



About the House

DOMESTIC SCIENCE AT HOME

Seventh Lesson—Fats and Oils.

Fats and oils form the second class of heat and energy giving foods. One of their functions is to lubricate the intestinal tract.

They produce twice as much energy as carbohydrates, and for this reason the people in cold climates consume from two and one-half to three times the amount of fat that persons in warm climates would consume.

Fats are classified or separated into two distinct classes—fixed and volatile oils. All fats used in the preparation and cooking of food are called fixed oils. By this term is meant that little or no evaporation takes place during the process of heating and cooking with the fat. Fixed oils, while they do not evaporate when heated to a high temperature, become dissociated or decomposed; that is, their chemical construction breaks down or separates after the boiling point is reached.

Volatile Oils.

Volatile oils, upon reaching the boiling point, are transformed into a gas or vapor. For instance, if the essential oil of turpentine is heated in a proper vessel by chemists to 300 degrees Fahr., it ceases to be a liquid and becomes a gas, which, upon cooling, returns to the liquid form without loss of volume or weight.

This experiment is dangerous and should be performed only by laboratory experts and chemists. It is given here only as an example for a proper explanation.

Oil of cloves, cinnamon, bitter almonds, lemon, patchouli and bergamot are a few of the best known of the volatile oils.

Composition of Fat.

Fats are called hydrocarbons, composed of carbon united with oxygen and hydrogen. They contain in their composition various fatty acids and glycerine. From decomposed fats the commercial glycerine is obtained.

Milk Fats.

The minute globules of fat that are suspended in milk give it its clean white color. The proportion of fat in milk varies from two and eight-tenths to eight per cent. This variation is due to the age, condition and feeding

The Ideal Meal.

Variety in the making of a menu is as necessary as the food itself. One would soon tire of beef and be unable to partake of a sufficient amount for nutrition if it were the only protein furnished for thirty days.

Beef, lamb, veal, pork, poultry, fish, cheese and the legumes give one a wide scope when planning the daily balanced menu. Potatoes, rice, hominy and barley furnish carbohydrates or starches.

Fat from the meat, cream in the milk and butter eaten upon bread also perform their mission in the body and are necessary for its upkeep in supplying energy and lubrication.

Sugar and sugars such as are found in the fresh and dried fruits are classed as carbohydrates. Succulent vegetables and salads supply the necessary mineral salts.

Therefore a portion of meat or a substitute for it, potatoes or their equivalent and one green vegetable, salad, bread and butter and a dessert supply an ideal meal.

Three Good Recipes.

Peach Popovers.—One egg, fill cup with milk, one cupful of flour, one-fourth teaspoonful of salt. Place in a deep bowl and beat for five minutes with a Dover egg beater. Then pour

Cold Storage Architecture.

To meet an ever-increasing demand for information respecting the construction of ice-houses and small cold storage systems for farmers, country storekeepers, milk producers, hotel-keepers, owners of country homes and others, the Dominion Department of Agriculture has issued Bulletin No. 49, of the Dairy and Cold Storage Branch, entitled "Small Cold Storage and Dairy Buildings," the immediate sponsors for which are Mr. J. A. Ruddick, Dairy and Cold Storage Commissioner, and Mr. Joseph Burgess, Cold Storage Inspector. The bulletin is a complete handbook on cold storage construction of a comparatively simple and inexpensive kind. Besides minute explanatory details of plans and material required

TIRES REMADE

Scrap tires can be made into guaranteed tread double service tires, puncture proof, blow-out proof, will outwear any new tire; results will astonish you; send for circular; we pay 6 cents a pound for old tires; we buy, sell and exchange new and second-hand tires and tubes. Auto Tire Exchange, 274 East King St., Hamilton, and 601 Yonge Street, Toronto.

THREE YEARS OF THE WORLD WAR

WHAT ARE THE PROSPECTS FOR AN ABIDING PEACE?

The Past Year Has Been One of Deep Disappointment and the End Is Still Distant.

Three years is the time popularly supposed to have been set by Lord Kitchener for the duration of the war. That time is now past, but the war shows no sign of coming to an end. There is a very general impression that it will not be definitely wound up for another year. If Russia had held firm it might have been ended in 1917, and if the United States had not taken the place of Russia, virtually out of the struggle, it might have continued for years, especially if Russia had made a separate peace, which would have solved Germany's problem of getting food.

We ought no longer to count on Russia. Eventually she is likely to come out all right, but only the greatest optimist will expect that powerful and disciplined armies will be evolved in the next few months. With the greatest admiration for the patriotism of Kerensky, and profound respect for the fighting qualities of Russian troops and the brilliancy of Russian leaders, one must count on miracles happening if he continues to count on Russia.

The Past Year.

Writing in the New York Tribune and reviewing the history of the past year, Frank Simonds says that it has been one of profound disappointment for the Allies. A year ago the Italians were making their famous drive that resulted in the taking of Gorizia. A Russian army under Brusiloff, was menacing Lemberg, and in a month's campaign had captured about 400,000 of the enemy. The Battle of the Somme had opened with great British and French successes. Rumania entered the war, and her armies swarmed down on the Hungarian plains.

Some saw in each of these events a sure sign that the power of the Central Empires was about to be destroyed. Most of us, viewing them together, imagined that the end of the war was in sight.

But it is not. Italy has not been able to advance to Trieste; Russia is almost paralyzed. Rumania is overrun; British and French advances for weeks past have been foot by foot, and at some points Germany has been on the offensive. On the Western front we have beaten the best troops Germany could send forward, but it promises to be a long and tedious job to force them out of France and Flanders.

The Hope of the Allies.

One of the most cheering circumstances in the war to-day, from the point of view of the Allies, is the virtual admission by Germany that she cannot win this war with her armies. She says that the submarine is her trump card, and with this card she has undoubtedly taken some important tricks. The German people are told that if they will only hold out the submarines will yet win the war for them.

Some experts who fear the submarine point out that at its present rate of activity it can perhaps starve the people of the British Isles in eighteen months. That is to say the Allied armies have 18 months in which to defeat the German armies, even if the Allies are unable to do anything to check the activity of the divers or are unable to build boats as fast as Germany can sink them.

Some American experts say that there is a short cut to end the war, and that it may be reached by a tremendous fleet of aeroplanes. A huge appropriation to build aeroplanes has been passed by Congress, and the short cut will be tried.

The Hope of Germany.

For Germany there are only two gleams of hope in the sky—the submarine and the Russian revolution. The latter has permitted Germany to bring several army corps to the Western front, and to more stubbornly resist the offensive on this side. It has also permitted the building of new lines of defence behind the present positions, and undoubtedly has enabled Germany to prolong the war for months. It has given Austria a much-needed breathing space, and reports of Austria desiring a separate peace and being about to negotiate one in defiance of Germany are no longer heard.

The great cloud on her sky, the entry of the United States to the war, is considered a mere trifling shadow by Germany. She believes the war will be over before the United States has had time to train an effective army, and on this account has really welcomed the advent of the American nation among her enemies. Some of her statisticians have calculated that

the United States will, at the end of this feast of death, be handed the checks for the banquet, and they say that she will be assessed \$20,000,000,000.

Half the World at War.

As matters now stand half the world is at war. The Central Powers are now fighting nineteen actual adversaries. Of this number fifteen have declared war, while Panama, Brazil, Haiti and Liberia are practically at war, and China, Bolivia, Honduras, Guatemala, Costa Rica and Uruguay have severed diplomatic relations. This means that of the fifty-six nations of the world, twenty-five are opposed to Germany and her three allies.

It is calculated that the combined population of Germany, and her dependencies, and Austria, Bulgaria and Turkey is 156,744,000, while the combined populations of the six most dangerous opponents of Germany amount to 856,000,000. These figures, while encouraging from our point of view, ought not to mislead us, since Russia is for the moment at any rate paralyzed, and Japan is fighting a limited liability warfare.

It is generally conceded that the final showdown will be between Germany on the one hand and Great Britain and the United States on the other. Even then the odds are in every way tremendously against Germany.

HARVESTERS WANTED!

Canadian Northern Ry. Runs Excursion Trains To The West.

The earliest arrivals in Winnipeg will have the first and best choice of employment in the harvest fields beyond. The Canadian Northern Railway will run the first Excursion Trains to the West in this connection, leaving Ottawa 9.30 a.m. Aug. 16th; and 10.30 p.m. Aug. 16th and 28th; also leaving Toronto 9.00 a.m. Aug. 21st; and 10.00 p.m. Aug. 21st, 23rd and 30th. Through cars will be operated from Montreal and Joliette, affording direct connection at Ottawa from principal Quebec points.

The equipment will consist of electric lighted colonist cars and lunch counter cars with special accommodation for women.

While the best chances are along the Lines of the Canadian Northern in Manitoba, Saskatchewan and Alberta, where the demand for labor is heavy and the wages high, no matter what final destination you may select, the C.N.R. offers the best route to Winnipeg.

For leaflet showing special train service, excursion dates and the number of laborers required at various points, together with all other particulars, apply to nearest C.N.R. Agent or General Passenger Department, Montreal, Que., and Toronto, Ont.

TO MOTHER.

Dear mother mine, why should you weep
That I, your son, should pay the price
Of one who would his conscience keep,
Though keeping it means sacrifice?
You needs should weep if I heard not
The soul's reveille clear and strong,
Above my fears; if I forgot
A folded hand is weaponed wrong;
Helps wrong prevail, since for the right
It does not work; no friend is he
Of liberty who sees sheer might
Thrust out, and sits in apathy.
He is her friend who, when she cries,
Finds all his fires of spirit spring
Towards God's canopy of skies—
He rides upon Nemesis' wing
Through battle's fury, and the strife;
His is the faith expressed in act;
He to his life is true, and Life
Will say he has kept the pact.
—A. H. Taylor,
On active service in the field.

EXHIBITION COSTS \$350,000.

Special Attractions At This Year's Fair Above the Ordinary.

It costs upward of \$350,000 to stage and prepare the Canadian National Exhibition each year. Much of this is spent on special attractions for which the Exhibition is famous. No expense or effort has been spared in securing for Confederation Year the finest array of acts for the Hippodrome Show that will be given as usual in front of the Grand Stand every afternoon and evening. There will be a galaxy of stars of the show world filling three stages at the one time.

One of the outstanding features will be the Al Golem Troupe, court artists to the Shah of Persia, who present the most picturesque and sensational acrobatic novelty now before the public. The remainder of the programme will be in keeping with this wonderful attraction.

The ideal condition for a cornfield is moist below, dry and light on the surface, which should be free from weeds.

Really there is nothing to canning fruit and vegetables except care, cleanliness, fresh products, jars and heat.

THE "MYSTERIOUS MAJOR" OF R.C.F.C.

MOTOR STALLED BEHIND THE GERMAN LINES.

Fought a Detachment of Cavalry With His Machine-gun Until Engine Again Started.

One of the most versatile flyers in the corps was the "Mysterious Major." Condon was his name, but to all the men, both sides of No Man's Land, he was the "Mysterious Major," says an officer of the Royal Canadian Flying Corps.

He was forced to glide to earth one day, back of the Prussian lines, with his big motor stalled. He leaped out hastily, adjusted a bit of machinery and spun the propellers. A gentle purr, then silence, was the response.

Once more he flashed the blades around, with no better result.

It wasn't a healthy neighborhood to be in. With a short, crisp oath, the "Mysterious Major" set to work in dead earnest. Down the road to the right of the field a cloud of dust, flying high, appeared. It meant cavalry. The major's ears caught the sound of hoof beats.

It was tradition that he would never be killed in the air, but here he was on earth, with cavalry galloping toward him. His descent had probably been spotted and the Uhlans sent to get him.

Kept Cavalry at Bay.

At last he got a roar from the engine that sounded like business, but it petered out.

Closer came the hoof beats. The Uhlans rode over a fence and came galloping across the field. A shot punctuated his exhortations to the motor and slit one of the planes.

Pulling and tugging, he got his machine turned so that he could use his machine gun. Br-r-r-rang! He let drive a drum of ammunition from his machine gun. He saw several horses and riders go down in sprawling, rolling heaps, then turned to his motor again.

Eight or ten Uhlans who had escaped his murderous fire withdrew. He knew what they would do. They would return from every side at once, and his single machine gun could never stop them.

If he could only get into the air he would feel safe. Once more he twisted the propeller. As though nothing had ever been wrong, the engine started to thrum and roar. He leaped into the seat.

Quickly the machine rose. The Uhlans saw it. I suppose they knew he had not loaded the machine gun again, and they galloped on to the field, firing at him.

A Price Upon His Head.

He was so low that there was every chance for them to hit his petrol tank or even the major himself. So he went even lower. Straight at the heads of the horses he drove. The animals, scared at the great, white-winged, roaring machine, reared and plunged, throwing some of the riders to the ground. The others were too busy with their mounts to shoot straight.

The major waved goodbye, fired a couple of parting shots from his service revolver and climbed to where the bullets could not reach him. It was not his fate to die in the air, he thought, but only a few weeks after he told me this story he was killed by a shrapnel burst from an Archie, which wrecked his machine while he was flying with an air patrol.

I do not think they ever should have sent him on such work. He was too valuable alone. The Prussians feared him so much that a price was upon his head.

I have known the "Mysterious Major" to side slip three thousand feet at a time. He used to skim so close to the Boche trenches that they say the men ducked their heads, and all the time he was pouring six hundred shots a minute from his machine gun.

EARTH GRADUALLY SLOWING.

Takes Three Seconds Longer to Revolve Than Century Ago.

British astronomers declare that the earth is gradually slowing down in the time of its revolution around its axis. That the rate is gradual is shown by their calculation that it now takes exactly three seconds longer for the world to turn on its axis than it took a hundred years ago. A writer in "St. Nicholas" comments: "At this rate Shakespeare had nearly ten seconds less in his twenty-four hours than has a modern dramatist. William the Conqueror was handicapped by a half minute in keeping up with his descendants. Julius Caesar was a whole minute to the bad."

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