

# About the House

DOMESTIC SCIENCE AT HOME.

## First Lesson—Food Constituents.

The secret of success in successful cooking lies with the housewife who knows food constituents, their value and the proper method of preparing, as well as how to plan a diet for invalid, child or grown person.

Many women read technical terms and become frightened and bewildered. This is very foolish. Just remember how hard it seemed to do decimals before you mastered them, and how quickly you understood after a little practice. It is just the same way with food terms. Learn the few simple principles and become mistress of the finest profession in the world—become a practical and scientific housewife.

The five principal elements of food necessary to maintain the health are: Proteins, carbohydrates, fats, mineral salts, water.

**Proteins.**—The source of proteins are meat, milk, cheese, butter, eggs, fish, grains, and legumes. Proteins contain carbon, hydrogen, nitrogen, sulphur and sometimes phosphorus. Containing about sixteen per cent. of nitrogen, their chief use is tissue building, repairing waste and making muscle. They also supply the same amount of heat as starches.

**Carbohydrates.**—Their source is in starches and sugars, and they are found chiefly in green vegetables, grains and fruits. Carbohydrates are composed of carbon, hydrogen and oxygen in small granular grains, enclosed in cellulose coverings. Carbohydrates are used to supply energy or power to do work. They enter, to a small extent, into the process of building tissue.

### Canning Gooseberries.

To can gooseberries, stem and remove the tails, then wash in plenty of cold water and drain. Pack in jars and fill with boiling water or a heavy syrup. Place the rubber and lid in position and process in a water bath for thirty minutes. Remove, and test for leaks, then store in a cool, dry place. Label and date.

**Canned Gooseberries for Pies.**—Prepare the gooseberries by stemming and tailing. Place in a preserving kettle and add one cupful of sugar for every pound of prepared fruit. Add one-half cupful of water to a cupful of sugar. Place the kettle on the fire and bring slowly to a boil, stirring all the time the berries are cooking. Boil for five minutes, then pour in sterilized jars. Place the rubber and lid in position and process for ten minutes in hot water bath after the boiling starts. Remove and cool and then test for leaks.

**Gooseberry Jam.**—Use two quarts of gooseberries. Stem and tail them and place in a preserving kettle, adding one and one-fourth pounds of sugar and two cupfuls of water. Cook until very thick and pour into sterilized glasses. Cool and cover with paraffin. Store in the usual manner for jellies.

They also furnish heat. Starch, by the process of digestion, is converted into a dextrine, and then made into a convert sugar. This change takes place in the intestines.

**Fats.**—The source of fats is in beef, lard, chicken and other compounds of an animal source, and in olives, corn, peanut and cottonseed oil of a vegetable source. Vegetable oils are free from all disease. Corn oil is superior to all domestic oils, it is the by-product of corn from which cornstarch is made. In composition fats contain carbon, hydrogen and oxygen. Fats in the body furnish a greater amount of heat than starches. They are used also for building tissue. A large amount of fat must be used during cold weather than in hot weather, for the heat radiating over the surface evaporates more quickly in the cold, or, in other words, the cold oxidizes this body fuel.

**Mineral Salts.**—The source of inorganic salts is principally in green vegetables, grains, milk, meats, eggs and fish. The salts found in foods are calcium, iron, chlorine, phosphorus, magnesium, sodium, sulphur and potassium. Salts are used to regulate the body; they are also needed for the formation of bone and teeth structure and appear in tissue building.

**Water.**—Water is the most necessary of all foods; it forms a part of all tissues and is the important factor in the blood stream. It is pre-emptive carries nourishment to the blood and regulates the bodily process of elimination.

Gooseberries may be combined with other fruits when making jams, such as strawberries, raspberries, blackberries, huckleberries or currants.

**English Gooseberry Jam.**—Two quarts of gooseberries, two cupfuls of water. Place in a small preserving kettle and boil until very soft, usually about one-half hour. Rub through a fine sieve and allow a measure of sugar to each measure of fruit pulp. Return to fire, cook slowly until thick. Pour into glasses or pots and cool. Cover with paraffin.

### Floor Fillers.

Cracks and crevices in old floors may be filled with the time-honored paper pulp, made by boiling newspapers to jelly, draining, and mixing with glue. The substance is jammed in with a knife, then painted over.

But sawdust, mixed also with glue, is more satisfactory, and saves time. Cornstarch, moistened with turpentine or linseed oil, makes an excellent filler for porous-grain wood, to be applied before paint, stain, or wax. If desirable, tint with ocher, burnt umber, or lamp black.

Commercial fillers ready to apply may be bought at any paint store and, of course, save time and trouble.

## Piano Firm 18 Years Older than Confederation



On July first Canada celebrated the semi-centennial celebration of Confederation.

Looking back over the progress accomplished in Canada during those years, the many remarkable achievements seem hardly possible.

The industries of Canada have progressed step by step as the population increased. Among the older "truly Canadian" firms is The Williams Piano Co., Ltd., of Oshawa, Ont., makers of the famous Williams New Scale Piano.

R. S. Williams came from England and established this concern in 1849—68 years ago. Canadians will feel proud to know that they have such a "truly Canadian" piano—the Williams New Scale, which they can be proud to place in their home. The Williams Piano Co. at Oshawa will be glad to send interesting points concerning the "Artist Choice" piano, free upon request.

the United States. There you find what is essentially one nation, not perhaps in the fullest sense, but what is more and more growing into one nation; one big State consisting no doubt of separate parts, but all linked up into one big continuous area. The United States had to solve the problem which this presented, and they discovered the federal solution—a solution which provides subordinate treatment for the subordinate parts, but one national Federal Government and Parliament for the whole. Compare with that State the enormous system which is comprised in the British Empire. You can see at once that a solution which has been found practicable in the case of the United States will never work in the case of an enormous system such as we are trying to work out for the world.

### Towards a Greater Nationality.

"What I feel in regard to all the empires of the past, and even in regard to the United States, is that the effort has always been towards forming one nation—always one nation. All the empires we have known in the past and that exist to-day are founded on the idea of assimilation, of trying to force human material into one mould. Your whole idea and basis is entirely different. You do not want to standardize the nations of the British Empire; you want to develop them towards a greater nationality. These communities, the offspring of the Mother Country, or territories like my own, which have been annexed after the vicissitudes of war, must not be moulded in any one pattern. You want them to develop on the principle of self-government, and therefore your whole idea is different from anything that has ever existed before. That is the fundamental fact we have to bear in mind—that this British Commonwealth of nations does not stand for standardization or conventionalization, but for the fuller, richer, and more various life of all the nations comprised in it.

"Even the nations which have fought against it, like my own, must feel that their interests, their language, their religion, are as safe and secure under the British flag as those of the children of your own households and your own blood. It is only in proportion as this is realized you will fulfill the true mission which is yours. Therefore, it seems to me that there is only one solution, and that is a solution supplied by our past traditions—the traditions of freedom, self-government, and of the fullest development.

### The King and the Empire.

"The question arises, how are you going to keep this Commonwealth of nations together? If there is to be this enormous development towards a more varied and richer life among the nations, how are you going to keep them together? It seems to me that there are two potent factors that you must rely upon for the future. The first is your hereditary kingship. I have seen some speculation recently in the newspapers about the position of the kingship in this country—speculations by people who, I am sure, have not thought of the wider issues that are at stake. You cannot make a Republic of the British Commonwealth of Nations."

The law of booty governing the Israelites is given in Nun. xxxi. 26-47. Booty consisted of captives of both sexes, cattle and whatever a captured city might contain, especially metallic treasures.

# For the BOYS & GIRLS

**Orders.**  
"Eugene," said Mr. Dixon, "pile the wood in the woodshed on the side next the barn. You'd better do it this morning."

Eugene went to the woodshed as his father went off to work. He did not object to piling up wood. He was not at all lazy, and there was nothing in particular to do that morning; so he whistled as he carried the wood in, armful by armful. Then he looked round the shed.

"Pile it on the side next the barn," his father had said. There was no reason at all for that, and it meant more steps; so Eugene piled the wood on the side next the door. He was very painstaking.

At noon Mr. Dixon came home in a little electric automobile. He tried to run it into the woodshed, but the wood stuck out several feet and prevented him from getting in.

"Eugene!" he cried "I thought I told you to pile the wood over there!"

"I didn't think it would make any difference."

"It does. I am to have the use of the Hamiltons' car while they are out of town. The woodshed was where I planned to keep it."

"I didn't know—" began Eugene. He was already throwing the wood across the shed.

"I told you what to do. You should learn to take orders without always knowing why."

But that was just a home episode, and the lesson did not sink deep into the boy's consciousness.

He had similar experiences all the way through school. In spite of his good mind and his willingness to work, the teachers found him annoying. It was difficult for him to obey orders exactly; in his own mind he could always see a better way. But he had no serious difficulty until he went into the high school. He was taking his first year's work in chemistry. Dr. Roberts gave them instructions for the arsenic test.

"On no account must the hydrogen be lighted until it is certain that all the air in the generator has been driven off," he said to the class. "Collect the gas in small quantities and test it away from your bench. It will require twenty minutes before you can make the final test at the generator."

Eugene timed himself. "Fifteen

minutes—sixteen." There was only a faint "pop" when he had made his test after twelve minutes. "I guess it will be all right now," he thought, "and I am tired of waiting."

He touched a match to the nozzle of the generator. Something exploded like a bomb. The generator flask was splintered, and the hot acid ran over his hands and burned them like fire, and ate into the sleeves of his coat.

In college Eugene took the engineering course. His work was good, and the instructors used their efforts to get him a position. He went to one of the big offices of a railway. His superior officer, the chief clerk, was a man of few words who gave his orders without unnecessary explanation.

"Let the Queen Run bridge work go and compute these," said the clerk, coming in one morning from his office and handing the data to Eugene.

Eugene looked them over. They were mere fragments in construction work. He could do the whole thing in two or three hours. At present he was in the midst of the most difficult part of his bridge work. He would finish up the one difficult point, and take up this new piece of work when he came back from luncheon.

He finished his computations and went out to luncheon. When he came back at two o'clock, he found the chief clerk, the master mechanic and the chief engineer at his desk.

"I was just about to begin them," he said.

An unpleasant scene followed. There had been a wreck of one of the flyers, and a viaduct had been so badly shaken up that reinforced concrete must be put in before trains could use it. Meanwhile they were making a detour of twenty miles. The construction crew were to go out on a two o'clock special. They were waiting for those drafts.

"I could have had them done an hour ago, if you had told me they were important."

"I don't ask questions!" roared the chief clerk. "I obey orders as they come in, and that is what every man in my office will do."

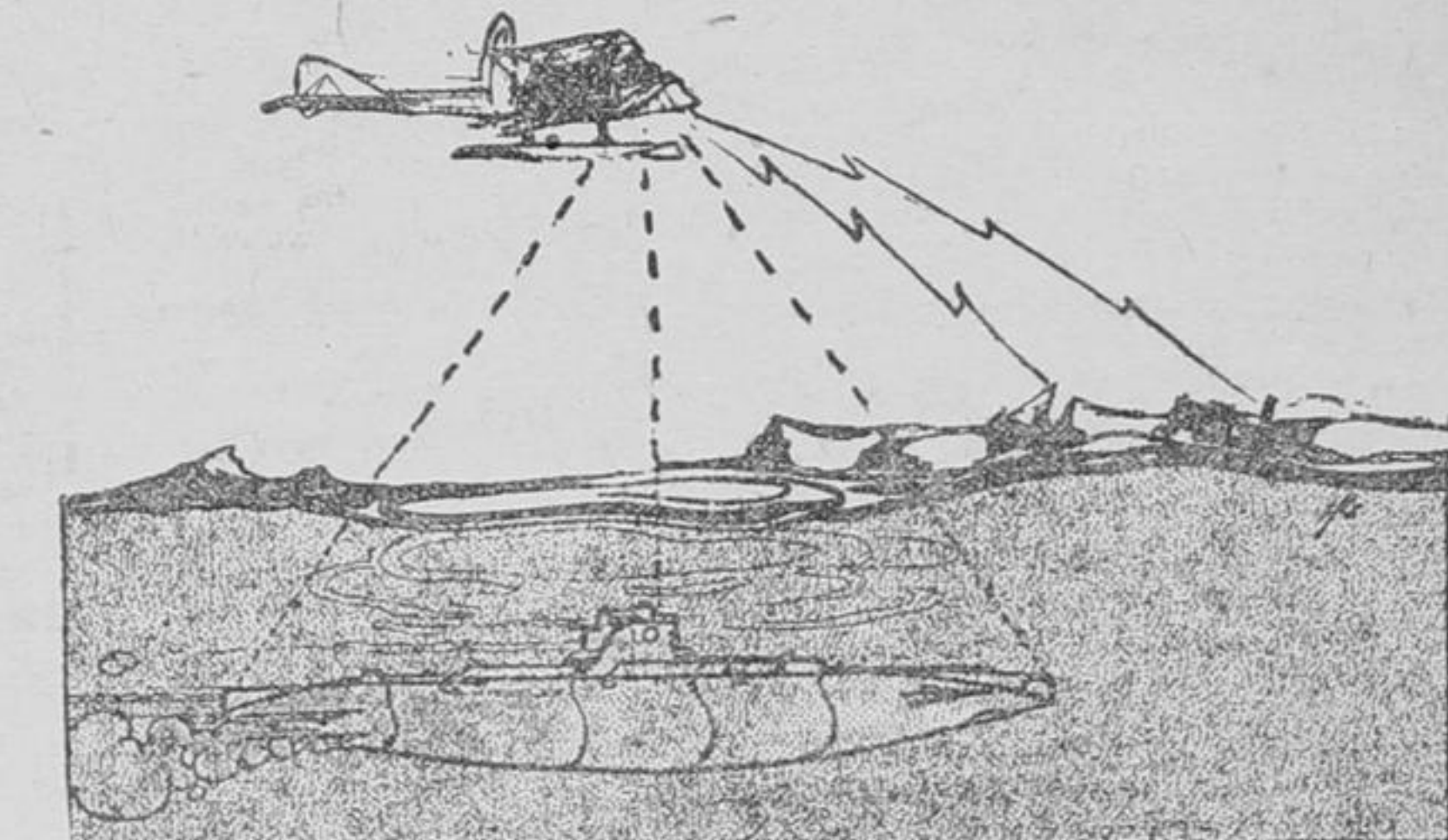
It delayed Eugene's promotion; it nearly cost him his position. But it will take a long, long time for him to learn his lesson.

## SEAPLANES ARE AN EFFECTIVE WEAPON AGAINST SUBMARINE

### The Greater Part of the Recent British Successes in Combating Undersea Pirates Has Been Obtained by the Skilful Application of Old Methods.

Precisely by what means our recent successes against submarines have been obtained may not, of course, be revealed. We have been definitely told that a new device has been employed with good results, and it may be safely surmised that there are more to follow, says the London Observer. But the greater part of the work has been done by the skilful application of old methods which the

ing called in evidence. The reasoning has proved sound. The human observer from aloft obtains the vision of the sea bird of prey. His quarry is visible to him under the water, save in certain unfavorable circumstances, almost as plainly as if it were lying on the surface. You must imagine sea-hawks with a 60-foot span of wing, and sword-fish 200 feet in length. The bird of prey, perhaps, stoops at its quarry like its proto-



On sighting the submarine under water the aviator summons the cruisers, trawlers, and "chasers" by wireless and they encircle the spot indicated. If the submarine comes to the surface and there is danger of its escaping before it can be netted, the aviator proceeds to bomb it.

unwearying work of our young officers has taught them to handle with deadly effect. For instance, it is no secret that, with the longer days and clearer weather, the seaplane has been used most effectively, both for purposes of observation and of "strafing." The possibility that the seaplane might prove the bane of the submarine was foreshadowed before the war, the analogy of the sea-hawk and other birds of the same habit be-

type; but, instead of following it into the depths, it proceeds to lay monstrous and fulminating eggs. The rest is silence, for the public, and, frequently, for the sword-fish too. It is enough to say that there is a formula by which the necessary damage is ensured without the need for an absolutely direct hit, and that the three-inch armored decks with which the Hun is believed to have protected his latest craft, affords no protection.

## FUTURE OF THE BRITISH EMPIRE

### EXCERPT FROM HISTORIC ADDRESS BY GEN. SMUTS.

#### The "Orator of the Empire" Made These Important Statements About the Future of the Empire.

General Smuts was a Boer General and President Kruger's State Attorney in the Transvaal Republic. He is now a loyal and enthusiastic soldier and statesman of the British Empire, and performed a signal service in driving the Germans out of Africa.

The following speech is one of the finest and most statesmanlike utterances that the war has produced. It was delivered before the British House of Parliament in London.

"I think that we are inclined to make mistakes in thinking about this group of nations to which we belong, because too often we think about it as one State. We are not a State. The British Empire is much more than a State. I think the very expression 'Empire' is misleading, because it makes people think that we are one community, to which the word 'Empire' can appropriately be applied. Germany is an Empire. Rome was an Empire. India is an Empire. But we are a system of nations. We are not a State, but a community of States and nations. We are far greater than any Empire which has ever existed, and by using this ancient expression we really disguise the main fact that

our whole position is different, and that we are not one State or nation or empire, but a whole world by ourselves, consisting of many nations, of many States, and all sorts of communities, under one flag.

#### A System of States.

"We are a system of States, and not, I think, a stationary system, but a system always going forward to new destinies. Take the position of that system to-day. Here you have the United Kingdom with a number of Crown Colonies. Besides that, you have large Protectorates like Egypt, an Empire by itself. Then you have a great Dependency like India, also an Empire by itself, where civilization has existed from time immemorial. We are trying to see how East and West can work together. These are enormous problems; but beyond them we come to the so-called Dominions, almost independent in government themselves, which have been evolved on the principle of a European constitutional system into almost independent States, but who all belong to this community of nations, which I prefer to call 'the British Commonwealth of Nations.'

"You can see that no political ideas which have evolved in the past will apply to this world which is comprised in the British Empire; and any name we have yet found for this group is insufficient. The man who will find a proper name for this system will, I think, do real service to the Empire.

#### Our Future Government.

"The question is, how are you going to provide for the future government of this Commonwealth? An entirely new problem is presented. If you want to see how great it is, you must indulge in comparison. Look at