

Conservation

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Our Fire Waste — Will It Increase?

Dangers of "Cashing in" on Insurance Policies During Periods of Deflation and Slacker Business

Canada's fire loss for 1920 up to the end of November, as reported by the "Monetary Times," was approximately \$24,000,000, or nearly \$800,000 over the total for the entire twelve months of 1919. The loss for November was \$2,770,000, of which \$1,865,090 is represented by 13 fires, with only 7 responsible for \$1,525,000, out of an average monthly number of fires of 1,350. The large risks, therefore, make up by far the larger proportion of the losses. It is to the large risk, in the factory, warehouse, sawmill, and other business property, or to the devastating conflagration, we must look for any amelioration of this constant drain upon our created and natural resources.

During the past few years, Canada has enjoyed unprecedented prosperity. Business conditions have been good and the purchasing power of the buying public abnormal; there has, therefore, been very little incentive for the surmounting destruction of stocks by fire to secure their insured value from insurance companies. Sir Vincent Meredith, president of the Bank of Montreal, speaking at the recent annual meeting of the bank and referring to the present period of deflation, stated that the number of commercial failures would no doubt be somewhat greater. This, unfortunately, is likely to be the case with the number and cost of fires.

In a survey by the Commission of Conservation, preceding the publication of "Fire Waste in Canada," some of the more prominent causes for fires assigned by those consulted were: Moral hazard, non-inspection of property by agents, attitude of courts toward fraudulent claims, and over-insurance.

During the period of high values, insurance agents were active in advocating increased insurance to cover enhancing value. Care must therefore be exercised that over-insurance be not permitted to become a temptation to arson. A careful and rigorous inspection should be instituted by insurance companies as a means of protecting their policy holders, as in the final

University Lectures on Conservation

Town Planning, Housing, Water-Powers, Hydro-electric and Allied Problems to be Dealt with by Commission of Conservation Advisers

The Commission of Conservation has arranged with Canadian universities for courses of lectures during the current session by its expert advisers on town planning and housing, and on water-powers and hydro-electric and allied problems. Those on town planning and housing will be delivered chiefly by the Commission's expert adviser, Mr. Thomas Adams, and will include lectures at McGill, Toronto, Manitoba, Saskatchewan, Alberta, British Columbia, Dalhousie, Acadia and Fredericton universities. The lectures on water-powers and hydro-electric and allied problems will be given by the Commission's engineer, Mr. Arthur V. White, who is recognized as one of the highest authorities on Canada's fuel problem and on the development of the water-powers of the St. Lawrence, Niagara and other great power rivers of Canada.

The most extensive series of town planning and housing lectures will be delivered at McGill during the second term, between January and April. Lectures will also be given on housing under the Department of Social Service, at McGill and Toronto. This is a forward step in university teaching, and is in accordance with the fixed policy of the Commission of Conservation to utilize the services of its expert staff in the most effective manner. During the past eleven years, they have been investigating Canada's natural resources. The Commission is now in a position to make recommendations of the highest value respecting the problems associated with their efficient development and to furnish accurate data respecting their character and extent.

analysis, the insurance companies are but the collectors of premiums in order to reimburse fire sufferers for losses. It is only fair and just that every precaution be taken against the possibility of converting, by means of fires, high priced stock into cash at the expense of the community.

Feldspar: Its Uses

Adaptability Renders it of Increasing Importance in Industry

One of our non-metallic minerals of which little is known by the public, and which has a very wide application, is feldspar. Many species of this mineral are found in Canada, but two only, microcline and orthoclase, are of commercial importance.

Microcline is found in Nipissing district and in Carleton, Frontenac, and Kennew counties, in Ontario, in Ottawa and Saguenay counties, Quebec, and in northern Quebec. Orthoclase is fairly generally distributed throughout Nova Scotia, New Brunswick, Quebec, Ontario and British Columbia.

Feldspar is largely used in the manufacture of pottery, enamelware, enamel brick and tile and in glazing electrical ware. Of

these, the most important is the use in pottery and vitrified sanitary ware, when, during firing, it fuses and binds the particles of clay together. It also supplies the glaze or coating for the surface.

In the manufacture of carborundum and emery wheels, also, the poorer grades are used for the purpose of a binder. The better grade is used for making opalescent glass, while pure white feldspar is utilized in the manufacture of false teeth.

Other uses for feldspar are in surfacing concrete for stucco finish, as a constituent of roofing material, and as an ingredient of scouring soaps and other substances.

During 1919 the output of feldspar in Canada amounted to 15,944 tons, of a value of \$91,273. It is reported that, owing to increasing demand, much activity prevails in Frontenac county, where new mines are being opened up and roads constructed to provide transportation to the railways.

Fifty miles of drainage ditches have been constructed in the Sperling and Morris districts of Manitoba in 1920, at a cost of \$140,000. These ditches will bring much waste land under cultivation.

Canadians Should Know Their Country

Every Traveller Should be a Missionary of its Advantages — Information Available from the Commission of Conservation

A knowledge of one's country should be the first essential of the patriotic citizen's education. Without this knowledge, he is neither prepared to advocate its advantages nor to defend it from depreciatory criticism. Canada has much that her citizens should be proud of, but, unfortunately, this fact is not as well known as it should be by her citizens. Every Canadian should know what Canada's forests, mines, fisheries, wild life and waterways represent to the country. Many thousands go abroad every year and a very large number spend a portion of the winter season in southern climes. Each and every one of these travellers should be a missionary for Canada, spreading knowledge of its many advantages.

This information is available for the asking, the Commission of Conservation being authorized by Parliament to secure and compile information on Canada's natural resources and to advise the public of the same. The Commission has available many valuable reports, two of which, "Water-powers of British Columbia," and "Forests of British Columbia," have been but recently issued. They are handsomely illustrated and contain some valuable information on that western province which it would be of advantage for the resident of eastern Canada to know. These reports may be had on request.

Dominion Registration for Silver Foxes

Many silver fox ranchers in Canada are still unaware that a step of paramount importance to their industry has been carried through this year. It is now possible for any fox owner, if he possesses pure-bred pedigreed stock, to secure registration of the same with the Canadian National Live Stock Records, Ottawa. This has been brought about by the formation of the Canadian Silver Fox Breeders' Association, with headquarters at Summerside, P.E. I. Full information can be obtained by writing to the Secretary, E. H. Monkley.

The Annual Meeting of the Commission of Conservation will be held at Ottawa, February 23, 24, 25, 1921

Control of Forests by Trained Foresters

Ontario Places Administration of Forests on Crown Lands Under Practical Men

The opportunity for the beginning of a new era in the forestry situation in Ontario was created by the recent announcement of the Provincial Government that henceforth the timber administration on Crown lands will be under the Provincial Forestry Branch, instead of comprising a separate organization, in which no foresters were employed. This is the most important development which has yet taken place in the forestry situation in Ontario.

By this action, assuming that its logical consequences will follow, Ontario aligns herself with the provinces of Quebec, British Columbia and New Brunswick, which had already recognized the necessity for taking thought for the future by making foresters responsible for the technical administration of Crown timber lands. A partial example had been set by the Dominion Government at a still earlier date, when the Dominion Forestry Branch was placed in charge of the timber administration on Dominion forest reserves in the west, exclusive of licensed lands or timber limits.

Nova Scotia has practically no Crown timber lands, her forests having passed into private ownership many years ago. The need for a provincial forest service there is based upon the opportunity for the development of better forestry practice on these privately-owned timber lands, and upon the urgent need for a greatly intensified system of forest protection, to cover all the forested area of the province.

Prince Edward Island is not a forest province, practically the whole of her land area being under cultivation.

Ontario is then the last of the forest provinces to recognize the necessary and logical connection between forestry and foresters. The recent action should, and no doubt will, mark the beginning of an era in which the fullest practicable consideration will be given to so regulating the methods of cutting on Crown lands as to have them in a condition to produce another crop of valuable timber species. It has been demonstrated that logging operations in which cutting is not regulated with an eye to future productivity are generally destructive to the quality and quantity of the future growth. Each area requires to be carefully studied in advance of cutting, that the method of treatment to be prescribed may be adaptive to local conditions and at the same time be practicable from the operator's viewpoint, to say nothing of being reasonable from the viewpoint of additional cost involved.

Ontario is to be congratulated upon the progressive action taken in thus far recognizing the need for a technical administration of

Crown timber lands. The Provincial Forestry Branch has a great responsibility and a great opportunity for public service in the prospective addition to its previous work of forest protection, of the inauguration of forestry practice upon the great areas of Crown lands which have now come under its jurisdiction. Progress will necessarily be slow; economic conditions must be fully recognized; and it will take time to develop the kind of organization required for so large a task. Public sentiment is now undoubtedly fully ripe for the development of this situation along the most modern lines. It must, however, make itself actively felt, in support of a really progressive forest policy.—*Clyde Leavitt.*

Bark Beetle Control in British Columbia

Many Millions of Dollars Damages Result from Attack—Preventive Measures Successful

About twelve years ago, bark-beetle outbreaks developed in the yellow pine stands of southern British Columbia, particularly in the Similkameen and Nicola districts. The earlier outbreaks have extended and new infestations appeared, until practically the whole yellow pine area shows serious bark-beetle injury. In the valleys about Princeton, more than 150 million feet of yellow pine have been so killed since 1913, and about the same amount in neighbouring valleys is threatened with destruction.

The same injury has been developing rapidly since 1918 in heavily timbered valleys lying northwest of Merritt. Judging from our knowledge of the Princeton outbreak, all this timber, estimated to be worth more than six million dollars, was practically certain to be utterly ruined within the next five or six years. This timber was being administered by the Provincial Forest Branch, the Dominion Forestry Branch, the Dominion Department of Indian Affairs and the Nicola Pine Mills, Ltd.

In the winter of 1919-1920, an attempt was made to save this timber through extensive control operations. An arrangement was made whereby the easily available commercial timber in the worst part of the infestation was sold to the lumber company on the understanding that the timber would be cut within two years and the logging slash burned. Much of this commercial timber was cut last winter and the remainder, including the infested trees, will be removed according to this plan. The two forest branches, Provincial and Dominion, provided funds and men for direct control operations on the higher land and in the less accessible valleys where lumbering normally would not be carried on for years.

The planning and supervision of the control methods were undertaken by the Division of Forest Insects, Entomological Branch, Dominion Department of Agriculture, in co-operation with the various interests affected. Control operations consisted in marking, cutting and burning the infested timber; so as to destroy the broods of beetles over-wintering in the bark and thus prevent further spread of the injury. This work was conducted over many square miles of territory in the Coldwater, Indian Meadows, Midway, and Spinn valleys. Altogether more than 6,000 infested trees were cut and burned sufficiently to destroy the beetle broods contained in the bark. The work was done in the late winter and early spring of 1920. The result seems at this date to have been remarkably effective. Whereas there would otherwise have been thousands of freshly infested trees on that area last summer, there are actually only a few hundreds to be found. Without any doubt, a moderate amount of control work on the same area next spring will stop the further spread of the injury, and save the main stand of timber. It is planned to extend the control work to other infested valleys during the coming spring.

The entire Princeton-Merritt-Kamloops forest, throughout the greater part of which the bark beetle injury is evident, has been estimated by the Commission of Conservation to contain more than two billion board feet of yellow pine, which would be worth to the country in manufactured value between twenty and forty millions of dollars. The bark-beetle outbreaks threaten the destruction of the greater part of this timber before it can be used commercially. Control operations such as those just described, together with the burning of pine logging slash, afford our only hope of checking the injury and saving the remaining timber. Fortunately these promise to be effective.

Similar outbreaks occur in western white pine and in lodgepole pine throughout the southern part of the province, but control work in these species has not yet been attempted.—*J. M. Siviter, Entomological Branch, Dominion Department of Agriculture.*

Highest Railway Stations in Canada

The highest railway stations, with their elevations in feet above sea-level, in the respective provinces of Canada are as follows:

Province.	Station.	Feet.
Nova Scotia.....	Folleigh.....	612
New Brunswick, Adams.....		1,204
Prince Edward Id. North Wiltshire.....		311
Quebec.....	Boundary.....	1,850
Ontario.....	Dunkalk.....	1,705
Manitoba.....	Erickson.....	2,053
Saskatchewan.....	Sonata.....	3,171
Alberta.....	Mountain Park.....	5,320
British Columbia.....	Stanton.....	5,332
Yukon.....	Meadows.....	2,924

Cancer Mortality: It Can Be Checked

More Intensive Study Required to Permit Early and Accurate Diagnosis and Treatment

"Once qualify your doctors to diagnose quickly and then properly to treat these cancer cases, and a considerable part of the battle will be won."

Thus does Herbert Snow, M. D., in the September number of "The Nineteenth Century," definitely state the chief necessity in the campaign to overcome the annually increasing mortality from cancer.

The exciting causes of every kind of cancer have long been recognized by every practitioner of experience who has had occasion to specialize in the diagnosis and treatment of cancer. To the inexperienced, unfortunately, cancer is simply cancer, whereas to properly consider cancer causation it is first necessary to segregate the different species of cancer, and not confound all together under a single term, any more so than to include under the broad term "fever" the many varieties of that disease.

There are ten known primary species of cancer, with twenty secondary varieties, and it is essential that a proper recognition of this fact precede any authoritative pronouncement on the causes which operate to induce and multiply the number of cases of this malady.

Mr. Snow, in his summary of reasons why cancer is everywhere increasing throughout the civilized world, emphasizes the fact that present day conditions of life are a largely contributing factor—the system is perturbed and distorted by nervous causes: trouble, anxiety, worry and general wear and tear. The malady is more general among women than among men, while all ranks of society are included.

One of the best preventives, therefore, is the cultivation of a spirit of cheerfulness and of greater equanimity—to overcome the temptation to yield to small and passing worries. Further than this, everything that tends to uphold and sustain physical health and well-being aids in preventing the development of cancer. The forms of malignant cancer which attack men are usually due, in the first instance, to some palpable breach of nature's laws, for which the patient is responsible.

There is evidently nothing that will eradicate a true cancerous growth but the surgeon's knife or the cautery, in one form or another. Nature will occasionally hold it in check, sometimes assisted by proper medical treatment.

What is undoubtedly the first essential, however, in confining and reducing the affection of such large numbers by the cancer malady is a greater recognition of the fact that more attention must be devoted to the better qualification of our medical and surgical practitioners for the early diagnosis and treatment of the disease.

Commission of Conservation CANADA

HON. W. C. EDWARDS
Acting Chairman
JAMES WHITE
Deputy Head

CONSERVATION is published monthly. Its object is the dissemination of information relative to the natural resources of Canada, their development and proper conservation, and the publication of timely articles on housing and townplanning.

The newspaper edition is printed on one side of the paper only, for convenience in clipping for reproduction.

The Commission of Conservation was created in 1909, by Act of Parliament, to promote the economic use of Canada's natural resources. Authentic information respecting the character and extent of such resources, and with reference to the problems associated with their efficient development and their conservation, is freely available on request to the Commission.

OTTAWA, JANUARY, 1921

Dangers of Celluloid

Celluloid is being used to a greater extent than formerly for the manufacture of toilet articles, including combs and backs of hair brushes, and for children's toys. The very inflammable nature of this material represents a serious fire hazard, and one which has received much attention from insurance and fire protection associations. Stringent regulations are laid down for safety of employees and property during processes of manufacture, while very little attention is paid to the dangerous nature of celluloid in the hands of the public.

The Professional Fire Brigades Association of England at a meeting recently dealt with this subject. It was suggested that legislation should be passed prohibiting the use of celluloid for children's toys, owing to its inflammability. The National Fire Protection Association in its quarterly bulletin, refers to the ignition of a celluloid comb through friction while combing hair.

Owing to processes of manufacture many products are placed on sale which are imitations of non-hazardous materials, such as tortoise shell, ivory, etc. These should be distinctly marked, to prevent accidents. It is of the utmost importance that care be exercised in the use of celluloid or similar inflammable substances under a variety of names.

Power Development From Waste Coal

Conservation of Fuel Demands the
Utilization of Unmarketable Coal
for Power Purposes

The efficient use of the slack resulting from the mining and screening of coal to marketable sizes, has been and is one of the problems of the mine manager. Canadian conditions are not unlike those of other countries, apart from the fact that our coal mines are somewhat distant from large centres of population. The Brit-

ish Association of Mining Electrical Engineers has considered this question from the fuel conservation standpoint, due to the fact that in many Scottish collieries the percentage of unmarketable fuel is increasing, the result of many of the thicker and better seams giving out.

The consensus of opinion appears to be that the most economical use for this fuel is in the generation of steam at large steam-electric power plants situated at the colliery. The colliery would thus become a power centre, around which power-consuming industries could congregate, or from which the power could be distributed by transmission lines.

On account of the high ash content of the coal refuse the water-tube boiler has been found the most satisfactory, with a stoker equipment which will automatically discharge the ash without the admission of an excess of air. A high combustion efficiency is thus secured, and satisfactory evaporation conditions are easily maintained.

In certain sections of Canada, notably Alberta, the fuel situation and power requirements suggest the introduction of super-power plants at mining centres. In a pamphlet, "Power in Alberta," by Mr. James White, the author emphasizes the importance of utilizing the waste coal at the collieries for the development of steam-electric power. While this pamphlet deals especially with Alberta conditions, an investigation of other areas would probably demonstrate the feasibility of steam-electric super-power stations at points where a cheap fuel supply is available.

With increasing freight rates and the higher cost of mining, it becomes of vastly greater importance that waste of fuel and waste in the handling and transportation should be reduced to the minimum in order that the cost to the consumer may be maintained at the lowest point possible.

Fur Breeders Association

An important meeting of fur farmers was held in Montreal during the recent exhibition of live silver foxes. Representatives were present from both Eastern and Western Canada and a national organization, to be called the Canadian Fur Breeders Association, was formed. It will have much the same relation to the fox-farming industry as the several National Live Stock Associations have to their respective branches of animal husbandry. National records for pedigreed foxes will be kept in future by the Live Stock Records Branch of the Dominion Department of Agriculture.

The catch of salmon, cod, lobsters, halibut, haddock and mackerel showed increases in 1919 over 1918, while herring, whitefish, trout smelts and scardines showed decreases.

Joint Ownership of Water Rights

Interference with Development May
Result from Lack of Common
Interests

The possibilities of injury by one or more users to other users of water-power on the same stream is attracting much attention, owing to the serious effect which it may have in retarding the full development of our water resources. The interference may assume many aspects. For instance, one user may so operate his water-power as to render it practically useless to another power-user situated below on the same stream; unless sufficient local storage were available in connection with the lower site, the lower power must adjust itself to that at the upper site, and under certain reasonably possible conditions, all the available water may pass the lower site during the night, while, during the day, the stream might be practically dry. These possibilities also open the door for malicious injury by the upper user.

Interference may also occur where a water-power site is jointly operated by users on each side of the river; one user may wish to utilize his share, while the interests of the other apparently point in the opposite direction, either to retard competition, to force the other owner to pay an unreasonable price, or for similar reasons.

Cases of this character have, up to the present, practically all been settled, and properly so, by the common law. The use of our water-powers is rapidly extending, and such cases will become increasingly numerous and intricate; unless guided by authoritative and accepted general principles, there will always be the danger that our courts may underestimate the effect on the general welfare and development of a community of taking too strong a view respecting the sanctity of acquired rights.

The Commission of Conservation recently undertook an investigation to ascertain how the problem was being dealt with in Canada and in the United States. In a number of instances, progress towards the solution of the difficulty was reported.

In Ontario, it is provided by statute that the Lieutenant-Governor may declare any stream under the control of the Minister of Lands. The Minister may then regulate its flow in the best interests of all parties concerned, this being particularly applicable in case of difficulty between interests on the same stream.

In the United States the respective rights of owners are often defined by "reasonable use" of the water, and the state of Maine offers the following judicial explanation in this regard:

"In determining what is a 'reasonable use,' regard must be had to the subject matter of the use; the occasion and manner of its application; the object, extent,

necessity and duration of the use; the nature and size of the stream; the kind of business to which it is subservient; the importance and necessity of the use claimed by one party, and the extent of the injury to the other party; the state of improvement of the country in regard to mills and machinery, and the use of water as a propelling power; the general and established usages of the country in similar cases; and all the other and every varying circumstances of each particular case, bearing upon the question of the fitness and propriety of the use of the water under consideration."—*L. G. Denis.*

Sockeye Salmon Pack On the Fraser River

Limited Seeding of Spawning Grounds
in 1917 will be Reflected
in 1921 run

In 1920, the Fraser River canneries contributed 44,598 cases of sockeye to the British Columbia pack. This was one of what are known as the "lean" years, in comparison with the "big" years, which, formerly, occurred every fourth year. In 1916, four years previous, the sockeye catch of Canadian fishermen on the Fraser river was but 32,146 cases, showing a considerable improvement for a comparative year.

According to precedent, 1921 should be a "big run" year, but, owing to the small run of 1917, due to the inability of the fish to reach the spawning beds in 1913, following the rock slide into the Fraser river in that year, it is difficult to estimate what the run may be. In 1913, the Fraser River pack in Canada was 719,796 cases, whereas, due to the above handicap, but 148,164 cases of sockeye were put up in 1917. Mr. J. P. Babcock, Assistant Commissioner of Fisheries of British Columbia, and a member of the Commission of Conservation, speaking at the meeting of the Commission in November, 1917, stated that "in 1917 there were 2,600 gill nets fishing as hard as they could, and there was not an available point in the Puget Sound district in which they could drive a trap or use a purse seine that they were not doing so. They are now trying to use gill nets in the clear waters there. . . . So great a proportion of the fish that sought the Fraser watershed in 1917 was taken by the fishermen that the spawning beds were no better seeded that year than in recent 'off' years. The spawning of 1917 cannot produce greater results in 1921 than were produced by the spawning of 1913 (148,164 cases in 1917), and there can be little hope that it will produce a result even approximately as great."

In the year ending Sept. 30th, 1919, 249,626 apple trees, 50,662 pear, 46,880 plum, 32,535 peach, and 55,612 cherry trees were sold by nursery men in Canada.

Forests Support our Credit in the U.S.

Public Not Appreciative of Part of Forest Products in our Export Trade

For the first nine months of 1919 paper, wood and manufactures of wood were exported from Canada to the United States to the value of \$163,941,802. The total value of exports of Canadian goods to that country for the same period amounted to \$370,246,970.

With our forests supplying over 44 per cent of the exports to offset our purchases, it is not hard to realize what position our exchange would be in but for the forests.

The depreciated value of our money hurts the patriotic pride as well as the pockets of all Canadians. Those who have occasion to visit the United States realize the additional cost to them in purchasing with Canadian money, but it is hard to make the general public realize that the forests of Canada are carrying a tremendous load as the chief support of our credit in the United States. Every effort should be made to protect our forests from fire and to provide efficient forestry management, to enable them to continue in perpetuity the large part they are taking in our foreign trade.

Lantern—Cat—Fire

A farmer near Swift Current recently lost his automobile and garage by fire. A cat upset a lantern in the garage while the owner was carrying some parcels into the house.

In this case experience was a dear teacher. The farmer had probably heard and read many times that it is dangerous to place lanterns where they may be upset; but no doubt dismissed the suggestion as intended only for "the other fellow."

Too often such caution is unheeded, with the result that disaster occurs. Many barns and outbuildings are burned annually in Canada by lanterns being upset. By simply providing hooks on which the lantern could be hung up, this fire waste would be avoided.

The production of Canadian salt in 1919 amounted to 148,302 tons, valued at \$1,398,968. This was obtained almost entirely from the salt fields of southern Ontario.

Fuse Plug a Safety Device

Many people have the idea that when a fuse plug "blows out," it is merely that a weak link in the lighting system has given way. Perhaps the plugs frequently blow out, and the occurrence is each time looked upon merely as one of those annoyances which must be borne.

A fuse plug is a safety device, and is so adjusted that it will "blow out," or break the connec-

tion, as soon as the amount of electricity being used is greater than the wires can carry with perfect safety. Instead of simply replacing the plug—remediating the effect—the cause of the trouble should be sought.

Fuse plugs are usually placed near the meter, and the number of amperes to which they are fused is stamped plainly on the plugs. For instance, if the fuse plugs in your home are stamped "7½ A." it means that this amount of current can be used at one time on each circuit without danger; using more than this amount causes danger from over-heated wiring. The electric wiring in a house is usually divided into a number of individual "circuits," each carrying not more than 7½ amperes, or the equivalent of 15 to 20 ordinary lights.

A five-pownd electric iron, such as is generally used, requires five amperes of electric current. If 7½-ampere fuse plugs are in use, not more than five 50-watt lights can be "on" the circuit at the same time as the iron without the fuses blowing out. An electric toaster carries about the same amount of current as an iron. Under no circumstances is it permissible to use an electric iron and a toaster on the same individual ordinary lighting circuit at the same time. If fire, resulting from over-heating wiring, occurs when two such appliances have been used, insurance companies are justified in refusing to pay claims for damages.

If an early warning of fire danger is desired, fuse plugs which are fused to carry a fairly low amperage, say 7½ or 10 amperes, on your individual distributing circuits should be used.

Deer Farming

In Biological Survey Bulletin No. 36 and Farmers Bulletin 339, the United States Department of Agriculture sets forth the results of investigations into the rearing in captivity of animals of the deer family. The conclusions would very probably apply with equal force to Canada. The following is the summary of the former bulletin:

"The rearing of wild game mammals, both native and introduced, offers a promising field for experiment, as well as for the practical investment of capital.

"The Rocky Mountain elk and the Virginia deer can be reared successfully and cheaply under different conditions in regard to food and climate, as has been proved by many successful experiments. The complete domestication of either species is a possibility which, if realized, would be a source of lasting benefit to the world. With proper encouragement, the production of venison from both elk and deer can be made profitable industries on lands unsuited for cattle, horses, or sheep. The rearing of both species for stocking parks and game preserves would for a time be even

more profitable than the production of venison.

"Instead of hampering breeders by restrictions, state laws should be modified so as to encourage the raising of deer as a source of wealth to the individual and the state. Safeguards against the destruction and sale of wild deer for domesticated deer are necessary. For this purpose a system of licensing private parks or of inspecting and tagging or otherwise marking live animals or carcasses sold or shipped is recommended.

"It is believed that with proper encouragement much of the otherwise waste land in the United States may be made to yield profitable returns from the production of venison, and that this excellent and nutritious meat, instead of being denied to 99 per cent of the population of the country, may become as common and as cheap in our markets as mutton."

Unique Exhibition of Live Silver Foxes

More than 350 foxes, the very cream of the silver fox aristocracy of America, were displayed at the exhibition in Montreal, November 24th, 25th and 26th. It was easily the largest exhibition of its kind ever held anywhere and demonstrated that fox-ranching has become firmly established in Canada and the northern United States. Financial assistance was given by the Federal Department of Agriculture and the provincial governments of Prince Edward Island, New Brunswick, Quebec and Ontario, while the exhibition was managed by officials of the Commission of Conservation.

Prince Edward Island easily held premier place in the number of animals exhibited and also in the number of prizes won. However, foxes from northern Quebec and Nova Scotia captured some of the prizes and in many other instances received highly creditable scores. Foxes whose forbears were brought from Alaska made an excellent showing and, although few in number, carried off some of the leading prizes. Quebec foxes also made a good showing and, with the experience gained at Montreal, their owners will provide still stronger competition at future exhibitions.

Although exhibitors from the United States were admitted to the exhibition on practically an equal footing with those from Canada, the number of animals from American ranches was disappointingly small.

As a conservation measure, the exhibition was important. The rapid and seemingly inevitable depletion of fur-bearers in the wild state makes it essential that they be domesticated sufficiently to permit of their being bred in captivity. The exhibition will become an annual event and other fur-bearing animals, such as red fox, patch fox, mink, fisher, marten, beaver and muskrat, which are being "ranch-ed," will also be shown.—A. Donnell.

Migratory Bird Treaty Endorsed

Supreme Court Judgments in Prince Edward Island and United States Support Legislation

The Supreme Court of Prince Edward Island has rendered judgment, in an appeal from a decision by a local magistrate, upholding the jurisdiction of the Dominion Parliament in passing the Migratory Bird Convention Act, an enabling act to confirm the provisions of the Migratory Bird Treaty. The original decision of the magistrate was based on the opinion that the birds found in the province were the property of the province.

This Prince Edward Island Supreme Court decision endorses the opinion expressed by the United States Supreme Court in rendering judgment in the case of a similar appeal by the state of Missouri, to the effect that migratory birds traversed many of the states and provinces in their flights, that they were the common property of the public, and therefore a national and not sectional responsibility.

The judgments of the Supreme Courts of Prince Edward Island and of the United States would seem to establish the fact that the provisions of the Migratory Bird Treaty are amply secured by the enabling acts of the two countries concerned.

Increasing Value of Wood Products

The appreciation in value of timber is shown in a recent transaction in second-hand material. Last year, at Bellevue, Ont., a wooden bridge on the Algoma Central railway was removed and replaced by a steel structure. The bridge had been built about twelve years ago, of Douglas fir. After being taken down and after twelve years use, the timber, 1,250,000 board feet, was sold for a higher price than that originally paid for it.

Newsprint, another product of the forest, that before the war sold at \$38 to \$40 per ton, is now selling at \$120.

If these products are worth so much more to-day than a few years ago, what must the increased value represent in the need of precautions for the adequate protection of our forests and for proper methods of cutting?

Some conception of the magnitude of the fish egg collection operations of the Dominion Fisheries branch may be gleaned from the fact that at the egg collecting station at Dauphin river, lake Winnipeg, 328,700,000 whitefish eggs were secured. These were deposited in the Dauphin River, Gull Harbour, Fort Qu'Appelle and Kenora hatcheries.

Hatching 70 to 63 per cent of the 26,261,400 Atlantic salmon eggs was the result secured by the Dominion fish hatcheries from the collection made in the autumn of 1919.