

THE AUTOMOBILE

Practical Paragraphs.
Emergency starting—When the electric starting system refuses to start and the crank has been left home in the garage, the motorist still has methods of getting the car going. The best way, perhaps, is to jack up one of the rear wheels and turn it by hand with clutch engaged and high gear shifted in. The spark should be retarded and only a small throttle opening allowed. Before removing the jack the gears should be shifted to neutral again.

To hold up timer wires—It is advisable to hold up the timer wires on the Ford engine, to keep them from becoming fouled with oil and also to prevent the rubbing through by spinning them. Take two pieces of wire, about six inches long and drill a hole in the end of each. Catch them under two of the manifold studs. Now loop the wires around the wires and the they will be no further trouble.

Wheel bearings—Every time a wheel is removed the bearing cup is removed with it, and consequently the bearings must be adjusted properly when the wheel is replaced. The best method of doing this is to turn the bearing up tight and then revolve the wheel a few times by hand, which overcomes any tendency to backlash.

Don'ts for Truck Drivers.
 To insure better care of the motor-trucks by their drivers, one company operating a fleet of trucks keeps the following list of don'ts posted in a conspicuous place on its loading platform:

Don't try racing with a touring car; your truck was built for strength, not for speed.

Wash your truck frequently; a dirty car can spoil a lot of our advertising.

Street car tracks are nice on springs, but hard on tires, and steel costs less than rubber.

Don't neglect a loose part, even though it seems to operate more freely that way.

Don't forget to watch the other fellow ahead; a slow stop on your part nearly always costs you a punctured radiator.

Use your brakes when getting "spotted"; planiforms were built to last, not for bumping posts.

Don't drive too close to the curb; edge-trimming is a fine institution for pie crusts, but too expensive for truck tires.

The steering wheel is vastly important, but it is well also to give the grease cups an occasional turn.

Don't slide the rear wheels when stopping; rubber pavement polishers are too much of a luxury.

APPLE BY-PRODUCTS IN ANNAPOLIS VALE

UTILIZING WASTE FRUIT, CORES AND PEELINGS.

Introduction of Simple Process Leads to Development of Entirely New Industry.

It is generally conceded that Nova Scotia possesses advantages, in many respects, for manufacturing such products as jams, jellies and analogous commodities of which the apple industry supplies the basic material, with equal in Canada.

The Annapolis Valley has on various occasions, in recent years, been visited by several Canadian and American manufacturers, attracted here by the publicity given our apple crops. These people had in mind the development of industries that would utilize the waste apples, the apple cores and peelings from the canning and evaporating factories, and the apple pomace from the cider and vinegar plants. Various offers were even picked out as more desirable than other, and in some instances boards of trade interested themselves to the extent of offering their good offices in obtaining, for the parties interested, tax exemption, free water, etc.

It is a well-known fact that large quantities of early apples and wind-falls which could very well be utilized in the manufacture of by-products are allowed to rot on the ground. Practically all these apples could be used in some form or other in the manufacture of some marketable article, and thus would be saved what today is looked upon as a worthless product.

The manufacture of cider and vinegar from Annapolis Valley apples, has been done for some years past, on a comparatively large scale, at Bridgetown and Canning, and lately a new plant has been erected at Aylesford, in the very heart of the apple district. The brands of both cider and vinegar from these plants have been known to the trade, and have enjoyed more than a Dominion-wide reputation. A ready sale has always greeted these goods on all markets, and even the British markets have absorbed a considerable proportion of the output.

Concentrated cider is another product of recent origin. It was first manufactured in 1920. In 1921 the quantity was largely increased. Where production has compelled the use of water, the benefits of liquid, concentrated ciders for a ready market, and some of the Canadian provinces have given it a sympathetic reception. It is put up in bulk in wood, and also for convenience in tins in cases.

Utilization of Apple Waste.
 Apple waste, which included cores, peels, chop and pomace, was, prior to the Great War, shipped from this province to England, France, Holland and Germany, where it was manufactured into various products, subsequently exported to the world's markets. The war and the adverse rate of exchange, together with the increased cost of transportation, forced our apple growers to seek other markets which in post-war years have been found in Quebec, Ontario and New York State.

During the war activities the desiccating of vegetables, such as potatoes, turnips, carrots, etc., became an industry of considerable proportions, even here in Nova Scotia. These goods were needed in a concentrated form to feed the troops overseas. Their reduced bulk and weight made their use a necessity. The cessation of hostilities and withdrawal of forces from actual service seemed to have closed the markets for this class of food supply. There is no doubt, however, that desiccated vegetables prepared by the latest and most up-to-date method will again become an article of daily use, when the cost of production can be reduced to a reasonable figure.

It may be interesting to know that although the 1921 apple crop was the smallest ever grown in the history of the Annapolis Valley, the apple industry, and the processing of it, is at its highest on record, there still were around 500,000 barrels of waste sent to the canning and vinegar factories, and older and vinegar plants which face the market standpoint

were considered of an inferior quality. The waste alone from these plants in 1921 totalled about 30 carloads, or 1,500 tons. Besides these shipments many tons were permitted to go to waste in various ways or were fed to pigs. Some authorities have made the statement that at least one barrel was wasted for every barrel marketed.

The total quantity of canned apples put up in the Annapolis Valley of the 1921 crop totalled, in round figures, over 30,000 cases of gallon apples. Cider and vinegar are figured in the hundreds of thousands of gallons, and evaporated apples run over one million pounds.

If a more extended growth of vegetables were encouraged in the valley, the plants now in operation during the Fall and early part of the Winter months, in the manufacture of such apple products as have been enumerated above, could very well be kept working during the balance of the year, and the help kept at work at the same time, decreasing the overhead by the continued operations. This business principle has already suggested itself to some of our manufacturers of apple products. The waste material exported prior to the war, and in recent years shipped to large Canadian and American centres, should, in the opinion of many, be manufactured nearer the source of supply, and dehydrated vegetables added to the list of factory products.

Jams, Jellies, Mince Meats, etc.
 It has been suggested that jams, jellies, apple chop, mince-meats and preserves, of which, in most cases, the apple waste forms the base, could be manufactured at some central point in the Annapolis Valley to greater advantage than elsewhere, on account of the raw material being at its doors. Hydro-power now being developed at various points will supply the necessary cheap power which should make the proposition a financial success.

The possibilities for raising strawberries, raspberries, and blueberries in Nova Scotia are unsurpassed on the continent east of the Rocky Mountains. These could find an assured market in the event of factories being established here having for object the utilization of the by-products of the apple industry, and such other fruits as plums, etc.

An article that has considerable of a market in the United States is "Fried Potato Chips." These are put up in small cartons and are in large demand in towns and cities. With cheapness here in our country districts this article could no doubt be manufactured here much cheaper than in the States, and the Canadian trade could be supplied from Nova Scotia.

In 1921 a new method of extracting by-product from waste and otherwise useless apples, including the most intensely acid and worthless apples, which heretofore have been going to waste, was introduced in the Valley. From a simple process, it was claimed that a syrup, which was pronounced eminently desirable as a basis for other concoctions, was produced. Calcium Malate, the same as is derived from maple syrup and known as Sugar-sand, was produced by this process. Before the war, Germany bought this sugar sand extensively in Quebec at about six shillings or more per pound, as a source of Malic Acid. The process was tried in two evaporators and it was thought that it would tend to the development of an entirely new industry in the Annapolis Valley. If the process needs further research, no time should be lost in making the necessary investigations. The Dominion Laboratory at Annapolis has done much research work in this connection, and will spend all the time necessary to produce the required results.

An excellent line of high class confections has been manufactured and found a wide market in the Western Pacific apple districts of the U.S.A., made from apple juice, of which large quantities could be obtained from unmarketable apples in the Annapolis Valley.

It is time that the prosperous and progressive fruit farmers of this district took stock of the opportunities that lie ready to their hands for increasing their business and the productivity of their beautiful valley and eliminating waste.

Don't put off until next spring what you can do this fall.

Says Sam: I hope by the time I did know as much as I thought I did I put on long pants.

"SHIPWORM" WORKS IN PANAMA CANAL

DESTRUCTIVE AS FIRES AND EARTHQUAKES.

United States Government is Seeking Antidote to Ravages Costing Twenty Millions Annually.

Twenty million dollars a year is the cost of a worm. Surely it must be a very remarkable worm to be so expensive. True, the "loathly worms" one reads about in old-time literature were disagreeable creatures, but, though they breathred flames, devastated countryside and occasionally ate folks, they were far less economically destructive.

The typical loathly worm was a dragon. Only once in a while did a specimen—its breath so poisonous as to kill all vegetation in its immediate neighborhood—make its appearance. Evidently the species was rare.

On the other hand, the worm here in question is exceedingly numerous, and that, taken together with its devouring habit, is what makes the trouble.

The scene of the trouble is the Panama Canal, and the worm is commonly known as the "shipworm." It eats the timbers of the locks and other wooden structures, ridding and destroying them.

Twenty million dollars worth of damage. But this sum, by its under-stand, does not represent the total up to date. Quite otherwise. It stands for the amount of destructive work done by the shipworm in the Panama Canal annually!

It is a huge tax. No wonder that the United States Government has taken the matter up and is trying to find a means whereby the activities of this pestiferous creature can be discouraged. The National Council some time ago appointed a committee of engineers, chemists and biologists to study the problem.

Impossible to exterminate.

Before going further, it ought to be explained that the shipworm is not really a worm at all. It is a mollusk, and in its early infancy it looks somewhat like a tiny clam, having a bivalve shell. When it has become mature and has assumed a wormlike form, it continues to wear this shell on the front of its head. But the shell has now adopted the function of a boring instrument—a sort of bit, by the use of which the animal burrows into any wood that it happens to come across beneath the surface of the water.

Examination under the microscope shows that the boring tool is provided with a great number of very minute chisels, with which the shipworm rasps its way into the wood. The chisels are so hard and sharp and the instrument so admirably adapted for the purpose that even the hardest wood cannot resist them.

A tiny creature? Yes, at first. But it grows with surprising rapidity, and a fully-grown shipworm may reach a length of over four feet, with a diameter of an inch!

The shipworm is found all over the world, and there are a number of species. In the Panama Canal there are two species, one of which is not an egg-layer, but brings forth its young alive.

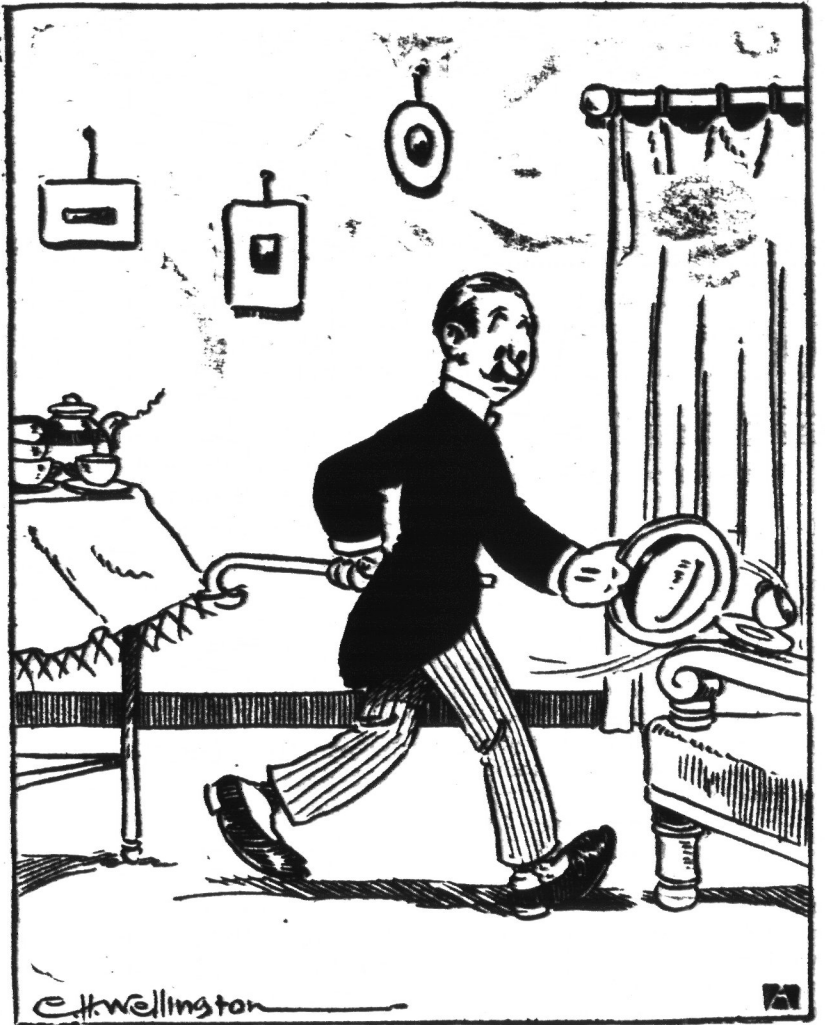
As every sailor knows, the waters in some regions, particularly certain harbors, are specially afflicted with shipworms. Nowhere, however, do they seem to be more numerous than in the Panama Canal; and, in view of their almost fabulous fecundity, it is out of the question to try to exterminate them. The only thing possible is to find some means whereby the locks and other structures in which wood is used may be protected against them.

Poisoned Paraffin Treatment.
 It is just about time for somebody to ask, why the name "shipworm"? It naturally suggests the idea of attacking ships.

Indeed, yes. Nowadays maritime craft are customarily sheathed with metal for defence against the shipworm, but in former times vessels, being literally devoured by the abominable mollusk, their hulls below the water line were riddled and chewed to pieces.

It was a common thing in those days for ships to run up rivers until they came to water that was fresh enough to kill the shipworms residing in the hulls. The marine species cannot live in fresh water. So a ship would stay in the river long enough to make sure

—and the worst is yet to come



Something to Fight For

A man who fights for the sake of fighting is no hero. He should be censured and not worshipped. It is only through the merest accident that his fighting can bring him any good.

The man who fights best is the man who has some worth-while object to fight for. He has taken a survey of the situation and has convinced himself that the only way whereby he can accomplish this worth-while thing is to fight. He then loses himself in the struggle. Of all persons, such a one is the happiest. He is no flourisher and while he may not live the spectacular life that some self-seeking persons are anxious to live, his is usually the most successful.

When I observe a farmer who has purposed in his heart to produce a better cow, or potato, or ear of corn, I say to myself, "Here is the man who has started well." It does not necessarily follow that he will attain his ideal, but nevertheless he will find much happiness in his efforts toward finding the ideal. In other words, he is in a state of mind to live an unselfish life, to fit into the mechanism of all sound co-operative enterprises, to become a community builder, and to live a life that others will desire to emulate.

Hints for the Sleepless.
 There are almost as many remedies for sleeplessness as there are for sea-sickness. In either case the difficulty for the sufferer is always to hit on the right one. What cures one falls to alleviate the other.

Common causes are over-fatigue, unsuitable food, over-smoking, anxiety, external noise, stuffiness of the bedroom, extremes of heat and cold, neuritis, and so on. Some of these causes are avoidable, and can be avoided.

Painful conditions like neuritis can be specially treated, when sleep should follow the removal of pain.

Even at this season cold feet are a common cause of wakefulness; this calls for warm socks, and even for a hot-water bottle in bad cases. Any kind of mental exertion involving close concentration, such as a study of a difficult problem, argumentation, laborious creative work, and heavy brain work of all kinds, has a tendency to keep the mind busy against the difficulty in going to sleep soon after getting into bed.

But there are many people in whose case it is impossible to find any very obvious reason for their bouts of sleeplessness. A doctor may, of course, be able to find some physical abnormality which would account for the insomnia, when treatment would be directed towards the cure of that particular abnormality from health.

Nevertheless, there remain large numbers of restless folk, the cause of whose involuntary nocturnal vigils remains obscure and indefinite.

When everything else has failed, a simple cupful of something hot in the very early hours of the morning will often soothe the weary mortal into slumber. It is only necessary to see that the hot drink is a thermos by the bedside, so that the wakeful one can help himself or herself when the limit in waiting for sleep is reached.

The drink may be either hot milk or water, meat extract, beef tea, or, of all things, ordinary tea. Tea, which in theory ought to increase wakefulness, has practically the opposite effect in many cases. It must, of course be made in the ordinary way in a teapot, and when passed into the thermos care should be taken to exclude all tea leaves. Add milk and sugar, if desired, when serving. A breakfast-cupful in the small hours often turns the scale in favor of prolonged slumber.

Spared His Feelings.
 A little girl has been deeply concerned about the possibility of ascertaining the exact shape of the earth by means of synchronized wireless messages. A few random experiments seem to show that the term "globe" is not quite a happy one, and that Mother Earth may indeed be pear-shaped. Mary has been duly impressed.

"Mother," she exclaimed, on coming home from school, "our teacher said today that the earth is round."

"Well," ventured her mother, "intelligently."

"I didn't tell him he was wrong," said Mary, loftily.

Maritime Iron and Steel Industry

The iron ore, coal, and fluxing materials which are found in abundance in the Maritime Provinces of Canada have given rise to the iron and steel industry of that area, which has developed to be the greatest of the Maritime's industrial activities.

The growth of the industry has been gradual but steady, and its history over the past hundred years has been one of progress towards giving the area a permanent position in the annual production of this industry is about \$25,000,000 per year.

Nova Scotia has numerous deposits of iron ore of limited extent, some of which are of considerable value, but profitable only as they complement other sources of ore supply. In other necessary materials Nova Scotia is likewise well favored, there being plenty of limestone for flux in various parts of the province and several important coalfields. In New Brunswick several deposits of iron ore have been discovered, but the majority are as yet of little economic importance. As this province has not the coal resources of her sister province, the iron and steel industry is not so important as in Nova Scotia.

The Maritime steel industry had its small origin at the hands of English capitalists in 1825 when ore in Annapolis county was developed. Deposits at Stellarton, Woodstock and other places were subsequently developed by enterprising concerns, the industry on a whole passing through many vicissitudes and tribulations. The real history of the gigantic modern industry which exists to-day dates from 1909, when the Dominion Steel Corporation was formed by an amalgamation of the Dominion Iron and Steel Company and the Dominion Coal Company.

The greatest development in the Nova Scotia steel and iron industry was the formation in 1920 of the British Empire Steel Corporation with an authorized capital of \$500,000,000. This was a merger of the Dominion Steel Corporation, the Nova Scotia Steel

and Coal Company and the Halifax Shipyards. Its effect was to centralise the control of all the large profitable coal areas of Nova Scotia, the iron ore deposits of Wabana, Newfoundland, and an adequate number of limestone quarries under one management. The corporation has approximately 37 collieries, with a combined yearly output of 6 1/2 million tons, or 93 per cent of the output of the whole province. The iron deposits of Wabana are practically inexhaustible. The Halifax Shipyards, located at one of Canada's most important ports, is an important user of steel products and heavy marine forgings, which the steel subsidiaries in the merger are equipped to provide. Sydney, with \$150,000,000 invested in its industries, is the great centre of the Maritime steel industry. There are six blast furnaces with a combined capacity of 1,600 tons of pig iron daily, ten five-ton open hearth steel furnaces and other complete equipment. The output of the plant is in excess yearly of \$36,000,000. The plant at Sydney Mines comprises 150 coke ovens, two blast furnaces and other equipment sufficient for the continuous operation of one furnace producing 300 tons of pig-iron a day, five fifty-ton open hearth furnaces and complementary equipment. There is a manufacturing plant at Trenton for turning out forgings, car and locomotive axles, polished shafting and bars, industrial rails, railway plates and structural steel shapes. Adjoining this plant is one for turning out steel, wooden and composite cars, the present capacity of the plant being 25 steel frame box cars per day, which can easily be doubled.

The iron and steel industry of Nova Scotia is now concentrated under the management of the Dominion Steel and Iron Mines of Canada, a company whose properties sufficiently large to enable production to be carried on for centuries. All necessary raw materials are situated in Nova Scotia or Newfoundland, making a thoroughly self-contained industry, entirely British as to the origin of raw material and manufacture.

The Balloon Man.

The children, whose eyes are clear, called him the old balloon man. On their way to school there was another man who looked much like him except that his eyes were bright and twinkling; they never called him old.

The children were right of course. The balloon man was old—old because on his long journey through the years he had lost the beautiful comrades of youth—love, hope and ambition. The persons who for a little while had taught him love had become a dim memory; there never had been anyone except her. For a while he had tried to do things for her sake, then illness had come. For years he had sold balloons; his only forward-looking thought was to buy an occasional hot dinner; his only emotion was bitterness toward the younger men who sold balloons and toward the other old men whom the children never called old.

"Older me, he is," he would mutter to himself. "Five years older than me and acting like he was forty!"

And then one day Marjorie Allen dragged her adored visiting cousin to buy of the old man. "I like him," Marjorie declared.

"That we surely must buy of him," her cousin Alie replied. "We'll buy a balloon made of a little piece of the sky."

Marjorie gave an ecstatic skip; she knew that her cousin would understand.

Cousin Alie looking into the tired old face with the dreary eyes, felt a sudden lump in her throat. Gay dancing color in his hands; little dancing children all round him—and a face like that! "They are such beautiful things," she said, watching while he detached a blue balloon from his bunch. "I never have outgrown my love for them."

"They're right pretty," he answered dully.

"Have the children a favorite color?"

He shook his head. "I dunno. I reckon it don't make much difference."

Cousin Alie tied the string of the blue balloon carefully round one of the buttons of Marjorie's coat; but she

Not Thinking of Marjorie.

"It is such a beautiful thing to be doing," she said to the old man softly, "making little children happy with clean and beautiful things, even making a street corner happy." You must love doing it. So many people haven't time to make children happy, and so many others do the wrong things."

The old man stared at her in dull astonishment. "I dunno," he muttered.

"Haven't you ever thought of it? It's such a happy way to think of it! It's wonderful to be a friend to children. They miss you, if you weren't here."

The old man looked after her and then looked at the dime that was lying in his knotted hand. Putting it into his pocket, he slouched back into his old attitude; but there was something different in the dim eyes, a shade less of hopelessness and indifference.

"It's wonderful to be a friend to children. The whole street would miss you—"

Hope for Job.

The Sunday-school lesson was on Job. The superintendent was endeavoring to picture the painful existence of Job to his youthful audience. To this end he was dwelling at length upon poor Job's sufferings and the futility of medical treatment.

A small boy who had been absorbed in the tale held up his hand.

"What is it, Willie?" asked the superintendent.

"Have they tried Dr. Smith?" asked Willie, naming the family physician.

Not Native.

Phelps: "That is a sunset my daughter painted. She studied painting abroad, you know."

Nobbe: "Ah, that explains it! I never saw a sunset like that in this country."

Half the cynicism in the world comes from failure sneering at success.

How many times a day do you find fault?

The Commercial Value of Poppy Seeds

Anyone who has travelled through the Canadian Rockies and returned at beautiful Lake Louise will remember with interest the vivid splashes of red, yellow, purple and orange—the multi-colored beds of Iceland popples—that decorate the charming grounds of the Chateau. Some of the most picturesque waters of Canada's most picturesque lake with the snow-crowned glaciers of Mounts Victoria and LeFroy beyond and set in emerald velvet lawns, sloping gently to the shores, to effect to the eyes of the visitor is striking indeed.

There are many varieties of poppy both annual and perennial, all beautiful in garden decoration, many valuable for commercial purposes. From the crushed seeds of the latter, from the manufacture of soap, varnish, etc., are produced. Nor is growth confined to the Rocky Mountains. For commercial purposes, the garden or opium poppy is cultivated on many prairie farms in Central Alberta and Saskatchewan. The Western Canadian Clavie or Ruthenian settlements in Alberta, in particular, include the cultivation of the poppy as part of their crop, some-times to the extent of an acre per farm. In order to extract the oil, which they utilize for cooking purposes and for confections, they employ a special hand-made tool, which they originally brought from Europe for the purpose. With this oil, their menu includes cakes, pies, candies and sandwiches.

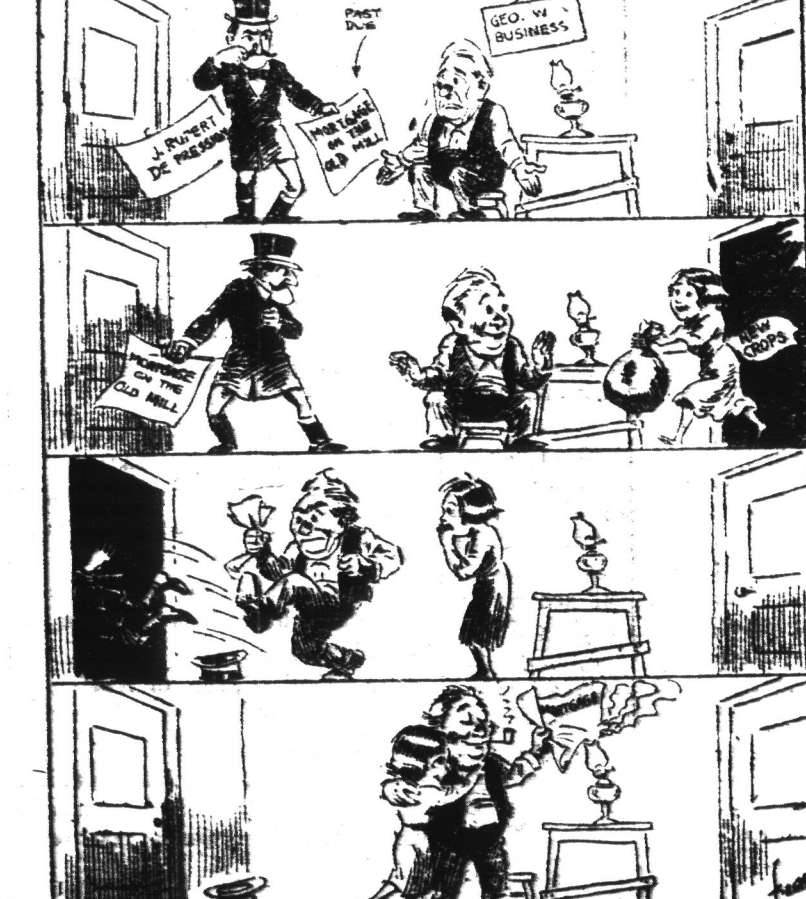
Method of Utilization.
 Run dough is used when cake or pie is required. The crushed seed is mixed with honey and the raw dough is left to stand for half an hour; then, in a moderate oven, the moisture is left to bake until the top becomes brown.

To make mainly the crushed seed is mixed with honey and nuts and baked; it is then spread on a clean, wax board, pressed to the required thickness, cooked and cut into squares. The white-seeded or black-seeded varieties are used for oil pressing. The principal object of culture, the black seed is usually preferred. The quantities of oil yielded by both varieties and the proportion they contain (from 50 to 60%) are the same. By cold pressing, seeds of fine quality yield from 20 to 40% of virgin or white oil, a transparent liquid fluid with a slight yellowish tinge, pleasant to the taste and with no perceptible odor. On a second pressure with the aid of heat, an additional 20 to 25% of inferior oil is obtained, reddish in color but possessed of a biting taste and a disagreeable smell. The oil belongs to the linoleic or drying series, having as its principal constituent linolein, and contains greater drying power than raw linseed oil.

Medium for Artistic Oil Painting.
 Poppy oil is a valuable and much used medium for artistic oil painting. The finer qualities are used in the North of France and Germany as a salad oil and for adulterating olive oil; inferior qualities are employed in soap and varnish manufacture, for lamps and in oleaginous cakes as fuel for the poor.

When the Empire Press toured Canada in 1920, each member carried away with him from Lake Louise a small packet of raw seed, and a packet was sent to Princess Louise (now the Dowager Duchess of Argyll), after whom the lake was named. Later, the Duchess wrote, at the request of Queen Mary, for a packet, so that it was presumed she had secured satisfactory results from those originally sent to her.

JUST AS THE VILLAIN WAS ABOUT TO FORFECE



TURKS AND THE
Allies Preparing of British, T
 A despatch from the Turkish Government...
List of Fire Vic
 No...
 Three names were...
Persons and
Saved from
 A despatch from...
Old Roman Bat
 in L...
 A despatch from...
Canada May L
 With Imp...
 A despatch from...
Britain Pays U.S.
 Millions Int...
 A despatch from...
 That Comes...
 Barber (to Tommy...
 his first haircut)...
 Tommy (aged 10)...
 the top, like my dad...