not a complete food for the adult, as it contains too little of the carbohydrate ingredients. In order to supply the amount of carbohydrates necessary a man, with moderate hard work, would have to take at least eight pints daily, and this would mean about 140 grammes of proteid, which would be greatly in excess of requirements; 100 grammes of proteid it is now generally agreed, is ample for the upkeep of the body. The addition of bread to milk of course lessens the amount of milk required, and brings up the carbohydrates to the standard diet. The carbohydrate constituent of milk is a special kind of sugar called lactose, or milk sugar. It differs in taste and digestibility to cane sugar, being comparatively free from sweetness. If milk contained the same amount of ordinary sugar as it does of milk sugar, it would pall upon the taste more readily than it does. Adults will tire of bread and milk with ordinary sugar added much more readily than when salt is used in its place. Milk sugar, unlike cane sugar, has very little tendency to be fermented by yeasts; and, as a consequence, is much better borne than other kinds of sugars in cases of dilatation of stomach accompanied by fermentation. It is always preferable to use milk sugar for very young children. Milk sugar is very liable to be split up into lactic acid by certain

micro-organisms producing souring, and in children diarrhœa. Most of the summer diarrhœas of infants are brought about in this way. With ordinary care, however, this can be avoided. Cow's milk contains 4 to 5 per cent of lactose and human milk 6 to 7 per cent.

Mineral Matter

The mineral constituents of milk are fairly abundant, forming about 0.7 per cent. The minerals in milk exactly correspond in kind and quantity to the muscles, bones, and other tissues of the animal it is designed to feed. Muscles require phosphate of potash, and bones phosphate of lime for their development, and both of these salts are found in abundance in milk. Milk also contains iron, a very important constituent of the blood. About five pints of milk will supply all the iron necessary for the adult man. Milk also contains citric acid. A good cow will yield daily as much citric acid as is contained in two or three lemons. Being combined with lime the citric acid is devoid of any sour taste. Citric acid is largely absent (or separates in an insoluble condensed form) from tinned milks, and infants fed on these are liable to a peculiar disease of the blood and bones which resembles scurvy. On this account children who are fed on preserved milk should daily take a little orange or grape juice. Infants fed on fresh milk, however, never suffer from the disease referred to. Lime and phosphorus are present in much smaller quantities in human milk, and occur in a much more digestible form. The phosphorus occurs in human milk in an organic form as lecithin. Of the total phosphoric acid in human milk 35 per cent is in this form, whereas in cow's milk it only forms 5 per cent. When it is realised how important phosphorus is to the nutrition of the infant, and the greater ease in which it is assimilated in the organic form, one must see that every possible effort should be made to supply the child with its natural food—its mother's milk. In fact the fat, the casein, and all the constituents in human milk

differ from that of the cow, not only in quantity but in organic form. Cow's milk is modified in order to correct these differences, but a truly "humanised" cow's milk is a chemical impossibility.

Water

The last, but not the least important constituent of milk is water. The solid constituents of milk are present only to the extent of 12 to 14 per cent. The fact that milk is made up of from 86 to 88 per cent of water shows it, for the adult at any rate, to be a very bulky food and the necessity of combining it with foods of a more solid character.

(To be continued)

FIRELIGHT

I LOVE to sit by the embers
As they sparkle, and fade, and creep,
While Twilight gathers her children
And tucks them away to sleep.

When the noises of Day are softened
To a soothing mellow croon,
Ere the reign of Night is ushered
By her herald, the weird faced moon.

There's a magic balm in the gloaming
For the day-racked, weary brain,
And my care-freed fancy wanders
In the paths afar from pain.

The visions and dreams of boyhood
Pass before me clear and bright,
In the changing coals and ashes,
As twilight fades into night.

The pillar of fire before me
Takes a deeper and stronger glow;
Calling me onward and upward
As it did in the long ago.

And I know that my heart grows younger,
That my soul climbs nearer Truth,
For these twilight-hour communings
With the things of my vanished youth.

So I love to sit by the embers
As they sparkle, and fade, and creep,
While Twilight gathers her children
And tucks them away to sleep.

—David DeMay Farnsworth.

Drinking Smoke, or Smoke Inhalation

D. H. Kress, M.D.

NICOTINE is one of the most deadly poisons known to science. One-half drop placed in the eye of a cat is suffi-

ent to kill this creature with the proverbial nine lives in four minutes. A small piece of tobacco leaf placed on the tongue of a boy who has never used tobacco will cause nausea, vomiting, and serious heart and circulatory disturbances. These are facts well-known to physicians. Death has resulted by placing tobacco upon open sores or cuts in children. A decoction of tobacco juice will almost instantly destroy all forms of insect life. It must be clear therefore to all that tobacco is a poison, and deadly in its effect upon all forms of animal life.

In the burning of tobacco, carbon monoxide is developed. Carbon monoxide is almost as deadly as nicotine. It is present in illuminating gas to the extent of twenty-five per cent. Many of the suicides committed are due to the inhalation of this poison. It is quite common to read of the gas jet being turned on at night by one who is tired of life. Death in these cases is due to asphyxiation. The blood naturally takes up all poisons conveyed to it by inhalation. Most of the gases present in the air are fortunately given off by the blood as readily as they are taken on. Air charged with carbon dioxide is not deadly because it does not accumulate. The blood does not contain much more at any time than is found in the surrounding atmosphere. With carbon monoxide it is quite different. It forms a staple or fixed compound with the hæmoglobin or colouring matter of the blood. The blood readily takes it on, but it lacks the ability to give it off. It accumulates and ultimately destroys the function of the red blood cells in conveying oxygen to the tissues. If an animal is exposed to an atmosphere containing a small per cent of carbon monoxide for one hour, the blood at the end of this time is found to contain over one hundred and fifty times as much carbon monoxide as is present in the atmosphere it has been breathing.

Destroys the Oxygen Carriers

Each ounce of tobacco when burned develops about one pint of carbon mon-

oxide. The tobacco smoker is therefore slowly yet surely destroying the oxygen carriers. Oxidation as a result is incomplete. Impurities accumulate, and the vitality of the tissues is slowly undermined. Degeneracy of the glands, heart, and blood vessels takes place, which results in premature death. Instead of turning on the gas jet and committing suicide, the cigarette addict is virtually doing the same thing gradually, or on the instalment plan. He dies at the age of forty or fifty, if not before, of some disease of degeneracy, when otherwise he could have lived to the age of seventy, eighty, or one hundred years.

The cigarettes of to-day are more dangerous than were the cigarettes of the savages. The primitive cigarette contained tobacco and nothing else, while to the modern cigarettes and cigarette-tobacco products are added which, during the process of combustion, develop poisons even more deadly than either nicotine or carbon monoxide.

One who writes in defence of tobacco says: "Each manufacturer has his own secret scent or perfume for various brands of cigarettes. All Turkish cigarettes are doctored, and in this the Ottoman manufacturer holds the art of cigarette-making." Various essential oils, liquorice, glycerine, tanku bean, etc., we are told, are employed in their manufacture. These products are not added for the purpose of improving the quality of the smoke healthwise. In these *added* products lies not merely the "art of cigarette making," but one of the greatest evils connected with the cigarette trade, as we shall presently see.

In experiments conducted by the *Lancet* several years ago for the purpose of ascertaining why the cigarette was more injurious than the pipe or cigar, it was found that the smoke of the pipe or cigar contained a greater percentage of nicotine and also more carbon monoxide than the smoke of a cigarette. This is due to the fact that combustion is less complete in a pipe and cigar than it is in the rapidly burning cigarette. Naturally this discovery was heralded everywhere

in civilised lands by manufacturers of cigarettes, stating that the cigarette was found to be the least harmful way of using tobacco. This was contrary to all the observations of medical men and those who have to do with cigarette addicts.

Recently, another series of investigations was made by the *Lancet*, which threw a scientific sidelight on the evils of the cigarette. It was discovered that the smoke of the cigarette contained products not found in the smoke of the pipe or cigar. These products are known as aldehydes. The chief one present is termed *furfural*. Thomas Edison, for some years, attributed the injury resulting from the use of cigarettes chiefly to the glycerine which is added to the tobacco, or to the paper in which it is rolled. One of his assistants in conducting some laboratory experiments was completely overcome and nearly lost his life by the accidental inhalation of the fumes of burning glycerine. The product developed by burning glycerine is very deadly and is known as *acrolein*.

Acrolein and *furfural* belong to the same family and are very similar. *Furfural* is the poison found in immature or crude whisky. It is said to be fifty times more poisonous than alcohol. Each cigarette, when smoked, it was discovered, developed an amount of *furfural* equal to that present in two ounces of crude, immature whisky. *Furfural* seems especially to injure nerve and brain tissue. It is responsible for the nervous tremor found in cigarette users. In time it produces intellectual and moral degeneracy among the young. It is to the presence of this poison, and to the inhalation of the smoke, we are forced to attribute largely the evils of the cigarette.

THE pineapple industry of the Hawaiian Islands has during the past few years experienced considerable development, causing it to rank second to that of sugar. At present there are about seven thousand acres planted with pineapples.



THE WINTER QUARTERS OF AN AUSTRALIAN ABORIGINAL

N. J. Caire, Photo., Melb.



NOTICE TO SUBSCRIBERS: All questions for this department must be addressed to the EDITOR, "LIFE & HEALTH," WARBURTON, VICTORIA, and not to Dr. W. H. James, who will treat correspondence only on usual conditions of private practice. 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.

309. Wound after Operation

J. S. states: "I was operated upon for an appendicitis, the results of which have left me with a slight wound which discharges about once a week. After the discharge it generally heals on the surface, then the discharge again collects and breaks of its own accord."

Ans.—The wound should not be allowed to heal on the surface. The edges of the wound should be kept apart by some sterilised gauze, and the wound thus allowed to heal from the bottom. If this is done there will probably be no further trouble.

310. Phlegm in the Throat

H. H. C. (Geelong) complains that he is suffering from phlegm in the throat, and that he finds a difficulty in getting rid of it.

Ans.—Gargle the throat every morning, using a teaspoonful of the following powder to a half pint of warm water. Equal parts of bicarbonate of soda, borax, and salt. Some of the same solution should also be used for the nose. Close one side of nostril and sniff up the solution well into the cavity of the other nostril. In this manner cleanse both nostrils. Daily spray the throat with a twelve per cent solution of protargol. A suitable spray can be got from any surgical instrument maker. The trouble is to a large extent due to stomach trouble.

Avoid all rich foods, foods cooked with fat. Avoid all complicated dishes. Too many varieties of food at a meal are hurtful. Avoid drinking with meals, especially tea, coffee, and cocoa. Some dry, crisp food should be taken with the meals.

311. Syphilis of Long Standing

Queensland writes: "Can you give me a permanent cure for syphilis of long standing?"

Ans.—A personal examination would be necessary to give a satisfactory reply to this question. The case requires the personal attention of a physician. Undoubtedly a vegetarian diet is useful in these cases. The skin also should be kept active by exercise and hydropathic procedures.

312. Restlessness at Night

Leeton writes: "My little girl aged five years is very restless at night. She wakes up frightened and crying several times in the night. Some nights we have very little sleep. Lately she is getting very thin."

Ans.—Very probably there is some digestive trouble which would show itself by a coated tongue and foul breath. Some would put the above symptoms down to worms, but in most cases they are produced as stated. It would be as well, however, to watch the stools

for thread or round worms, or for segments of tapeworm. The evening meal should be light and composed chiefly of fruit. Avoid rich foods—foods cooked with fat and eggs, also complicated dishes (foods cooked with three or four different ingredients). No tea, coffee, or cocoa should be taken. Pure water should be taken freely between meals. If threadworms exist, use salt and water injections two or three times weekly, as described in a previous number under "Chats." For the round worms use three grains santonin at night followed by a dose of castor oil in the morning. This should be done twice weekly for two or three weeks. For tapeworm: Take a good purgative—castor oil or large doses of salts; fast for twenty-four hours, taking only a little fruit. Take in the morning three grains of pelletierin, and keep quiet in bed to prevent vomiting. At the end of an hour take a couple of tablespoonfuls of castor oil. Further on in the day a large enema should be taken—keep the hips elevated. _____

313. Jaundice

J.M.H. writes: "My little girl aged eight and a half years has been suffering this last few months with yellow jaundice. She is very drowsy at times, complains of headache, her skin and the white of her eyes look yellow, and from being a strong, sturdy child she has become quite thin. Are there any dangerous developments to be feared?"

Ans.—Jaundice is not a disease, but a symptom of quite a number of complaints. The most common cause is catarrh of stomach and intestine. The swelling of the lining membrane blocks up the tube of the bile duct, and thus the bile salts are absorbed into the circulation. Other causes are gall stones (almost always accompanied at times by great pain), exposure to cold and wet, errors in diet, obstructions by tumors, heart disease, and fevers. As bile aids in the digestion of fats, fatty foods should be eliminated from the diet. Skimmed milk and the cereal foods are suitable. Keep the

bowels regular, using enemata if necessary. A good sweating procedure about three times a week is helpful to eliminate the poisons, such as fomentations to the spine or hot blanket pack. Use twice daily to the abdomen hot fomentations alternating with cold applications. Hot fomentations ten minutes, cold two minutes—three of each. Avoid all chills. Cold mitten frictions twice daily are helpful to the skin. _____

314. Coffee Bean and Chicory

"Kerang" asks: "Is there anything harmful in the coffee bean and chicory?"

Ans.—Coffee bean of course contains the same ingredients as coffee, and is harmful on account of the tannic acid and caffeine which it contains. Coffee does not contain such a large percentage of these harmful ingredients as tea, but it should be remembered that much more of it is used. An ordinary cup of coffee contains 1.7 grains of caffeine and 3.24 grains of tannic acid. A cupful of black coffee contains very much the same amount of caffeine and tannic acid as an equal quantity of tea.

Chicory is the root of the wild endive, kiln-dried and broken into fragments. The drying converts its sugar (of which it contains 18-20 per cent) into caramel, and thus it increases the colouring property of coffee. It is not injurious to health as it does not contain caffeine. One pound of chicory is equal in colouring power to nearly three pounds of coffee. As chicory is only about one-fifth the price of coffee, it is frequently used to adulterate the latter and lessen its cost.

Chicory was formerly used medicinally from possessing properties resembling those of the dandelion. Dr. Pavy states: "It is largely consumed on the Continent, not merely as an adulterant of coffee, but as an independent beverage. In Belgium as much as five pounds a head are used in the year, counting the whole population; and in some parts of Germany women, it is said, are regular chicory-toppers."

315. Piles

"Hobart" writes that her mother aged sixty-four years suffers from the above. From childhood she has suffered from constipation. She has adopted the diet recommended in *LIFE AND HEALTH*, and asks if paraffin oil is good.

Ans.—The bowels should be kept regular by regulating the diet. Plain, easily-digested food is more important than foods with a laxative action. Boiled milk and hard-boiled eggs should be avoided, also tea, coffee, and cocoa. Fruits of all kinds that agree with the digestion should be taken. Passion fruit is a good and safe laxative. Sulphur, five to ten grains may be taken daily. Paraffin oil is also good in doses of two to four teaspoonfuls daily. Ice-cold compresses, or ice-cold water injected into the rectum give relief. If the bowels have to be opened with warm enema, follow it with smaller enema of cold water. Piles that protrude after the bowels are opened should be cleansed with cold water and gently pushed back. The following ointment will be found useful:—

R	Ung. Conii	ʒj
	Ferri Sulph. Exc.	grs. xv
	Ext. Bellad.	grs. x

In long standing cases, however, an operation is the only remedy that gives permanent comfort. The operation is simple and safe. The "open method" of administering ether makes the anæsthetic perfectly safe in the weakest individuals, and even where there is heart trouble.

316. Mongol Baby

"Help" wishes to know how to feed her baby who is a mongol. He is eighteen months old, can crawl this last month. His hips and legs have not developed in proportion to his body, and the knee joints click very much. He is rather subject to looseness of the bowels, is very restless in his sleep, seems to have an unnatural craving to eat anything he picks up. "Help" wishes also to have a diet recommended in pregnancy.

Ans.—Foods taken with milk are of special value in children described as above. Milk contains all the ingredients necessary for the development of the child. The proteids (casein and lactalbumin) are the most easily digestible of all proteids. The fat is in a most finely divided state. Milk also contains lime, potash, and phosphorus ingredients absolutely necessary for the development of children. With the milk cereal foods should be taken, especially zwieback, granose biscuits, gluten, and granola. These simple foods are better than any others. "Help" mentions "tea" as one of the drinks given to the child. This most certainly should be omitted from the dietary. It is especially harmful for children. Oatmeal porridge, well cooked rice, bread and butter make a good variety. Oranges, bananas, ripe pears, and other digestible foods are wholesome. There is no special diet necessary in pregnancy.

317. Chronic Catarrh (Naso-Pharyngeal)

B. H. J. writes: "I am suffering from chronic catarrh which is affecting my hearing. Sometimes I am not so bad as other times, my head not being so much charged with mucus. . . . I have suffered many years from indigestion, although fairly free of it lately when careful. . . . In watching it closely I find that food has a good deal to do with its increase or decrease. . . . If I go without breakfast I am better. Would fasting in a mild form assist toward a cure? . . . I suffer from general debility."

Ans.—There is no cure for naso-pharyngeal catarrh apart from attention to the digestion. The tongue becomes coated, and the naso-pharynx the seat of catarrh, as a result of disturbed digestion. These may be brought about through the nervous system, or are the result of excretion of waste products from the blood. As far as the writer's observations go, it is a result of duodenal rather than gastric dyspepsia. The foods that should particularly be avoided are sweets and foods cooked with fat or grease of any kind,

especially when the fat is brought to a point above boiling point, as in baking or frying. The mild fast proposal would undoubtedly be beneficial. We would suggest the following for one week. Plain, unsweetened biscuits, such as wheatmeal, oatmeal, or granose, gluten (No. 3) in the form of porridge, and abundance of fresh fruit. Avoid for the one week all forms of fat and sweets of every kind. The skin should be kept active by a couple of hot baths a week and a daily cold sponge with plenty of friction with a rough towel. The bowels will probably keep regular with the diet proposed, otherwise the enema should be used. Douche the nose and gargle the throat daily with the following: Sodii bicarbonate, borax and salt—equal parts of each. Use of this powder one teaspoonful to half a pint of warm water. Daily spray the nose and throat with a fifteen per cent solution of protargol or argyrol. We prefer the former if it can be obtained. Use DeVilbiss atomiser No. 16. This may be obtained at Roper's Surgical Instrument Maker, Swanston St., Melbourne.

318. Pain Between Shoulders, etc.

G. S. M. writes: "My daughter is eighteen years old, and looks well and strong, but is often troubled with a dull, aching pain between her shoulders down the spine, especially when sitting sewing or studying (she is a student at school), and is troubled a good deal with heartburn. She is fairly careful in diet, has never taken either tea, coffee, or meat. She gets a tired, dark ring round her eyes when the pain is bad.

Ans.—This is probably a case of simple debility, largely due to a sedentary indoor life. She requires a fairly active life in the open air until her muscles have regained their power. We would also recommend a daily sponging of the whole body with cold water. In cold weather this may be done while standing in some hot water. With outdoor exercise nour-

ishing food should be taken consisting largely of milk, lightly cooked eggs, and gluten.

319. Poor Appetite

G. E. M. also asks: "Is there anything harmful in horehound or quassia? My appetite is very poor. I feel hungry for my meals, and start eating, have a few mouthfuls, and then feel as though I could not swallow another mouthful."

Ans.—Sufficient particulars are not given to diagnose the cause of loss of appetite. Some fluid food at the commencement of the meal would probably be beneficial, such as a little soup, hot milk, or thin gluten porridge. Follow this by very thoroughly masticating a wheatmeal or other unsweetened biscuit. We would not recommend quassia as a tonic. Gentian root infused with boiling water or horehound may be taken with a fair amount of water one hour before meals.

320. Nosebleed—Epistaxis

Mrs. C. and another ask particulars *re* the above.

Ans.—Bleeding from the nose when it is persistent may be the result of a polypus or other growth or an ulcer. Sometimes it is due to chronic catarrh with congestion of the mucous membrane. When there is a predisposition to nosebleed hemorrhage may be excited by bending the head, sneezing, drinking hot drinks. It should be remembered that the mucous membrane of the nose is especially rich in blood, more so perhaps than any other part of the body. It serves as a means of warming the air before it passes into the lungs. Chronic throat troubles are often aggravated by breathing through the mouth, and thus the cold air comes in contact with the delicate tissues of the throat. This is more likely to occur at night during sleep. The nose should be thoroughly cleansed as under "Chronic Catarrh," and then sprayed with some astringent lotion,

as ten grains of tannin in an ounce of water. When the bleeding comes on hold the head erect, apply cold compresses to the back of the head and the root of the nose. Often placing a little absorbent cotton in the cavity of the nose and allowing it to remain for half an hour or more will stop the bleeding. Sometimes the posterior naris have to be plugged. The latter procedure requires the aid of the physician. The protargol solution may be used instead of the tannin. Ulcers or polypi of course should receive the attention of the surgeon.

321. Chronic Cough

"Roona" complains of a bad cough which he has had for four years, and asks for advice.

Ans.—Chronic coughs are due to so many varied causes that it is impossible to give any reply without a personal examination.

322. Gall Stones

O. F. asks what can be done for gall stones, also what is the best food to be taken? Is it harmful to use acid in making bread instead of hops?

Ans.—We have very little faith in drugs for this complaint. Olive oil in large doses several times a day is often recommended. A surgical operation is advisable in a great majority of cases, and the sooner it is performed the better. When gall stones have existed for years inflammation and adhesions occur which greatly increase the difficulties of the operation. All rising powders are injurious.

323. Dropsy

"Worried" writes: "My feet and round my ankles are swollen and puffy, also the calves of my leg (especially the right one). My knees and ankle joints are very enlarged. Can you tell me what to do for it, or is it an incurable disease?"

Ans.—The symptoms complained of are of a dropsical nature, due to poor circulation in the limbs. The cause prob-

ably is some affection of the kidneys, heart, or liver. A personal examination by a medical man is necessary in this case.

324. Diet in Asthma

Mrs. A. M. H. asks for rules of diet in asthma.

Ans.—There is no special dietary for asthma. Every case has to be treated on its own special conditions or peculiarities.

325. Sore Tongue

"Sydney" writes: "I have been suffering with sore tongue for a period of over eighteen months caused by a decayed tooth. I have consulted a surgeon, and he informs me that he has a suspicion that it is malignant, and prescribed a mouth wash which I have used for some time without any good effect. Could you recommend a remedy?"

Ans.—If there is any suspicion of malignancy a specialist (surgeon) should be consulted at once, for the sooner it is removed the better. We understand the tooth has been extracted.

326. Stuttering

"Teulba" writes: "My boy is ten years old, and has been stuttering for the last two years. He repeats the first word three or four times before he can speak it out, and if he gets excited it is difficult for him to speak at all. My little girl is five years old. She can only say a few words, and they are not very plain. She was tongue-tied when she was born, and her tongue was cut by a good doctor. Do you think she will be able to speak plainly as she gets older without getting her tongue cut again?"

Ans.—Stammering requires much perseverance and regular training if it is to be overcome. It is considered by some a good thing to prevent the child from talking altogether for a few days, then to make him pronounce one word at a time, both softly and loudly, until it can be spoken without hesitation. Then two

words may be combined, and the number of combination of words gradually but slowly increased. A child being tongued in babyhood can have nothing to do with stammering, especially when it has been properly treated. It would be impossible to "cut" the tongue a second time, for that which holds the tongue down at the tip has been completely removed.

327. Headache and Heart Trouble

"Subscriber" writes: "My father has been troubled with a pain on the top of the head for some time past, . . . feels the pain most if he does any work in a stooping position. . . . His doctor tells him he has valvular trouble of the heart, and that he must not lift anything heavy, or do any hard work. Would you advise turpentine for flatulence? . . . When he has a lot of varieties of food he feels worse, and his heart at times beats very fast."

Ans.—Pain at the top of the head is often due to debility, and is very likely to be associated with heart trouble. It must be remembered the heart is only separated from the stomach by the diaphragm, and any distension of the stomach will consequently displace the heart to some extent, and thus bring about disordered action, such as palpitation and irregularity. We would not recommend turpentine for flatulence, except in fomentations for outward application. It is frequently added to enemata for intestinal flatulence. Internally turpentine is an irritant. In large doses it produces gastro-enteritis with vomiting and diarrhoea, and sometimes ulceration of the intestine. For flatulence we would recommend careful attention to the diet. Too many varieties of foods, and dishes made up of many ingredients, cause fermentation. Some dry food, thoroughly masticated, should be taken at every meal. Milk with bread or zwieback is good for flatulence, if this constitutes the one food for the meal. Avoid drinking with meals, especially tea and coffee and all foods cooked with bak-

ing soda, cream of tartar, baking powders, and fats of all kind, also coarse vegetables, such as cabbage, turnips, carrots, and parsnips.

328. Food to Increase Weight

E. R. writes: "I want to know what medicines or food I should take so that I may increase in weight. I am very thin, aged thirty-seven years. I am 5 ft. 7 in. high; weight 7 stone. My appetite is fairly good. I take meat and vegetables once a day, tea at all meals. My hair is falling out. What would be a good thing to stop it falling out and make it grow?"

Ans.—If you want to get the full advantage of your food you must certainly leave off the tea altogether. It certainly interferes with the action of the digestive juices right through the alimentary canal. We have found the following foods excellent for increasing weight: Milk, rice, potatoes, gluten cooked with milk and made into gruel and porridge, eggs raw or lightly cooked, brown or white bread, and butter or cream. Digestibility of food must, of course, be taken into account. We would not recommend any drugs. Water should be taken freely between meals. It may be flavoured with fruit juice.

329. Dryness of Face

"Cooma" writes: "For some years I have been troubled with a dryness of the skin on my face. Could you tell me how to avoid this? Every other day a small swelling or pimple appears, which when pressed discharges a quantity of fluid like pure water. I am moderate in all my habits."

Ans.—Anoint the face daily with the following application:—

R̄	Glycerini Amyli	ʒii (2 ounces)
	Sulphur Precip.	grs. x

When the pimple discharges treat as follows: Fix a very little cotton wool on end of safety match, moisten with pure carbolic acid, and with this sponge out the cavity of the pimple. It will then

probably heal from the bottom of the small cavity, and give no further trouble.

330. Removal of Appendix

E. J. C. (New Plymouth) takes exception to the following which appeared in a previous number of LIFE AND HEALTH: "We believe the appendix at one time had important functions, but that those functions have largely been lost, and that the removal of the appendix under skilful hands is only followed by favourable results," and asks if it is right to "cut away parts of God's wonderfully and fearfully made 'man,'" and thinks that this advice is going against "the efficiency of God."

Ans.—We spoke only of the diseased appendix. Frequently disease renders the removal of a leg or an arm, or even a kidney, and such operations frequently prevent the spread of disease and save life. We do not see why the appendix should not also be removed under diseased conditions. The writer asks if God made a mistake in forming the appendix since it can be removed without injury to

the patient. We believe man fell from his first state when he was created in the image and likeness of God, and that if he had not sinned he would never have died. Even after man sinned he lived to over 900 years. Man has continued to degenerate as the result of sin, and now even seventy years is a good age. We do not believe God created a practically useless organ. We do not even believe that it is now useless except when diseased. We believe, as stated, that "at one time the appendix had important functions," but that those functions have, with man himself, degenerated as the result of sin.

331. Anonymous Correspondence

If "V. D. L.," Geelong, will send a stamped addressed envelope to the Editor, Life and Health, Warburton, he will reply to her questions by return mail, as it is our practice not to publish replies in the journal dealing with the matters she alludes to. In any case we do not reply to anonymous correspondents. See notice at the head of this department.





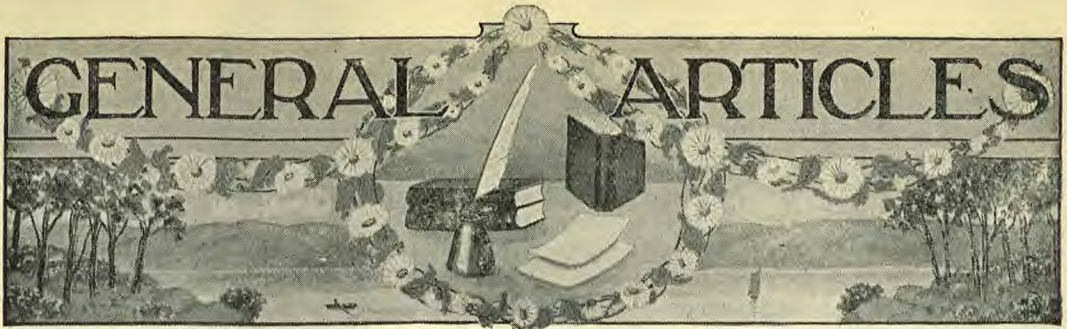
DO SOMETHING

BY R. HARE

Have something to show for your toiling,
 Something to count up as gain
When the evening shadows are falling
 Over the sky and the plain;
Something to show for the daytime,
 Something to tell you have toiled,
Something—if only a picture
 Your trembling hand has spoiled.

Life's page may be blotted already,
 And marked with many a scrawl;
But better, far better, scrawl markings
 Than not any markings at all.

Then dare to do something prospective,
 And stand to your task by the day;
There'll be resting enough hereafter
 When visions of earth pass away.
And toiling is better than rusting,
 For toiling can fit you for rest;
But the soul that grows careless is ever
 Unblessing alike and unblest.



Devices for the Elimination of Unnecessary Fatigue in the Industries

BEFORE the breaking out of the European war this age might well have prided itself upon being an age of waste elimination. For a time the emphasis was all upon cutting down waste of material; but lately the emphasis has been shifted to the human element, and such phrases as "Safety First" have become the slogans of the day.

With this consideration of the human element has come the realisation of the importance of fatigue, and the necessity of allowing the worker all possible opportunities to recuperate from it. Provision for such recuperation is the basis of most welfare work, which consists of providing rest rooms and lunch rooms, social halls, or other places of amusement, where the worker can go before working hours, during his noon hour or afterward, to relax physically and mentally, and to get back his working strength.

In the majority of places to-day, however, it has not been recognised that fatigue is of two kinds. A certain amount of fatigue is necessary fatigue, which the very nature of the work done demands, and which can be excellently dealt with through such devices as are provided by welfare work, or by the home reading box movement, and other plans of scientific management. But a large amount of the fatigue accumulated in the average day's work is entirely unnecessary, and is caused by such perfectly obvious, but

often unnoted conditions, as wrong lighting or heating or ventilation, vibration, standing instead of sitting, or working at machines or benches, and on chairs or stools which are of the wrong height.

Ask any manufacturer to walk through his plant and spend a half day himself making a fatigue survey; that is, deciding just what fatigue the work done in his plant is causing, and what proportion of it is actually necessary or productive. Ask him to count how many fatigue eliminating devices he has, and to find, if he can, in how many places a study of fatigue elimination has been made. The result will astound him and you.

In order to bring this subject of unnecessary fatigue to popular attention, there is now in operation in Providence, Rhode Island, a Museum of Devices for the Elimination of Unnecessary Fatigue.

A Chair for Every Worker

One of the most obvious devices for eliminating fatigue is the chair; and, if you should visit Providence or any of the factories where the devices there exhibited are installed, you will find that the first rule followed is "A chair for every worker, whether he needs it or not."

Fatigue eliminating chairs are of various types, some of which are shown in the accompanying illustration. One type is devised in order that a kind of work which has always been done standing,

may be done sitting. For example, heavy filing, which has always been considered standing work, may, through the use of a specially devised chair, be done with greater ease and the same speed and efficiency while the worker is sitting. The chair is most inexpensive and easy of construction; is provided with a projecting foot rest, which enables the man to push the file as comfortably sitting as when he stands up; and is of such a height that the man can work part of the time standing and part of the time sitting.

Another type of chair illustrated is specially devised to permit the worker to stand part of the time at work which has usually been done sitting. It is useful in rest intervals. For example, in a certain industry where cotton cloth is folded, the hour is divided into a number of work periods and rest periods, which alternate—four periods of work to one of rest, with a longer rest period at the end of the hour. During certain of these periods the worker sits; during others, she stands. This type of chair allows her to go from the sitting to the standing period in the quickest time, and with the least amount of effort possible, and, incidentally, has proven itself so comfortable that the worker who has once been supplied with one considers it her personal property, and refuses thereafter to give it up. A third type of chair is a modification of a chair that is already in use, so that it will be the most efficient device possible for the worker using it. Many chairs, which are originally well adapted to the work and the user of the chair, become so worn in time, that the chair is neither comfortable nor useful. In this case, often, such an inexpensive and easy remedy as boring out four blocks of wood and fitting them to the legs of the chair will bring the chair back to its originally desired height. A fourth type of chair, which will cut

down fatigue, is one which eliminates unnecessary vibrations. An ordinary chair, which has shown itself useful and comfortable, may be provided with springs which relieve the operator of 100 per cent of the vibration of the floor, where the type of work done makes such floor vibration necessary. In a certain factory where such non-vibration chairs were introduced, the operators at first did not like them; but in at least one case, a girl



New Types of Chairs

who had been given this type of chair, and who was later put, for one day, back on the old kind, was so much affected by the vibration that she went home, at the end of a half day, sick.

A fatigue eliminating device is not necessarily a chair. It may well be some sort of a packet, which will bring the goods to be fabricated or assembled closer to the hand of the worker. It may be some sort of chute to carry off the finished product. But the chair is typical of the devices exhibited in and advocated by this little museum, for it emphasizes, not so much increased production, as decreased fatigue.—*Frank B. Gilbreth, in the Scientific American.*

Speeding up and Slowing Down

A SALUTARY little sermon on rest is preached in the editorial columns of *The Nurse* (Jamestown, N.Y., December) under this heading. The speed to which the writer has reference is the rushing, hustling variety that means overwork and the impairment of health. Efficiency experts tell of the possibility of increased output at a lowered rate of energy-expenditure; but this is not the "speeding-up" that is condemned here. And no matter what the expenditure of energy may be, it requires a "slowing-down" ultimately for the repair of wasted tissue, otherwise muscle and nerve will be weakened, strength impaired, and health, at the end, permanently lost. Says the writer:—

"'Speeding-up' has become a recognised term for describing the hustling and straining of factory operatives when they are 'rushed' with work, and eager to accomplish a little more than the usual 'stunt' every day. Speeding-up implies feverish haste, reckless expenditure of energy, wretched fatigue, and stupid accidents due to tired hands and half-dazed brains. It may seem to produce larger results, but it is very costly in the end as compared with the usual rate of working.

"Speeding-up is altogether too common; we need not visit factories to see human lives wasting themselves in the deluded idea that they are accomplishing wonders by adding a little bit to their already ample output of daily product. There are still enough ignorance and recklessness in our rank and file to account for the sacrifice of much health and many lives merely for the sake of a little more speed. For speed means overwork and fatigue, and these, in their due time, speed the worker on to his death.

"Every human machine is adapted to do a certain amount of work before fatigue asserts itself and demands a rest—a slowing-down for repairs. If time is not taken for repairs, this delicate machine will surely run down and deteriorate. We

are so wonderfully formed and adjusted that defects appearing in one part of our mechanism will produce impairment of the whole body with its endless complex of functions. Thus, fatigue of the mind will inhibit the functions of the muscles, and, on the other hand, muscular fatigue will cause mental inertia and 'brain-fag.'

"These principles are of universal application. They hold good for the child at school, the farmer in the furrow, the athlete, the artisan, the professional man, the nurse who works day and night, and even the weary deacon who sleeps in his pew on Sunday. Dr. Stirling, the great Manchester physiologist, has presented some interesting facts regarding the comparative rates of mental exhaustion attending different kinds of study. Mathematics tires the brain more rapidly than other studies; Latin and Greek and gymnastics are about equal in their power to produce fatigue; natural history and drawing are less strenuous. The best time for doing brain work is in the middle of the forenoon, while the body is fortified against fatigue.

"We know considerable to-day about the causes of fatigue. Work is done at the expense of certain chemical substances—fuels—circulating in the blood. If these fuels are not replaced as rapidly as they are used up, the body suffers from fatigue, which is a signal for slowing down and resting. Work burns up the body-fuels and wears out the muscles, leaving in them a deposit of poisons which are really the excretions accompanying fatigue. The physiologists have proved this fact by actual experiment. The muscles of a fatigued animal have been washed out, and the extract thus obtained has been injected into the muscles of a perfectly fresh animal, producing the phenomena of fatigue just as surely as if the injected animal had been tired out in the usual way. Again, they have

taken a fatigued muscle and irrigated its blood-vessels with normal salt solution, removing the waste products and causing the improvement usually following rest. These experiments permit of but one interpretation: over exertion, or fatigue, generates poisons in the body; rest not only removes these poisons, but it provides the tired muscles and brain with fresh fuel and substances that act as an antidote to the fatigue-products. Even rest without sleep is attended by these beneficial processes of repair, and may make the worker ready for another period of exertion before the time for sleeping arrives.

“The holiday season suggests to us all the pleasure and relief that come from relaxation, amusement, and repose. It is a most beneficent feature of our civilisation—this resting from our labours and enjoying a brief period of recreation. Let no arduous worker cherish the flattering notion that this blest rest is unnecessary, a thing for children and old people to indulge in. If you are tempted to think yourself made of iron instead of flesh and blood, we advise you to get the vacation habit just the same—make this one concession to the merry people who have holidays, that you will take your holiday too.”

Up to the Limit

A SHORT time ago a young man at a Y.M.C.A. camp went in swimming. He dived off the wharf into the water and sank at once without a struggle. His companions had him ashore in no time, but he was dead. He had not drowned, his heart had simply stopped beating. A week or two later another young lad in a village just a few miles away, died in practically the same manner. Neither of these were drowning accidents. The young fellows had weak hearts. When the sudden strain came, the shock was too much.

A while ago a young man fell out of a chair. He picked himself up with diffi-

culty, and noticed that something was wrong with his arm. The doctor said it was broken. The injury was “set,” and recovery came. But a little later the man stepped in a ditch and broke his ankle. The doctor said his bones were brittle. They would not stand any extra strain. Fortunately most of us have good hearts and elastic bones, but there is a point where even the strong heart and the healthy bone gives way.

Don't Go Beyond Your Limit

The same is true of the nerves, though nerves are much harder to see and examine and understand than bone and muscle.



A Little Time Spent in the Fowl-yard is one way of Securing Relaxation

If you have taxed your nerves to the limit, something will happen which is equivalent to the break or the sprain in a bone or muscle. The natural advice which would follow a knowledge of these facts is be sure and not go beyond your limit, but this is not very practical advice, because few of us know exactly what our limit is. It is seldom, however, that we go to the limit in any of these things, or anywhere near the limit without warning of some kind. In other words, there is some condition of pain, or nervousness, or indigestion, or ill health before the collapse comes. If such warnings were

taken as danger signals, and every man would go to a good physician or somebody competent to tell him what these danger signals mean, thousands and thousands of useful lives would be prolonged in comparative health and comfort. In normal individuals there is plenty of margin to endure all ordinary strain.

Dr. Kellogg says: "Most of the important organs of the body are in pairs, and each one of each pair is more than capable of doing all the work ordinarily required of the two. This is true, for example, of the lungs, the kidneys, the adrenal glands, and the thyroid glands.

The same principle applies to organs which are not in pairs, as the heart, the liver, and the skin—the last-named organ presents a most excellent example of a wide margin of safety. The ordinary activity of the skin, resulting in what is known as the insensible perspiration, produces from an ounce to an ounce and a half of sweat per hour. When highly stimulated by heat and exercise, the amount of perspiration may be increased to thirty or forty times this amount, or forty to fifty ounces.

Extra Heart Work

The work of the heart during violent muscular action, when the muscles require six to ten times as much blood as is ordinarily required, is enormously increased, and in young and healthy subjects without the slightest injury to the body. In some of the organs of internal secretion the margin of safety amounts to ten or fifteen times the ordinary need. The eliminative power of the kidneys is far beyond that usually required. For example, a man of average size living upon a natural diet normally eliminates through the kidneys about one quart of excretion daily. By copious water drinking this amount may be readily increased to four or five quarts; and in cases of disease, as, for example, diabetes insipidus, the enormous quantity of fifteen or twenty quarts of liquid may be passed daily through the kidneys, and this continued for many years without apparent injury.

A Part of a Kidney

Certainly nothing could be more unwise than the useless curtailment of one's vital safety margin. This question is one which frequently comes to the surgeon for decision; as, for example, in severe affections of the kidneys. A kidney may become so diseased that its removal becomes necessary. A healthy man could get along very well with one kidney; even two-thirds of a kidney will perform all the kidney work ordinarily demanded. The writer recalls a case in which the removal of a kidney was found necessary, and in twenty-four hours the only kidney which remained was found to be doing more work and better work than both kidneys were doing before the operation. But the vital question which interests the surgeon who is about to remove a kidney is this: What is the condition of the other kidney? More than one patient has lost his life after this operation because the one kidney left was unable to do the work required of it. Nowadays the surgeon employs means to inform himself of the state of each kidney before the operation.

In a person with a weak body or one organ weak or diseased, a small margin such as a short run to catch a street car, a light cold, a small intestinal autointoxication in eating, the loss of one night's sleep, one more cup of coffee, one more cigar, one more bottle of wine, or another glass of beer, an extra draft upon the bodily mechanism, may be sufficient to snap the brittle thread of life and end all.

Tobacco Collapse

Thousands of men and women have so small a margin of safety that they would be terror-stricken if it could be graphically portrayed to them. These are the people who suddenly collapse, who are reported to die of heart failure. A tobacco user comforts himself with the idea that when he finds tobacco is hurting him he will quit its use. He says to one who condemns the use of tobacco on principle because it is a poison, "Tobacco doubtless injures some people, but it doesn't hurt.

me. I am not such a fool as to injure my body. When I find tobacco is hurting me, I will give it up." This sounds very well, seems philosophic and reasonable, but as a matter of fact it is a most dangerous sort of sophistry. A tobacco-user never finds out that tobacco is hurting him until his margin of safety is used up. He is like a man whose life depends upon a limited store of food, and who has no means of knowing how much he has left, his food being doled out to him day by day as he needs it."—*The Health Home.*

with not a little feeling. I might undertake to train you to sing in operetta; but to speak quite frankly, you haven't the looks for it."

Up to this time the teacher had not known that the rank of the aspirant was any higher than that of scores of other young ladies, equally ambitious, who constantly came to him. But his surprise was great when the lady handed him the visiting card of the queen, and he found that he had before him no less a personage than royalty itself. The queen



Farming is the Healthiest of all Occupations

The Queen's Voice

IN her youth, Queen Elizabeth of Roumania spent much time on the training of her voice, and, encouraged by flatterers, came to believe herself to be a singer of unusual talent. At length, says *Bibliothek der Unterhaltung und des Wissens*, she decided to have her voice tried by some great teacher. So she went one day, dressed very simply, and without the usual retinue of servants, to see Professor Dumanois of Bucharest, and urged him to give his frank opinion on the quality of her voice, and her future prospects. He tested her voice with great care, first with the simple scales, then with a song, and lastly with an operatic aria.

When the trial was over, the professor said, "I cannot say that you have a wonderful voice. You sing fairly well, and

thanked him heartily for the frank way in which he had judged her musical ability, and went home with her ambition in that direction decidedly diminished.—*Selected.*

"THINGS to keep sweet: the milk can, the dish-cloth, the kitchen sink, and your temper."

THE United States Public Health Service rendered recently its first verdict upon Dr. Frederick F. Friedmann's purported tuberculosis cure, to the effect that his "turtle serum" was not only no cure for tuberculosis, but often rendered the subject into whom it was injected more susceptible to tubercular infection, rather than more resistant.

The Papyrus

"THE poets and sages of antiquity did not write their immortal work upon foolscap, but upon natural paper, furnished by the papyrus, a reed-like plant which formerly was common in some parts of Egypt. The interior of the stalks of the plant, after the rind had been removed, was cut into thin slices in the direction of their length, and these being laid on a flat board in succession, similar slices were placed over them at right angles, and their surfaces being cemented together by a sort of glue, and subjected to a proper degree of pressure, and well dried, the papyrus was completed."

Defying the Kaiser

IN a fit of impatience because the speed of his yacht was slowed down on entering a certain harbour, the German Emperor on one occasion tried to assert his authority, and rang the bell for "Full speed ahead." To his great surprise, the pilot, an old Norwegian named Nordhuns, who knew the dangerous character of the channel, placed himself in the way, and, leaning over the wheel, called down the tube to the engine-room: "Half-speed ahead. Never mind the bell!"

"What! You dare to countermand my orders?" cried the Kaiser, again ringing the bell.

"Disregard the bell," calmly repeated Nordhuns through the tube.

For a moment the Kaiser glared at the intrepid pilot, and then, drawing himself up to his full height, said majestically: "Go below, sir, and report yourself under arrest."

"Leave the bridge!" thundered the Norwegian grimly, as he grasped the wheel more firmly. "This ship is in my charge, and I'll have no interference with my orders from Kaiser or seaman!"

The officers on deck hurried silently aft, wishing luck to the sturdy old seadog, who, knowing that he had the law as well as commonsense on his side, stood

at his post unshaken by threats, unheeding commands, and steered the *Hohenzollern* safely into port.

The next day the Kaiser came to his senses, and decorated the pilot—the king at the wheel—with one grade of the Order of the Black Eagle, and also appointed him his life pilot in Norwegian waters.—*Our Boys' Institute Magazine*.

Twenty-Four-Hour Clock Dials

NOW that twenty-four-hour time is officially adopted in France, inventors have been at work upon a double-figure dial. One method is to use red figures underneath the ordinary figures, that is, 13 would come under 1 o'clock, and so on. An ingenious idea has, however, been found for watch dials, and a complete watch is now on the market which contains this makeup. The dial face has a set of twelve holes instead of the usual figures, and back of this is a rotating enamelled disk with the Roman numerals from 1 to 12, and just beside them Arabic numerals from 12 to 24. First the Roman numerals appear in sight under the holes, then by pressing a button which lies above the winding stem the disk shifts around slightly so as to bring the other set of numbers into place.

The Chemical Value of a Man

A GERMAN scientific writer, figuring out the money value of a man weighing 150 pounds, finds that he comes to about 30/-. He finds in his body 10/- worth of fat; while iron is so essential to health and vigour, he discovers hardly enough of it to make a nail an inch long. But there is plenty of lime, enough to whitewash a good-sized chicken house. Of phosphorus he finds enough to put the heads on two thousand two hundred matches, and there is magnesia enough to make a good fireworks piece. There is enough albumen for one hundred hen's eggs, and a small teaspoonful of sugar and a pinch of salt are not overlooked.

The God of Fashion

R. Hare

TYRANNICAL in its domination, unreliable in its demands, whimsical in its dictates, and absolutely selfish in all its dealing the god of fashion has ruled, and still rules, the sons and daughters of men.

From the fig-leaved apron of long ago, it has led the human race into follies the most extravagant and cruel. The islander with his tattooed body, the Indian with his flat head, the Chinese mother with her deformed and crushed feet, and the European fashion plates with their spindle waists, all bear evidence to the cruelty of this god that man has never ceased to worship.

Every whim and folly of fashion that has marred the human form has not only been an injury to that wonderful body, but it has also cast a reflection on the Creator's work, indicating that the coxcomb and the savage could improve on the Creator's model.

Yet through all ages man has been a willing devotee at the shrine of this deity, a veritable slave bound to its chariot wheels, to be and to go wheresoever its fancy might decide.

At one time it has been filed and blackened teeth; at another, a towering head-dress of colossal dimensions; then a mark on the face, a ring in the nose, pendants from the ears, a bone through the lip, and again a great hump behind, the Grecian bend, the Alexander limp, small shoes, and the thousand and one other ways in which the divine model has been spoiled and deformed at the dictates of that Moloch which rules civilised and savage alike.

No class or division of society can claim a monopoly in the whims of fashion. High and low, rich and poor, master and slave, white and black, wise and unwise have all yielded allegiance and kissed the rod in submission. Probably also no class can claim exemption.

A picture from the time of Edward III, in the fourteenth century, reads as follows :

An Englishman . . . He wore long pointed shoes, fastened to his knees by gold or silver chains; hose of one colour on one leg and of another colour on the other; short breeches which did reach to the middle of his thighs; a coat, the one half white, and the other half black or blue; a long beard; a silk hood buttoned under his chin, embroidered with grotesque figures of animals and dancing men, sometimes ornamented with gold and precious stones.—*Clark's Commentary, Lev. 19: 19.*

The sad part of it all is that men and women still consent to be the dupes of this irrational and irresponsible deity. Whims the lightest, fashions the most grotesque will be followed with a submission most amazing. If people were compelled to wear such garments as fashion dictates there would be a national insurrection. But because some person is found willing, perhaps from a wish for notoriety or a desire to be thought peculiar, to submit, a million imitators appear, like the mushrooms in a night, and lo! the thing is "fashionable."

When Benjamin Franklin went to Paris as the American commissioner, in 1776, he went with his old plain dress, and his straight, unpowdered hair, contrary to all the fashions of the day. Why cannot people of sense still live apart from the silly decrees of the god of human folly?

Too Short

AT a time when it was thought that Germany wanted to get a foothold in Holland, Bismarck and the Dutch Ambassador stood watching a review of the German army. As a well set up body of men marched past the Ambassador said: "Fine soldiers, but too short." Then came the Grenadiers, between six and seven feet tall; nevertheless the Ambassador's comment was the same as before: "Fine soldiers, but too short."

"What does your Excellency mean?" asked Bismarck.

"I mean that we can flood Holland eight feet deep," replied the Ambassador.—*Boston Transcript.*

ONE way to keep well is to refuse to join those who "enjoy" poor health.

Health Hints

David Paulson, M.D.

PREFERENCE should always be given to solid, substantial foods that require thorough mastication. When monkeys are fed exclusively on soft foods, they are likely to develop pyrrhea, or infection of the gums. Thorough mastication not only excites the flow of saliva and the gastric juice, but it also stimulates the intestinal movements.

Eating between meals disturbs the rhythm of digestion, encourages the activity of the germs, and thus favours auto-intoxication.

Dr. L. Duncan Bulkley, the noted New York skin and cancer specialist, secures most phenomenal results in inflammatory skin disorders by prescribing an exclusive bread and rice dietary for five consecutive days. Lettuce, parsley, cooked spinach, and other varieties of greens, cooked carrots, and similar foods, by their bulk stimulate the activity of the intestines, and their rich contents of mineral salts are beneficial for the blood. So it can be truthfully said that such foods clean the alimentary canal and the blood at the same time. Fruits both raw and cooked serve the same purpose.

If we want to enjoy simple, natural health, we must return to the simpler foods of uncivilised people. The free use of wholemeal biscuits and bread is a step in the right direction.

Such fiery spices and condiments as mustard, pepper, Worcestershire sauce, etc., cause spasm of the pylorus, delaying the emptying of the food from the stomach, and have a tendency to produce nervous spasm at different points in the alimentary canal, thus promoting stagnation of its contents and at the same time encouraging hyper-acidity and intestinal catarrh.

God has put a flavour into every food, just as He has put fragrance into every flower: and no food is in any way improved by adding to it stinging, burning, blistering, irritating substances.

Only a small amount of poison

can be generated during the first twenty-four hours after the food is eaten; and that is the normal time for the food remnants to traverse the entire length of the alimentary canal. But among civilised people it more often requires forty-eight and sometimes even seventy-two hours or longer.

Such people have already discovered that they feel better after taking salts and various cathartics. But that is only substituting artificial dysentery for an abnormal stagnation. The ordinary laxatives increase the spasm of the lower bowel, irritate the mucous membrane, promote mucous colitis, and thus actually increase the absorption of toxins.

Provided there are no adhesions or other conditions requiring surgical interference, it is nearly always possible, by using a larger amount of food possessing bulk, and eating more liberally of fruit, to secure a normal bowel movement in the morning. For those who are not in the best of health, it is highly advantageous to take a small enema before bedtime. Securing two bowel movements daily in the majority of cases increases physical efficiency and a sense of wellbeing from fifty to a hundred per cent in a few months' time.

Dr. Lane, the brilliant English surgeon, was the first man to suggest liquid paraffin as a substitute for medical laxatives. Being a mineral oil, it is neither digested nor absorbed, and it cannot decompose in the alimentary canal. As it is merely a lubricant, it does not create the laxative habit.

Of all the different medical laxatives, senna and castor oil, the old-fashioned remedies of our forefathers, are perhaps the simplest and the least harmful. Metchnikoff, the eminent French scientist, developed the Bulgarian bacilli idea with the view of helping to disinfect the colon. In many instances these are undoubtedly advantageous. In other cases they appear to render no benefit.

Many persons are suffering from intestinal stagnation simply because they have prolapsed abdominal organs, which

produce kinks or strain of the intestine. Such can often be wonderfully benefited by wearing for a time properly adjusted abdominal supporters, and at the same time taking such simple exercises for strengthening the abdominal muscles as lying down and carefully raising the heels six inches to a foot from the floor and lowering them again, then raising the head and shoulders a few inches, repeating half a dozen or a dozen times once or twice a day. These exercises should be taken cautiously at first, until the muscles are accustomed to the exertion.

Above all things, our vast army of sedentary people need more outdoor exercise. While we cannot reverse modern conditions, we may introduce into our daily life more normal conditions.

Many who are suffering from auto-intoxication can secure amazing improvement by adopting a sane, sensible plan of living. Others will need a careful physical examination and intelligent advice by some competent, conscientious physician.

Above all things, every patient who is struggling with ill-health should remember that God's wish for him is that he may "prosper and be in health" (3 John 2); and that if he will cheerfully use all the light Providence causes to shine on his pathway, God will give him all the health he will make good use of; and what is equally important, He will bless to his good all the ill-health He permits him to retain. 2 Cor. 12:7-9.

Saving a City

IT was in the year 1868, after a battle in the Spanish revolution of that year, and the streets of Madrid were filled with angry crowds that were bent on destroying everything and everyone. Suddenly an unknown man appeared at the city hall.

"Give me a band of musicians," he said, "and before nightfall I shall control all Madrid."

He must have been a man of rare per-

sonality to have been able to persuade the authorities in that dark hour to give him anything.

But he got the musicians, and went out with them to wander through the city. While they played, he sang—popular street songs, or some old national air. When these bored the listeners, he mounted old boxes and told funny tales.

By nightfall peace reigned in the city, and the mob broke up and went home to bed. The man's name was Felipe Ducazel, and he was only twenty two years old when he cleverly achieved this result.

We are told a deal about heroic things in saving countries by long, terrible rides at night, or by the sacrifice of oneself by dying in somebody's stead, but few of us hear of anyone who saved a town by laughter.

"THEY SAY"

R. Hare

Of all the spooks that walk abroad,
Or come at fancy's call,
"They say," that little red-haired elf,
Is spookiest of them all;
But there's no foe to human peace
So false or out of reason,
"They say," though brightly decked with smiles,
Its very breath is treason!

It haunts the village and the town,
Through mansion, hut, or cottage,
Prepared to barter friendship's name
For Esau's mess of pottage.
Its dimpled face oft wears a grin
As though it meant to scold you,
And then in smiles it whispering says,
"Now mind, don't say I told you."

It has no heritage on earth,
And heaven is blest without it.
I wish that mothers all would hear,
And warn their girls about it.
Teach them to hate the little spook
That friendship's ties would sever,
And thus enjoy the peace of heaven
With "They say" banned forever.

MANY of the fruits and vegetables now eaten were almost unknown to our forefathers. Not until Henry VIII's time were there either raspberries, strawberries, or cherries grown in England.

Serpent-Bite Antidotes Save Many in India

EFFECTIVE antidotes for snake bites which already have saved the lives of numerous persons in India are being produced as the result of work carried on at the Parel laboratory at Bombay. Between the years 1887 and 1911, it was estimated that 543,991 human beings

cannot strike those about it, while a small wineglass with its top tightly covered by a piece of cloth is placed near the reptile's head. It usually strikes almost immediately, its sharp upper fangs piercing the cloth and the poisonous venom dripping into the glass. From such an operation, approximately a half teaspoonful of the liquid is collected, an amount sufficient to kill half a dozen persons.



Spanning a Giant Eucalyptus at Gilderoy, Victoria

N. J. Caire, Photo., Melb.

were killed by poisonous reptiles. The figures were so appalling that scientific experiments were started in an attempt to find something which would counteract the effect of the venom of the various serpents commonly encountered in the central part of the country. Extraction of the poison from the most deadly of these snakes constitutes the work being accomplished at the Bombay laboratory, and this process is as simple as it is interesting. The snake is held so that it

This is dried over lime, dissolved into a salt solution, and injected in small doses into horses. For two years this treatment is continued, until an animal is able to take a quantity equal to two hundred times the original amount. The horse's immunity to the poison is caused by a material which is gradually built up by his system. This material is contained in the serum of the horse's blood, which is administered to human beings by subcutaneous injection. If the serum is

injected immediately, the bite will not result disastrously. It is necessary, however, that a person use an antidote made from the venom of a serpent of the same species as the one that bit him.—*Popular Mechanics*.

MID-LIFE

GONE, they tell me, is youth,
Gone is the strength of my life;
Nothing remains but decline,
Nothing but age and decay.

Not so: I am God's little child,
Only beginning to live
Coming the days of my prime,
Coming the strength of my life,
Coming the vision of God,
Coming my bloom and my power.
—*William Newton Clarke*.

Flatfoot (Fallen Arches)

DID you ever notice the gait of the average policeman? Graceful, isn't it? In it you see one of the results of flatfoot, but not by any means the most important ones.

This condition is becoming exceedingly common, and particularly so since the tango and other dances of this class have become so popular; in fact, we now have the "tango foot," which is merely another name for flatfoot.

There are several causes which tend to bring about this condition. The normal human foot was built to rest flat on the ground, that is, not to be raised at the heel. It naturally follows that the higher the heel, the more unnatural the condition of the foot. Any shoes are bad enough, but of late years the heels have been getting higher and higher all the time. Women are, of course, the worst offenders against nature in this line; hence it is not surprising that women are now furnishing the most cases of flatfoot, where formerly men, owing to the heavier work they do, presented the most cases.

The symptoms of flatfoot are many and various. Many cases of so-called rheumatism, particularly in the feet and legs, are due entirely to this cause. The pains caused by flatfoot, however, may be in

parts of the body quite remote from the foot itself, reflex pains, as they are called. Usually there is little if any swelling, as the pains are neuralgic in character rather than due to inflammation. It is safe to say that there should be a strong suspicion of flatfoot in all cases where there is pain in the feet, legs, or thighs, also in cases of backache, unless there is some other evident cause for such pain.

When flatfoot is the cause of such troubles, the relief of the condition of the foot will relieve the pains "almost like magic." In many cases all that is necessary is the wearing of a properly fitted arch brace. Many patients can obtain one that will do the work, at almost any shoe store. Some cases are more complicated, and need a specially fitted arch or shoe. In still others, where there are adhesions, these must be broken, perhaps under ether; and the foot must be treated for a time by elastic bandages or some other surgical measure. In any case, in addition to the braces for the arch of the foot, the feet should be exercised. This is for the purpose of making the weakened muscles, which should support the arches, strong enough to do their work again.

To test yourself for flatfoot, wet the feet, and stand barefoot on a piece of paper. If the entire outline of the foot is marked on the paper by the water, you have some degree of flatfoot. If the foot is normal, the mark of the foot at the instep will be very narrow, showing that the instep does not touch at all. It used to be said that it should be possible for water to run under the arch of the bare foot. This was rather exaggerated, but it expressed the idea very well.—*Ernest F. Robinson, M.D.*

Military Strategy

In a letter to the *Army and Navy Journal*, a retired army officer says that no intelligent soldier will fire a dum-dum or an explosive bullet at the enemy, for they both kill. The object of the rifleman is not to kill an enemy, but to wound him. "A dead man is simply one soldier lost

from his army. He is not a burden to anyone. A wounded soldier must be taken care of. Four wounded soldiers must have an ambulance with two horses and an able-bodied soldier driver. Thirty wounded soldiers must have a surgeon, a hospital steward, and ten or a dozen able-bodied soldiers to aid the doctor and wait upon and nurse the wounded men. The ambulances block the roads and delay the troops, especially the artillery and the supply waggons. When a man is hurt, everyone is anxious to get him at once to a doctor. If the troops on the firing line are not well disciplined, and a soldier is wounded, there will be three or four soldiers who are willing and anxious to carry him to the rear. For every soldier wounded, the firing line loses four soldiers, and a hundred men wounded means that four hundred men are lost to the firing line, for they never rejoin their regiments until the battle is over."

New Boots Crippled the German Army

THE new uniforms and new shoes of the German army tell volumes for the way in which the Germans had prepared for war; but the new boots worked mischief with the men's feet. Thousands of them were almost crippled. It is possible that the failure to go through Belgium as soon as expected was due in some degree to the effect of long marches with new foot wear. New shoes at best are bad for the feet, even though well fitting. In fact, fitting shoes successfully is an art. Certain shoe dealers refuse to let a customer go out unless the shoes fit satisfactorily in the judgment of the owner or manager. This is the right policy, and such dealers are the right ones to patronise. The feet cause about as much suffering as any other portion of the human anatomy, but our pedal extremities seldom kill outright. It is a very human trait to look lightly upon infirmities that are not calculated to kill.

In this day of overdone specialism, the

competent foot specialist ought to find a creditable clientele. Many people are crippling about with broken arches while they attribute the trouble to rheumatism. There are few people free from some foot malady which makes locomotion—and sometimes sitting still—quite painful. Corns, bunions, callouses, and bony and ligamentous affections of the feet are all too common, and seldom receive appropriate treatment.—*Exchange*.

Palpitation

A PERSON in perfect health is not conscious of the beating of his heart, and therefore an attack of so-called palpitation often causes great alarm. Of course the heart palpitates incessantly; we should die if it did not perform that function, but "palpitation" is the word that has been chosen to express an increase of the beating sufficient to bring it to our notice. The first attack of the kind generally sends the sufferer in great alarm to the physician; and that is fortunate, for a proper examination is desirable, and often helpful. The trouble may prove to be serious, although that is not likely; and when it is not, the doctor can, by explaining the condition, save the patient much unnecessary apprehension.

Palpitation of the heart is usually of nervous origin. The people who suffer from it are of the nervous temperament, and the attacks generally appear at critical times in life's journey, or when the sufferer is weakened by illness, or depressed by grief or worry, or anæmic from confining work.

Intense fear will bring on palpitation of the heart in almost anyone. In some people, also, it is a symptom of indigestion. Those who are subject to palpitation should avoid over-stimulating and straining the nervous system. Tea and coffee are stimulants that do harm in many cases, and alcohol and tobacco are sure to be hurtful. It is not possible to take too much care about the use of tobacco; any competent physician is sure

to advise a patient to give up tobacco altogether. The term "smoker's heart" describes the form of palpitation that tobacco causes.

Palpitation of the heart causes distress not only because the beat is so alarmingly rapid, but also because of the irregularity and the thumping force of it. The symptoms vary all the way from a simple feeling of weakness and a fluttering round the heart to a rapid pounding that almost makes the victim fear that the heart is trying to escape from the body. There is also a pronounced throbbing of the arteries. Many people who are not ordinarily subject to the trouble will know something of these symptoms if they ride a bicycle up a steep hill in the face of a strong wind. The sufferer must learn that palpitation, although unpleasant, is not dangerous, and must be willing to go slowly for a time, to take only moderate exercise, and to avoid stimulants and all articles of food that tend to cause flatulent dyspepsia.—*Youth's Companion*.

WANTED: THE GERM OF MAL-DE-MER

By a Victim

WHAT causes mal-de-mer? Please tell,
Dear doctor, for a martyr's need,
And how when sick to get quite well,
To know this would give joy indeed.
Is it from germs this dread disease
That makes me languish? Tell me please.

A pound a head for every germ
That you can catch for me and kill
(If thus you shorten this sick term),
I'd give it with a right good will.
Yea, more, were I a millionaire,
A million pounds for this I'd spare.

Are there some wretched, sprawling things,
Which in bilge-water thrive and grow,
Which have the power to sicken kings
As well as mortals poor and low?
If so, let Science wise employ
His knowledge each one to destroy.

Ye men of wisdom, doctors all,
Marshal your hosts, attack these foes,
And when the last of them shall fall,
And life at sea has lost its throes,
A medal I will strike that day,
And for the victors ever pray.

W. R. C.

[There is one sure cure for "mal-de-mer"—stay ashore!—Ed.]



Scene on the Lower Columbia River, Oregon



“No Children”

Indulgence and Its Results

MANY people complain that advertisements for tenants, paying-guests, employees, etc., so often include the words, “No children,” or “no children preferred.”

This appears harsh, but something can be said in excuse of it, for these advertisements notwithstanding, this is certainly the age of the child. Never perhaps in the world's history have children been so much considered and indulged by their parents and guardians; they are therefore usually troublesome, the result being that they are seldom wanted, except in their own homes. Nor can this be wondered at. The little ones are rarely obedient, or only after wearisome arguments, while their noisy freedom of a house destroys its peace and comfort, and cannot be easily tolerated by grown people not related to children, or interested in them.

House agents and flat-owners are on their guard, because children are unduly careless of wallpapers, furniture, and other surroundings; while boarding-house keepers complain that although a lower rate is paid for children, they demand the same quality of food, and eat or waste more of it than better-paying and less troublesome guests.

It is the same in social life. When a lady visits a friend, her children cannot, as in bygone days, be given a glass of water or lemonade, and sent to play in the garden with some biscuits or simple cakes. No, they “don't want to go in the garden,” or, if they go, come back

almost immediately. They hang about the drawing-room, against all entreaties, preventing any private conversation, and keeping their hostess in silent fear for her belongings. When tea comes they are satisfied only with the daintiest cakes and sandwiches; they also want cups of tea, or—worse, if their visit is unexpected—cups of milk, with the carpet and furniture in danger all the time. What wonder if a hostess inviting callers would like to add, “No children preferred”?

The trouble is seen in all classes. A capable woman with a “walking child” finds it difficult to get a situation, even at low wages. One must employ her to understand the difficulty. To begin with, the child has no idea of obedience or the rights of others, and so he cannot be kept in his own apartments, no matter what the previous arrangements. In one instance, a grassy yard, with trees, a back verandah, a fair-sized room, in addition to kitchen offices, and a large back hall, were not scope enough for the “walking child.” In vain the lady of the house would every morning silently close the door between the front hall and the back one; on every opportunity the small boy was in, at the hat-stand, the pot plants, or anything else that pleased him, not infrequently presenting a grubby appearance to visitors at the front door. Then his aggrieved mother would take him screaming to the kitchen, and give him the flour-sifter to play with, or the nut-meg-grater, or he would be seen at the



"MY BABY IS MY PET"

J. W. Small & Co., Photo., Melb.

yard tap with a "dining-room teacup," or stirring wet sand with a stick in a new aluminium saucepan. All this in addition to his mother's work being made irregular, and the household meals annoyingly uncertain. On a fair estimate three-fourths of this trouble was unnecessary.

Of course, there are many exceptions. A capable woman with a child who is obedient and reasonably quiet need never wait long for a good situation, nor would the child, one thinks, be less happy.

We must look to ourselves to remedy the evil. If a change is made in the drawing-room, it will, in time, be made in the kitchen. While we are thankful that our children enjoy so much liberty, and so many advantages, can we not teach them to be a little more considerate for others; to occupy themselves quietly when grown people are reading or writing; to go and amuse themselves elsewhere when desired; to be, in fact, less obtrusive, more obliging, more moderate, and more careful? Such training need not lessen the happiness of our dear boys and girls, but will rather add to it; and should it become general there might be an end to the stipulation, "No children," or "No children preferred."—*Mater in the Daily Telegraph, Sydney.*

My Baby is My Pet

THE domesticity of Miss Dorothy Ward, the brilliant actress who has won for herself extraordinary popularity in London, was charmingly revealed recently to a newspaper interviewer who asked if she had any pets. The interviewer had in mind the present-day weakness of actresses and society women for weird little animals. "My baby is my pet," said Miss Ward, and her face beamed with loving pride. The world would be happier and more prosperous if women devoted their attention to the rearing and training of babies, instead of lavishing their affection upon toy dogs and other pets as so many society women do to-day.

A Stitch in Time

THE time to repair a garment is before there is any actual break in texture. The housewife should look for evidence of strain or wear, and reinforce thin places and renew worn edges before they become torn or frayed. Not only will one early stitch take the place of nine later stitches, but the garment will keep in a uniform state of preservation, and will last far longer.

The time to take the first stitches in ready-made clothing is immediately after you buy it. Buttons should be sewed on firmly; tapes, ribbons, or ornaments restitched and buttonholes and seams examined for unfinished edges. Use strong thread and plenty of it for sewing on buttons; wind it round under the button several times after sewing, and fasten it firmly before cutting it off.

Parts of garments subject to the greatest amount of wear, like the underside of sleeves, the seat and knees of trousers, and the knees of stockings, should be strengthened by basting a piece of cloth, preferably of the same material, under the thin place before it actually wears through. If the same material cannot be secured, use cloth of the same shade and weight. Make your "patch" of generous size, and sew it by running stitches or cat stitching, rather than by hemming, which would show on the right side of the goods.

Watch the sleeve linings and the pockets for rips. When a pocket becomes worn cut it off below the sound top, cut a new one by it, allowing extra length for the lapping, and stitch the new part into place.

Darn stockings, mittens, or other knitted goods on the wrong side, if possible before a break occurs. By running long, parallel threads under thin places, such articles can be kept in good condition long past the time when otherwise they would have been disfigured by unsightly darns. The two great secrets of neat darning are matching colours and covering well over on the firm part of the garment.

If a hole appears in any kind of woven

goods, a piece of the same cloth must be used to fill it, if possible. Often a bit from a wide seam, or even from a deep hem, may be removed; or in the case of a shirt waist, a piece from below the belt can be taken out and replaced by plain cloth. In making garments at home, particularly those of coloured wash goods, stitch in an extra piece of the goods at the belt or yoke, on the underside of the garment, so that it may fade like the rest of the cloth in washing, and be ready for needful repairs.

Finally, if you are a wage-earner, beware of spending your precious hours of leisure in much mending. Buy good material, not necessarily expensive, but of good quality, well made, and keep it in repair in advance of actual breaks. But do not keep mending garments that have outlived their usefulness; do not spend two shillings' worth of time darning a one shilling pair of stockings, or sixpenny worth of time over them week after week. Give them to someone who can better afford to keep them in repair, and buy yourself new ones. If more of the time now spent by wage-earners in petty economies over worn-out things were spent in developing their earning capacity, there would be fewer people wearing patches.—*Selected.*

A Useful Invention

A SOMEWHAT unusual but what appears to be a really practical device is of recent Paris invention, this being a traveller's smoothing iron, self-contained with its alcohol heater. Ladies will appreciate the convenience which is afforded by having an iron ready at hand, for on arriving at the hotel, clothes in trunks or valises are often sadly rumpled. It is then an advantage to have at hand the means of repairing the damage in a very short time, and in a neat leather case only five by three inches are lodged the iron and its alcohol lamp, the latter having a good-sized asbestos burner.

PATIENCE YET

R. Hare

WE plant our seeds, and then in childish haste
 Impatient wait and watch to see them grow.
 Forgetful that the sun and rain, the frost and dew,
 Must charm their latent energies and bring to view
 The beauties that each springtime would renew—
 Yet these pass silent o'er the seeds we sow.

For God works slowly in the garden sod.
 No need of haste, His ways are plain and true,
 And from the clod unconscious, by His power doth
 bring
 Full many a blossom, bright as seraph's radiant wing,
 To add new glories to the opening spring—
 But all too slowly for our anxious view.

Fear not; He knoweth best; impatient haste
 Would mar the blossoms in their cloth of gold.
 Wait His good pleasure, then life's lilies, bright and
 fair,
 Will rise to breathe their sweetest incense through
 the air
 Like glad memorials of His watchful care—
 For thus His holy purposes unfold.

Gas Economy

Using the Stove to Advantage

AS gas stoves are now generally used for cooking, even in the humblest household, says an exchange, it is comforting to know that with care gas may prove cheaper than either wood or coal.

First keep your range and cooking utensils perfectly clean, and use, if possible, broad, flat saucepans for cooking. Always lower the gas directly the utensils boil. Take the gas fittings to pieces occasionally; place them in an iron saucepan with a lump of soda, and boil thoroughly. Then carefully dry, and replace them. The result is better light and less gas used. A dirty stove burns double the gas.

Test the heat of the oven by putting in white paper, which blackens if too hot. The gas is saved if the stove is not allowed to be over-heated. Conserve heat by letting no draughts get to the stove. Put a piece of tin or sheet-iron on the top of the stove. This concentrates the heat, and allows a larger surface for pots and pans. Screw the gas off immediately it is not required. Keep a box of matches handy, for matches are cheaper than gas.

After much cooking stand a bowl of water in the oven. The heat of the oven will suffice to heat this, which will serve for washing up, and save lighting a burner for that purpose. Have pots and pans used only for gas cooking. If they become sooty, they will take longer to boil, and moreover run the risk of choking the burners. Place an enamelled basin of water on the top of any pot that is boiling. This makes the water hot, and it may be required for various purposes.

Keep a saucepan of water on the stove whenever cooking is on, for though it may not be over a burner, the combined heat from oven and burners alight will raise the temperature of the water sufficiently for washing-up purposes, and thus the use of a burner is saved. If the gas-handle at the meter is kept turned only half on, it will be found sufficient for ordinary purposes.

One woman sometimes saves using the gas stove by arranging a square of bricks around her gas ring. She has a piece of sheet iron on top, with some holes drilled through it. In this way three saucepans are kept boiling. Of course, each one is first brought to a boil over the top of the ring.

Some Exploded Notions

IT seems strange, says *The Healthy Home*, to read the medical and hygienic literature of even ten years ago, hygienic knowledge has progressed so fast.

Catching cold in the night air was among the older notions. Now it is known that colds are passed from individual to individual just as smallpox and diphtheria are passed along.

In the old days we used to hear about malaria, also, being caused by night air and by marshy places. Now we have found that the mosquito is the cause of malaria, and we know that night air contains less dust, and is in fact rather better than day air.

In the old days people were afraid of sewer gas, but it is now understood that sewer gas is not dangerous, although peo-

ple still naturally cling to the notion that anything which smells bad must be bad for the health.

Infection from Clothes

In the old days people were terribly afraid that the inanimate objects in a house would hold germs, as, for instance, books, draperies, wall paper, furniture, and the like. It is now known that the danger from this source is slight as compared with the danger from drinking cups, pencils, toys, and other things which may be contaminated with saliva and nose secretions. People are now afraid of infection from dirty fingers and hands in the handling of food, and from flies which come from the filthiest places to the cleanest tables.

In the old days we used to disinfect a whole ship and its contents to keep out the cholera. Even the stone ballast on wooden ships was sometimes disinfected, each stone being dipped in bichloride solution. Now the plague is thought to be carried by the rat, and we keep out the plague by killing the rats.

It is common to print figures showing how rapidly one person contaminated the air of a room by breathing out carbonic acid gas. It is true that nobody took these figures very seriously, or at least but few did. Very recently ideas of ventilation have changed completely. The effort is now to keep a proper amount of moisture in the air and to keep it moving. It is known that the cause of discomfort in improperly ventilated rooms is heat stagnation, and that while fresh air is the best remedy there are other ways of helping matters when this is not possible.

No Air-Borne Plagues

In the old days it was thought that some diseases were air-borne. Nowadays people think it is unnecessary to bother much about the air except the drop laden infected air from sneezing and coughing. The radius of infection from discharges from the mouth and nose is but a few feet or yards at most. Ozone which was once looked upon as a disinfectant and

purifier of the air has been found to be an irritating and poisonous gas, and has no real place as a disinfectant in rooms. Its effect may even be mischievous.

Great emphasis is now laid on prevention. Disease used to be blamed on providence or the devil. People are now urged to prevent disease by proper cleanliness and proper disposal of sewage and garbage. A very important rule at the hospitals is to avoid contact with discharges which come from any part of the patient. If the patient has to be handled, keep your hands out of your mouth, nose, etc., and when the work is done wash the hands immediately.

Fumigation is not looked upon as effective as it used to be, but cleanliness is made of even greater importance.

How to Purify Drinking Water

IN the Washington *Times* Leonard Keene Hirshberg, B.A., M.A., M.D., gives practical directions for disinfecting drinking water so that no cholera, fever, dysentery, or other disease-producing microbes will be left in it, and no unpleasant taste or odour remain. He says to obtain a supply of high-quality chlorinated lime in quarter-pound cans, hermetically sealed. Secure also an equal number of half-pound packages of hyposulphate of soda, properly called sodium thiosulphate. Add to a gallon of water a quarter-pound can of the chlorinated lime, and shake well until thoroughly mixed. In another gallon of water dissolve in the same way a half-pound package of hyposulphate of soda. These solutions may be bottled and kept in stock.

They are sufficient to sterilise 8,000 gallons of drinking water. A teaspoonful of each will sterilise eight gallons of water. To use, add the chlorinated lime solution to the drinking water in the above proportion, according to the quantity of water to be sterilised, and fifteen minutes later add the hyposulphate of soda in the same proportion to remove any bad taste or odour. These mixtures

may be used in reservoirs, wells, fountains, springs, or gallon bottles of table waters, and will remove from them all danger from water-borne maladies.

How Mother Brought the Babies Home

THE evening whistle of a small suburban town blew sharply, and all the mothers of a certain resident street began calling their little ones in from play to their suppers.

There followed the usual scene of protests, tears, and open rebellion, with mothers scolding, threatening, and in some cases bodily dragging their struggling offsprings home by main force.

In the midst of this scene of infantile weeping and wailing and gnashing of teeth, appeared a young mother, gentle of face and quiet of manner. In one hand she carried a child's harness of jingling bells, in the other a toy whip.

She approached a group of small children making mud pies, and singling out her own—a boy and a girl of five and three—she deftly slipped the jingling harness over the boy's arms, placed the reins in the hands of the tiny girl, and with a merry "Gee up horsies!" and a playful snapping and flourishing of the toy whip, this wise young mother gaily pranced her babies home.—*Selected.*

TALK HAPPINESS

TALK happiness! The world is sad enough
Without your woe. No path is wholly rough,
Look for the places that are smooth and clear,
And speak of them to rest the weary ear
Of earth; so hurt by one continuous strain
Of mortal discontent and grief and pain.

Talk faith! The world is better off without
Your uttered ignorance and morbid doubt.
If you have faith in God, or man, or self,
Say so; if not, push back upon the shelf
Of silence all your thoughts till faith shall come.
No one will grieve because your lips are dumb.

Talk health! The dreary, never-ending tale
Of mortal maladies is worn and stale;
You cannot charm or interest or please
By harping on that minor chord disease.
Say you are well, or all is well with you,
And God shall hear your words and make them true.
—*Ella W. Wilcox.*

Catch Up Your Lost Sleep

TEMPORARY loss of sleep is sometimes unavoidable. Baby may be sick. The day's work may not end just as you have planned it. Emergencies often arise which cut into one's rest, but doing without sleep is like trying to run a waggon on three wheels or a bicycle on one. They don't run well. They were never intended to run that way. But when

"Instead of resorting to drugs when that weary feeling begins to steal over one, make a firm stand against them. Substitute the sleep habit for the drug habit.

"For tired, nervous women, one day a week in bed will do wonders, and save time and money. It is important for high-strung women to learn how to be calm.

"When a woman begins to get cross over trifles, and the slightest disagreement



The Conservatory, Adelaide Botanical Gardens S. A. Marchant Photo., Adelaide

you have lost sleep plan to make it up.

The way some people act about sleep you would think it was mankind's greatest enemy. The less they get of it, the happier they are (for a while), and feel that they are beating nature at her own game when they can keep going without sleep for some time and not collapse, and often boast about how fit they feel on a narrow margin of sleep.

The North Carolina *Health Bulletin* says:—

makes her feel like jumping up and down, then she must not go and get a cup of tea or medicine, but start in for a series of rests. Give herself the rest cure, and she will not have to go away from home to do it.

"Sleep more; that reposeful manner that is so refreshing to see depends on abundant sleep. Adults need seven and one-half to eight and one-half hours sleep daily. You can't do your best work on less. It is a mistake to try it."—*Selected.*

Odd Facts About Sleep

ALL the organs of life rest in some way or other. The heart has an interval of rest between each combined act of contraction and expansion and the beginning of a fresh act. Between each expiration of the lungs and the succeeding inspiration there is a period of repose. Physiologists have calculated that the heart reposes during about one-fourth of the time. Certain of the other organs suspend their activity in part during sleep. Old physiologists supposed that sleep was caused by the pressure of the blood on the brain. But modern physiology, with a tendency to regard the brain as the origin of all force and of all functions of the body, inclines to the view that sleep is caused by a withdrawal of blood from the brain. A curious trait has marked men of large brain—that of sleeping at will. Bonaparte used to throw himself on the ground and go to sleep within the space of two minutes. Pitt was a sound sleeper, and slept night after night in the House of Commons while his colleagues watched the debate and roused him when it was necessary that he should speak.—*Selected.*

Why It Pays to Lie Down

YOU go to bed tired; you wake up rested—that is the proof that you need sleep—lots of it. And the younger you are the more you need. The baby sleeps, or should sleep, almost all the time. A very young child needs a great deal of sleep. As we get older the need of sleep is less and less; until at last we fall into that last, long sleep, “from which no traveller returns.”

Some time ago I was talking about this

to a bright young fellow. He said, “I get along with very little sleep.” I stood up beside him and asked him to count my pulse. He did so. “Seventy-four,” he said, after a minute. Then I lay down on a couch and, after a few minutes, asked him to count the pulse again. “Sixty-six,” he announced with some surprise.



Work in the Garden is a Good Promoter of Sleep

“That is just the point,” I said. “When you are lying down your heart is saving itself at the rate of about eight beats a minute, nearly five hundred an hour, about twelve thousand a day. When you are lying down and asleep the saving is still greater.”—*Dr. Latson.*

IT is stated that the residents of islands and small peninsulas live longer than persons who dwell on the mainland.

I'd Like to Go

It seems to me I'd like to go
Where bells don't ring nor whistles blow,
Nor clocks don't strike, nor gongs don't sound,
And I'd have stillness all around—

Not real stillness, but just the trees'
Low whispering, or the hum of bees,
Or brooks' faint babbling over stones
In strangely, softly tangled tones.

If 'tweren't for sight and sound and smell,
I'd like the city pretty well;
But when it comes to getting rest,
I like the country lots the best.

Sometimes it seems to me I must
Just quit the city's din and dust,
And get out where the sky is blue—
And, say, how does it seem to you?

—Eugene Field.

Ice water in the bag is more immediately effective, but should be used with caution. Water from the tap does the trick just as well, and promptly lessens the unpleasant sensation of heat.—

Healthy Home.

Typhoid and Tuberculosis

STATISTICS seem to show that in any given number of consumptives the number of those who have had typhoid fever is much greater than it is among the same number of healthy people. The inference



“Where bells don't ring nor whistles blow”

The Cold Water Pillow

A COMFORTABLE device on a very hot night is a cold water pillow. This is an ordinary rubber water bag half filled with cold water placed under the head on retiring. It soon reduces the temperature of the whole body so as to insure sleep.

The cold water cushion may be used as a head-rest while reading or resting during the hot weather, and is a much simpler way of cooling off than frantically struggling into a crowded car in search of a breeze.

is plain that tuberculosis is often an after effect of the fever. “The explanation of this phenomenon,” writes Dr. Charles E. Woodruff, in *Science*, “is evident. If an adult develops active tuberculosis, it is generally not a new infection, but an activation of latent lesions that he has been carrying since childhood. Something has happened that has caused a temporary lessening of his antibodies and allowed the latent tuberculosis to spread—and nothing is more potent in doing this than infections like measles, whoop-

ing cough, and typhoid fever." Doctor Woodruff draws from these facts a potent argument for a pure water supply. He shows that tuberculosis invariably decreases wherever the water supply has been purified.

of these things are hateful in themselves. Often a moderate indulgence in them might be charming. It is the monotony that kills, the dull prospect of the same old clothes to be mended in the same old ways, forever and forever. All that such

A Bit of Colour

EVERYONE knows the effect of colour in dress. A black hat with just a touch of red or yellow in it, quietly and tastefully disposed, is far more striking than any blaze of many-coloured gorgeousness. A plain white frock, of a morning, needs pink or blue ribbons at the neck or waist to give it freshness and vivacity. An evening gown, all grey, may be very restful, very personal, very perfect; still, if you know how to use colour with it, and when, and where, the charm is more varied and more complete.

So in a room. A subdued colour scheme of deep tones and shadows may be tranquillising to live with. You may resent the idea of breaking it by the sharp intrusion of harsher hues. And yet just a small vaseful of gay-tinted flowers may give something that you feel was lacking, may give a warmth and cheerfulness that will alter the whole current of your thoughts. || ||

It is just so with some lives, with many women's lives, especially where the sombre hue is not a matter of design, but the fatal result of circumstances that cannot be controlled. We do not mean the tragic lives, the lives of intense and bitter misfortune. We mean the grey lives, the lives that seem to run in one eternal, inevitable rut of dusting and cooking and washing and sewing and baby tending, without end, or change, or hope. None



Spend Some of Your Time Amid the Flowers

lives need is just a bit of colour, a bright flash of some kind, to lead the eye over and beyond the washtub and the sewing-machine, to some winning possibility of diversion and forgetfulness.

Think of this, husbands and brothers, and fathers. Your lives have their hard spots, their tired spots, their discouraged spots. Often you come home for cheer and consolation, and you get it, and you think to yourself, "Ah, she doesn't have

to take the hard knocks." Perhaps she has enough even of those. But the worst to her is that long grey monotony. And such a little thing can break it. A day's outing at the beach will suffice, if you cannot afford a week at the mountains, or an evening at a concert. It does not much matter what it is. But just devote your idle minutes to thinking of some little bit of colour that you can pin upon that too grey life and make it sparkle. It will be a surprising addition to her happiness—and yours.—*Southern Cross.*

IF the bottoms of pots and kettles are greased before putting them over the fire, they will not become black.

TAKE time to teach the toddling tot to be kind to all animals; and then the mature man will never be neglectful of nor cruel to them.

ONE reason why some folks chase their work all day and never quite overtake it, is because so many jobs were left over from yesterday. Clear the calendar every day, for that makes every day's work easy.

A School Book Label

THE following has been suggested to the New York Board of Education as something valuable to place on school books for the guidance and information of pupils. It conveys a lot of common-sense for everybody to observe:—

Suggested Label

Your eyes are worth more to you than any book.

Your safety and your success in life depend on your eyes; therefore take care of them.

Always hold your head up when you read.

Hold your book fourteen inches from your face.

Be sure that the light is clear and good.

Never read with the sun shining directly on the book.

Never face the light in reading.

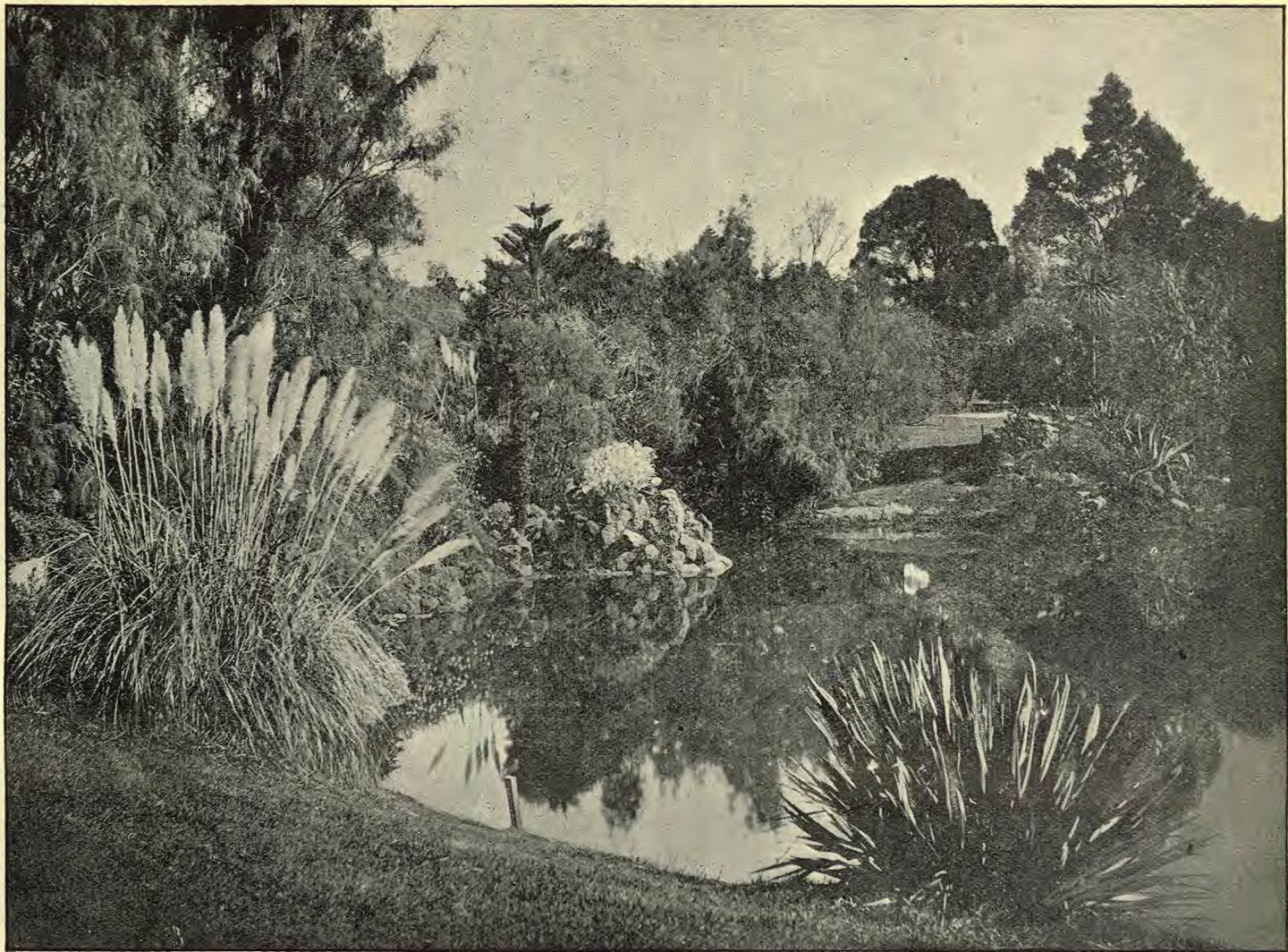
Let the light come from behind or over your left shoulder.

Avoid books or papers printed indistinctly or in small type.

Rest your eyes by looking away from the book every few moments.

Cleanse your eyes night and morning with pure water.—*Selected.*





A POND IN THE MELBOURNE BOTANICAL GARDENS

N. J. Caire, Photo., Melb.



CHILDREN'S HOUR

TO GRUMBLETOWN

'Tis quite a straight and easy road
That leads to Grumbletown,
And those who wish can always find
A chance to journey down.

'Tis customary for the trip
To choose a rainy day—
When weather's fine, one's not so apt
To care to go that way.

Just keep down Fretful Lane until
You come to Sulky Stile,
Where travellers always like to rest
In silence for a while.

And then cross over Pouting Bridge,
Where Don't Care Brook flows down ;
And just a little way beyond
You come to Grumbletown.

'The children there are badly spoiled,
And sure to fret and tease,
And all the grown-up people, too,
Seem cross and hard to please.

The books are stupid as can be ;
The games are dull and old ;
There's nothing new, and nothing nice,
In Grumbletown, I'm told.

And so I've taken pains, my dears,
The easiest road to show,
That you may all be very sure
You'll never, never go !

—Exchange.

Only a Husk

TOM DARCY, yet a young man, had grown to be a very hard one. Although naturally kind-hearted, active, and intelligent, he lacked strength of will to resist temptation, and had therefore fallen a victim to intemperance. He had lost his place as foreman of the great machine shop, and what money he now earned came from odd jobs of tinkering which he was able to do here and there at private houses ; for Tom was a genius as

well as a mechanic, and when his head was steady enough, he could mend a clock or clean a watch as well as he could set up and regulate a steam engine, and this latter he could do better than any other man ever employed by the Scott Falls Manufacturing Company.

One day Tom was engaged to mend a broken mowing machine and reaper, for which he received pay, and on the following morning he started for his old haunt, the village tavern. He knew that his wife sadly needed the money, and that his two children were absolutely suffering for want of clothing, and that morning he held a debate with the better part of himself, but the better part had become weak, and the demon of appetite carried the day.

So away to the tavern Tom went, where, for two or three hours, he felt the exhilarating effects of the alcoholic draught, and fancied himself happy, as he could sing and laugh ; but, as usual, stupefaction followed, and the man died out. He drank while he could stand, and then lay down in a corner, where his companions left him.

It was almost midnight when the landlord's wife came to the bar-room to see what kept her husband up, and she quickly saw Tom.

"Peter," said she, not in a pleasant mood, "why don't you send that miserable Tom Darcy home? He's been hanging round here long enough."

Tom's stupefaction was not sound sleep. The dead coma had left his brain, and the sharp voice speaking his name roused him, though he did not move.

"Tom has been a good customer of ours," said the landlord; "and as long as he has anything, we may as well have it. He would only go somewhere else, if I offended him."

"He had better go home and look after his family," snapped the wife. "They look as if they had had little of his attention in recent years."

"Well, it is the way some poor fools do," said Peter Tindar. "We have had the kernel of the nut this time, I think. Men must pay up the score in order for us to do business with them, and as we sell a good article trade is good, and we must not complain. But Tom will want a glass to brace his nerves for going home when he wakes up. There isn't much but the husk left now when he goes home."

Tom was looking out from between his nearly closed eyelids, and saw the glittering furnishings of the bar-room, everything bright and elegant; and his money had helped to pay for it. He thought, too, of the scanty furnishing at home, where wife and children awaited his coming.

Mrs. Tindar was well dressed, and wore jewellery that sparkled in the light. And his money too had helped to pay for this, while his own wife could not dress even comfortably.

Mrs. Tindar soon left the room, and shortly Tom sat up on the form and buttoned his threadbare coat about him, saying goodnight to the landlord without calling for a last drink. He looked back from the steps at the door which he had so often entered.

"And that is what I have been doing," he said to himself. "I have been helping to buy fine clothes for Mrs. Tindar while my own wife has gone hungry. I have been robbing my children of food, and robbing myself of love and life—just that Peter Tindar may have the kernel, and Ellen the husk! We'll see!"

It was a revelation to the man. The tavern-keeper's speech, meant not for his ears, had come on his senses as fell the voice of the Risen One upon Saul of Tarsus.

"We'll see!" he said, setting his foot firmly upon the ground; and then he wended his way homeward.

On the following morning he said to his wife, "Ellen, have you any coffee in the house?"

"Yes, Tom." She did not tell him that her sister had given it to her. She was glad to hear him ask for coffee instead of the old, old cider.

"I wish you would make me a cup, good and strong."

There was really music in Tom's voice, and the wife set about her work with a strange flutter at her heart.

Tom drank two cups of the strong, fragrant coffee, and then went out—went out with a resolute step, and walked straight to the great manufactory, where he found Mr. Scott in his office.

"Mr. Scott, I want to learn my trade over again."

"Eh, Tom, what do you mean?"

"I mean that it's Tom Darcy come back to the old place, asking forgiveness for the past, and hoping to do better in the future."

"Tom," cried the manufacturer, starting forward and grasping his hand, "are you in earnest? Is it really the old Tom?"

"It's what's left of him, sir, and we'll have him whole and strong very soon, if you'll only set him at work."

"Work! Ay, Tom, and bless you, too. There is an engine to be set up and tested to-day. Come with me."

Tom's hands were weak and unsteady, but his brain was clear, and under his skilful supervision the engine was set up and tested; but it was not perfect. There were mistakes which he had to correct, and it was late in the evening when the work was complete.

"How is it now, Tom?" asked Mr. Scott, as he came into the testing-house and found the workmen ready to depart.

"She's all right, sir. You may give your warrant without fear."

"God bless you, Tom! You don't know how like music the old voice sounds. Will you take your old place again?"

"Wait till Monday morning, sir. If you will offer it to me then, I will take it."

At the little cottage, Ellen Darcy's fluttering heart was sinking. That morning, after Tom had gone, she found some money in the coffee-cup. She knew that he had left it for her. She had been out and bought tea and sugar, and flour and butter, and a bit of tender steak; and all

"I have kept you waiting, Nellie."

"Tom!"

"I did not mean to, but the work hung on."

"Tom! Tom! You have been to the old shop!"

"Yes, and I'm bound to have the old place, and——"

"Oh, Tom!"

And she threw her arms around his



The man who spends his wages at the public house cannot possess a comfortable home like this one

day long a ray of light had been dancing and glimmering before her—a ray from the blessed light of other days. With prayer and hope she had set out the tea-table, and waited; but the sun went down and no Tom came. Eight o'clock—and almost nine.

Hark! The old step! quick, strong, eager for home. Yes, it was Tom, with the old grime upon his hands, and the odour of oil upon his garments.

neck, and pressed a kiss upon his lips.

"Nellie, darling, wait a little, and you shall have the old Tom back again."

"Oh, I have him now! God bless you, my husband!"

It was a banquet, that supper—with the bright angels of peace, and love, and joy, spreading their wings over the board.

On the following Monday morning Tom resumed his place at the head of the great machine shop, and those who thor-

oughly knew him had no fear of his going back into the slough of joylessness.

A few days later, Tom met Peter Tindar on the street.

"Eh, Tom, old boy, what's up?"

"I am up, right side up."

"Yes, I see; but I hope you haven't forsaken us, Tom?"

"I have forsaken only the evil you have in store, Peter. The fact is, I concluded that my wife and little ones had fed on husks long enough, and if there was a good kernel left in my heart, or in my manhood, they should have it."

"Ah, you heard what I said to my wife that night?"

"Yes, Peter; and I shall be grateful to you for it as long as I live. My remembrance of you will always be relieved by that tinge of warmth and brightness."—*Selected.*

A Good Lesson

As Bessie sat playing with her doll on the shady verandah, there came a thump! thump! thump! on the walk that led up to the front door. Looking toward the gate, she saw a little old lady walking with a cane.

The old lady climbed the steps to the screen door, but before she could open it, she had to set down a little basket that she carried in one hand. Then she held the door open with her cane, and picked up the basket and passed in.

Bessie went on playing with her doll, and in a moment her mother, too, came up the steps, for she had been in the garden.

The old lady was a great friend of Bessie's grandmother. She had brought a basket of cherries, and she and Bessie and Bessie's mother all had tea together on the verandah. When the friend rose to go, Bessie sat looking at her, and made no move to open the door for her, but let her mother do it.

When she had gone, Bessie's mother said, rather sadly, "I am sorry my little girl is so rude. I thought she had better manners."

"Why, mother, I didn't do anything impolite, did I? I didn't do anything at all!"

"No, my dear. That is the trouble. You didn't do anything when you ought to have done much. More than a hundred years ago there was a little girl in the Southern States about your age. She had the same kind of a chance to be polite that you had just now, and she did such a pretty thing, and did it so well, that she has been remembered for it ever since, and people in the South still tell about it, although even the little girl's name has been forgotten."

"Oh, tell me about her!" cried Bessie.

"Well, it is a very short story. She was the daughter of a lady who was a great friend of General George Washington, and one day she was in the room with her mother when the general called. She sat there till he rose to go; then she got up and held the door open for him to pass out. As he reached the door, he bowed to her, and said, 'My dear, I am sorry to make you so much trouble.'

"And then the little girl made a courtesy,—a still little bow that every child of that time learned to make,—and said, 'I only wish, sir, that it was to let you in.'

"It was a lovely speech for any child to make, but the feeling that made her say it was lovelier still."—*Selected.*

Origin of a Popular Phrase

SOMETIMES when a person wants to make an unpleasant remark in a pleasant sort of way about a dull boy, he will say, "That boy will never set the Thames on fire." Now that is all very true; for even the smartest man in the world could never set a stream of water on fire, and so perhaps many of you who have heard this expression have wondered what is meant by setting the Thames on fire. In England, many, many years ago, before the millers had machinery for sifting flour, each family was obliged to sift its own flour. For doing this it was necessary to

use a sieve called a temse, which was so fixed that it could be turned round and round in the top of a barrel. If it was turned too fast, the friction would sometimes cause it to catch fire, and as it was only the smart, hard-working boys who could make it go so fast as that, people got into the way of pointing out a lazy boy by saying that he would never set the temse on fire.

After a while these sieves went out of use, but as there were still plenty of stupid boys in the world people kept on saying that they would never set the temse on fire. Now the name of the River Thames is pronounced exactly like the word "temse;" and so, after many years, those persons who had never seen or heard of the old-fashioned sieve thought that "setting the temse on fire" meant setting the River Thames on fire.—*Selected.*

Maid Marian

SUCH a clouded, discontented little face as it was, frowning between the rich lace curtains, and looking with gloomy eyes upon the sunlight that was flooding the flower garden.

"Just my luck! Of course, when I wanted to go to Aunt Bernice's the carriage must go to the shop, and that stupid Marie had a blue feather put in my hat when I told her a white one. I know that I am the most unhappy girl alive!"

An angry stamp of the foot emphasised the words, and a flood of tears seemed just ready to fall, when the click of the iron gate caused Marian to turn quickly. A dear old lady was trotting briskly up the walk, a little basket on her arm, and her soft, grey curls bobbing gaily upon either side of her wrinkled face.

"Why, it is Miss Hannah!" Marian cried, eagerly, a sudden smile breaking over her gloomy face as the door opened and a chirpy voice said:—

"How are you, my dear? No, I cannot stay, I only came in to beg a few of your lovely flowers for an invalid friend I am going to see."

"You are welcome to as many as you want, Miss Hannah. I am sure that they do no good there in the garden. Just wait until I get the scissors," Marian replied, the old cloud creeping back over her face, and in a few minutes they were in the garden, the basket being rapidly filled with the choicest blossoms, while Miss Hannah listened to a flood of peevish, discontented words. A faint sigh passed the old lady's lips as she looked at the daintily dressed little girl, complaining so bitterly because one of her bright, happy days had contained a slight disappointment.

"Everything goes wrong. Whenever I plan anything, something is sure to happen every time," Marian cried, fretfully, as she tossed a white lily into the basket.

Miss Hannah did not reply at once; she seemed to be thinking deeply, with her eyes fixed upon the beautiful, stately house rising at their side.

"That will do, deary," she said at last; then, resting her wrinkled hand on the pretty golden head, she continued gently: "Marian, my dear, I want you to do me a great kindness; will you take a pretty cluster of these lilies to No. 13 Walnut Street, and give them to Nellie Raymond? She is a dear friend of mine. Tell her I sent you."

An instant Marian hesitated, for Walnut Street was a poor place, where her aristocratic little feet had never been. Then obeying a sudden impulse she kissed her dead mother's old friend and said, pleasantly: "Why, yes, Miss Hannah, I will do that for you. I go for my music lesson this afternoon, and can come back by Walnut Street."

"Thank you, my dear. Do not forget the lilies, and when I see you again you must tell me what you bring away with you." Then with a farewell kiss and smile she went her way.

"I do not see why Miss Hannah sent flowers here. The idea of these lilies in a place like this," Marian thought, with a tilt of her dimpled chin, as she stepped cautiously upon the porch of a very tiny house that afternoon.



THE KING'S CAT

J. W. Small and Co., Photo., Melb.

"Come in, please," called a blithe voice in answer to her timid knock, and, clutching her great bunch of lilies tightly, she opened the door slowly and entered, such a bare little room, with its few poor articles of furniture, but oh, so fresh and clean! In a large armchair by the window a girl near Marian's own age was sitting, with her hands busily knitting. "Will you please find a chair?" she said, turning her soft brown eyes toward Marian; then, receiving no answer, she continued: "I do not know who you are, for I am blind."

"I am Marian Esmond, and Miss Hannah Grey sent these lilies to Nellie Raymond," Marian answered, advancing to the old chair and looking with wonder into the bright face turned toward her.

"I am Nellie. Oh, how kind of you both, and how sweet they are!" the blind girl cried eagerly, as she lifted the snowy blossoms carefully. "I feel almost as if I see them when they touch my face so. But sit down, will you not? Tatters"—touching the huge grey cat curled up in her lap—"and I are alone this afternoon."

Marian paused a moment irresolutely, then drawing a chair near the window she seated herself, her eyes resting, as if fascinated, upon the animated face before her. "Do you stay here alone all the time?" she asked at last, and a merry, joyous laugh answered her: "O dear, no! Only during the day, for at night mother is here, you know. She stays in a shop, and it is often quite late before she comes. We do have lovely times when she is here."

"Marian's blue eyes opened widely as she glanced around the bare little room, and thought of her own cosy, nestlike quarters at home. "Lovely times" here!

"And sometimes mother comes home early, and when she is not too tired we go for a ride on the tram—away out, you know, where it feels and smells just like the country. I do enjoy that, and I think about it for ever so long, and make up stories about how it must all look. Do you live in the country?" The brown, sightless eyes were again turned toward

Marian, who flushed slightly as she answered:—

"No; I live on Hamilton Avenue."

"That is where so many beautiful houses are, mother told me. How happy you must be! Do tell me all about your home."

And for the next two hours the two girls chatted like old friends.

"If you could only see the lovely flowers in our greenhouses!" Marian surprised herself by saying suddenly, but Nellie's sweet face did not darken as she answered softly, a beautiful light stealing into her sightless eyes:—

"Some day I shall see, but I am content as it is now. It is dark outside, but you know that makes it all the brighter inside. Then I have so much to make me happy; everyone is so kind to me that I do not have time to miss my poor eyes."

Marian looked at the happy face of the speaker with a rather queer expression in her blue eyes, and when she tied her wide hat on over her curls it shaded a very sober little face. She had come in contact with a new and unknown side of life, and her face glowed and her pretty lips quivered as she recalled her peevish complaints to Miss Hannah. As she said goodby she hesitated a moment, then said, hastily: "I am coming again, Nellie, if I may, and some day soon I am going to take you to my home for a whole, long day among the flowers." A warm kiss was pressed upon the blind girl's lips, and ere she could reply the door closed softly and she was alone.

Many new thoughts chased each other through Marian's curly head as she neared the beautiful home where she reigned supreme over her widower father's heart. Near the gate she met Miss Hannah, and running forward, caught her hand. "O Miss Hannah!" she faltered, looking up with misty eyes, "I went to see Nellie, and I can tell you what I brought away. I brought away a blessing, and I know now how bad and wicked I have been, and how happy I should be. I think I know why you sent me, and blind Nellie has taught me a lesson in contentment that I shall never forget."—*Selected.*

As Ruth Saw It

OF course little Ruth should have been able to answer more precisely when the teacher asked her to describe a frog, says the *Public Ledger*. But she gave a description that at least is picturesque when she replied:—

“A frog, teacher, is a big green insect with warts all over it. And it keeps its mouth open all the time, and—and—it’s always sitting down behind and standing up in front.”

Before and After

AN instructive and pathetic custom still prevails in Munich. Every destitute child found begging in the streets is arrested and carried to a charitable institution. On his arrival he is photographed—dirt, rags, and all. After being maintained and educated, when he quits the

institution to begin life, this photograph is given to him, and he is required to make a solemn declaration that he will keep it as a reminder of the wretched state from which he was saved, and of the kindness shown. The charity has received many gifts from its reclaimed waifs.—*Healthy Home.*

The King’s Cat

The illustration on page 182 of a policeman and a cat is interesting because the cat has the distinction of being the only one in Great Britain to receive an allowance from the Treasury. He is domiciled and employed at the Record Office, London, and receives an allowance of sevenpence a week for cat’s meat. He wears a red collar with a silver crown on it, and is known as the King’s Cat. He is a splendid ratter.



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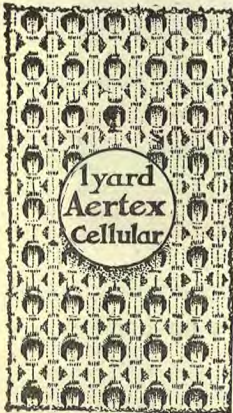
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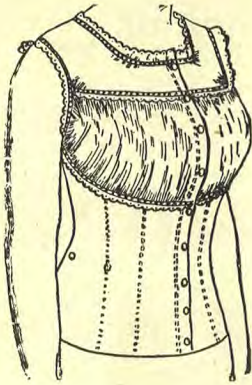
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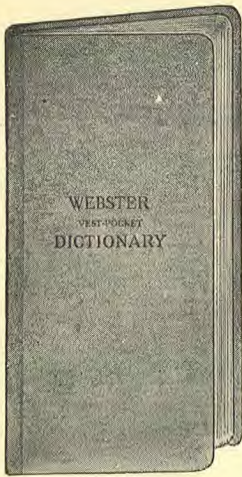


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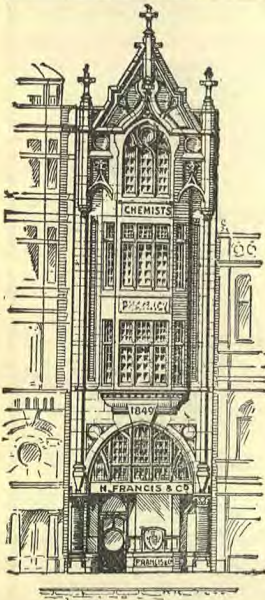
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