

# Conservation

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## After the Playground, What?

**A Substitute May be Provided  
in the Municipal Open-Air  
Skating Rink**

Many cities in Canada have instituted the public playgrounds; many more might with advantage do so. There is also a special need for enlarging the scope of the present undertakings. The season for the public playground, as now adopted, is practically at an end. What is to take its place? The school-yard affords a recreation ground only during school hours, after which the children have no claim to its use.

The schools represent a public investment, and, consequently, should be available for public use whenever such use does not interfere with their primary purpose. They might well be utilized for an extension of the playground movement. In many of them space could no doubt be made available for installing much of the playground, as well as other equipment, for indoor gymnasiums for the children.

A further extension of the playground movement is found in the public skating rink. In every municipality there are vacant lots and other open spaces, which, at very little expense, could be converted into skating rinks.

Healthful exercise is necessary for child life, and when this is added the advantage of keeping the children off the streets and out of danger, the public skating rink would surely be a sound investment. It would continue, in a measure, the excellent work of the playgrounds associations.

Insurance does not replace burned property. It is merely a system whereby the misfortune or carelessness of one becomes a tax on all in the form of insurance premiums.

"Air, light, highways, and water are the primary conditions of civilization. It is the interest of all that every citizen should have as much of these as he wants."  
—Frederick Harrison.

## Canada's Handicap

**Her Industries Hampered by Heavy Charges to  
Provide for Fire Losses**

The direct fire loss of Canada for the past five years has averaged \$23,722,246 per year, and of this amount at least seventy-five per cent is the immediate result of personal carelessness.

To this vast sum must be added the cost of equipment and up-keep of fire departments, a proportion of the cost and expense of waterworks systems, and the money paid as premiums to insurance companies in excess of the amount returned to the policy-holders as indemnity for losses.

This latter charge amounted, for the five years 1910-14, to \$52,918,061.

The above charges total approximately forty-five million dollars per annum, or a tax of over six dollars on every man, woman and child in Canada.

Canada's census returns give an average of five members to a family, with a consequent average family assessment of thirty dollars to cover the fire charge.

Canada's fire loss per capita is at least five times greater than that of any European country. The Canadian employer, in competing for business in the world's markets, must meet, among others, the additional charge for fire loss, fire protection and fire insurance, before he can compete with his European competitors on an even basis.

Canadians must unite to take effective measures to reduce this tax. Business men and employees, alike dependent upon Canadian industry, should take precautions against the enormous fire loss lest, through this extra cost of production, their industries be unable to meet foreign competition and to furnish employment for their capital and labour.

## Sturgeon Fishery

**Depletion of the St. John River and  
other Fishing Grounds Almost  
Complete**

The decline of the sturgeon fishery of New Brunswick furnishes an extreme example of the manner in which this fishery throughout the Dominion has been steadily but surely depleted.

Thirty-five years ago the St. John river contained an immensely productive sturgeon fishery, which, prior to 1880, was utilized because Canadian fishermen were not aware of the real value of the sturgeon. When, however, its commercial value became known, mainly through the caviar merchants in New York city, no time was lost in exploiting the fishery to the maximum.

In the absence of effective restrictions, the supply of sturgeon in the St. John river was rapidly exhausted. In the two years 1880 and 1881, the catch in New Brunswick exceeded the total output of the province for the following thirty-two years. In

the five-year period 1880 to 1884 the average catch exceeded 300,000 pounds, while during the last five-year period for which statistics are available, 1909 to 1913, it was less than 14,000 pounds. What is true of the St. John river is true in a lesser degree of practically all sturgeon fisheries in Canada.

During the five years, 1894 to 1898, the Dominion, as a whole, produced an annual output of more than two and a half million pounds of sturgeon. For the years 1909 to 1913 the average annual catch had fallen to considerably less than one million pounds.

How to revive the sturgeon fishery is a difficult problem. Artificial culture has never proven a success on this continent. The American sturgeon fishery is probably in an even more depleted condition than that of Canada, and a total prohibition of sturgeon has been suggested for the only solution. Such a drastic measure should be a last resort, but would surely be preferable to the complete extinction of a species so valuable, commercially, as the sturgeon.

## Electric Cooking Popular

**The Better, Cleaner and more  
Sanitary Way of Cooking  
Making Headway**

The increasing popularity of electric cooking is well evidenced by the attention which is being given to this subject in the press. That it is a better, cleaner and more sanitary way of cooking was never questioned. The only objection has been the high cost in comparison with coal, gas or other fuels. Formerly the cost of both the electric range, or oven, and the current were practically prohibitive. Two or three years ago the prices of electric energy in most Canadian centres were so reduced that electric cooking became cheaper than the older methods. This has had the effect of stimulating the manufacture of cheaper electric cooking devices, as it became evident that a much larger field was being opened and an enormous demand could not fail to follow. Thus, the second objection to electric cooking is now practically eliminated, as a good electric range costs very little more than a gas range.

An important point, often disregarded when the saving by electric cooking is compared, is the excessive loss in meat shrinkage by the older methods. For instance it is not generally realized that an eight pound roast of beef weighs only five and a half pounds after roasting by gas, while, if cooked by electricity, only three-quarters of a pound is lost. With other meats and different sizes of roasts similar results obtain.

Another great advantage of electric cooking is the precise manner in which it can be accomplished. The results of cooking experiments in electric ovens indicate that it is possible to reduce the art of cooking with electricity to an exact science. If definite rules of time and temperature were formulated for cooking each article of food, the inexperienced housewife could obtain uniformly good results with the expenditure of a minimum of attention and fuel.

(Continued on Page 43)

## Fish for Every Season

Economy in Purchasing Secured Through Use of Seasonable Varieties

"When to buy fish" is a time that most housewives neglect to mark on their calendars. The fact that most varieties of fish can only be obtained at reasonable prices during certain seasons is not sufficiently recognized. No one thinks of buying oysters in June or strawberries in December, and yet fish dealers frequently have enquiries for fresh fish which are quite out of season at the time the enquiry is made and which, if obtainable at all, demand an almost prohibitive price. Thus, for example, during June, 1915, one of the largest retail fish dealers

There are certain varieties of fresh fish, such as hake, pollock, skate, etc., which can be procured at certain seasons at extremely low prices, but which in at least some large inland centres find practically no sale. To remedy this, it is first of all necessary to break down what appears to be a sort of traditional prejudice against the use of such fish. But many housewives are very hazy as to the seasons in which the several varieties of edible fish can be obtained most cheaply. These will vary somewhat with different communities and with different seasons, so that only approximations can be arrived at. However, through the courtesy of the fish dealer already referred to, the following approximations for Central Canada are presented. These may easily be verified or corrected as circumstances and conditions may require:

Fresh sea fish	When to buy most economically	Fresh lake fish	When to buy most economically
Hallbut	May to September	Lake Superior whitefish	May to August
Haddock	May to September	Lake Erie whitefish	Middle of October to middle of Nov.
Cod	May to September	Lake herrings	October and November
Herrings	July and August	Salmon trout	July to October
Gaspé Salmon	June to middle of Aug.	Sturgeon (local)	June to middle of July
Mackerel	June to September	Pickered (local)	July to October
Flounders	July to October	Pike	July to October
Soles	August to December		
Finnan Haddie	October to March		
Kipperd Herrings	September to Nov.		

in Eastern Canada was retailing the very choicest cuts of fresh Gaspé salmon at 15 to 20 cents a pound. For a short time, about a month earlier, the price of this fish was 75 cents a pound.

In view of the steady rise in the cost of foodstuffs, this is a circumstance that should not be overlooked. Fish is one of the most nutritious of foods, and, if purchased intelligently, would prove to be one of the cheapest.

### SAFETY-FIRST INSTRUCTION TO CHILDREN

The public school children of New York City are being instructed in safety-first principles. Through the co-operation of the Police Department with the Board of Education, police sergeants are sent to the schools to deliver fifteen-minute talks to the children at the nine o'clock assembly on such subjects as the prevention of street accidents and the dangers of bonfires. They also explain why the police have to break up certain games on the street, and point out the results of mischievous acts. The children are taught to overcome their fear of policemen and to regard them as their friends. Good results of the work are said to be already apparent in the better understanding which exists between children and the police.—*The American City for October.*

### THE VALUE OF BIRDS IN FORESTS

Birds attain their greatest usefulness in the forests, because the conditions there closely approach the primeval.

Forest trees have their natural insect foes, to which they give food and shelter, and these insects in turn have their natural enemies among the birds, to which the tree also gives food and shelter. Hence it follows that the existence of each one of these forms of life is dependent upon the existence of the others. But for the trees the insects would perish, and but for the birds the trees would perish; and, to follow the inexorable laws of nature to the conclusion of their awful vengeance, but for the trees the world would perish.—*The Value of Birds to Man*, by James Buckland.

## Forest Fires on H. B. Railway

Large Areas Burned Over with Great Loss of Timber and Supplies

Large areas of forest have been destroyed this year by fires which have occurred along the Hudson Bay railway, under construction for the Dominion Government between Le Pas and Port Nelson, Manitoba. It is estimated that the burned area will total not less than 500,000 acres, causing a destruction of forest values amounting to \$250,000, in addition to a heavy loss of game and fur-bearing animals. In some cases, considerable quantities of supplies belonging to railway contractors were also destroyed.

The country which the railway traverses contains considerable jack pine, spruce, black spruce and birch, averaging from 4 to 30 inches at the butt, along the rivers, creeks and lakes and also on the islands. All the high land has a fairly good average stand of timber, chiefly a reproduction from previous fires, which probably occurred about forty years ago. In the muskegs, the timber is, of course, stunted, on account of lack of drainage.

An attempt to prevent fires in this section has been made by the Dominion Forestry Branch, through the appointment of fire-rangers, but their efforts have been only partially effective owing to the defective condition of the fire-protective appliances on the railway engines, as well as to the carelessness or negligence of sub-contractors and of unemployed labourers tramping along the railway line.

The Hudson Bay railway is not subject to the jurisdiction of the Railway Commission, but is under the direct control of the Department of Railways and Canals.

## UNSAFE LANTERNS

The season of shortened daylight brings its own peculiar dangers. One of these is the use of the lantern about farm buildings. Of recent years, owing to competition, a low-priced lantern, which is a serious fire menace, has been placed upon the market. Instead of being securely screwed on the oil reservoir, the burner is simply slipped on, with the result that if the lantern is upset, the burner comes off and the oil is allowed to run out upon the lighted wick. The result is either an explosion or a serious blaze, and unless specially checked, damage to life and property.

## Marketing of Garden Produce

Attractive Conditions Necessary to Secure Best Results

The conditions under which some farmers display their goods on city markets are anything but inviting to the discriminating purchaser. Not only are vegetables and fruits shown in the greatest confusion but, in many cases, the market wagons are such as to discourage prospective customers.

Probably the greatest incentive to purchase is the appearance of vegetables in clean and orderly condition, the market wagon suitable to its use, and personal cleanliness of the owner. The illustration herewith shows a suitable market wagon. It is large, and can accommodate considerable garden produce, which, can be displayed in an attractive and orderly manner.

As the successful merchant looks to his show windows to attract purchasers, so the successful farmer must see to it that he meets his customers under the most favourable conditions.



MODEL MARKET WAGON

Of ample capacity and suitable for the purpose. Vegetables and fruits may be properly displayed, resulting in increased sales and more satisfied customers.

# Commission of Conservation

CANADA

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Deputy Head

CONSERVATION is published the first of each month. Its object is the dissemination of information relative to the natural resources of Canada, their development and the proper conservation of the same, together with timely articles covering town-planning and public health.

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CONSERVATION is mailed free to those interested in the subjects covered by the work of the Commission.

OTTAWA, NOVEMBER, 1915

## MEETING OF FISHERIES COMMITTEE

The industries dependent upon the fisheries, game and fur-bearing animals of Canada have received much careful attention and study from the Commission of Conservation since its inception. In 1912, a meeting of the committee detailed to study these important resources was held and valuable information was brought together, especially with regard to fisheries. The recommendations of that meeting were received very favourably, and, in some instances, important action resulted.

On November 1st and 2nd, this committee convened in the board room of the Commission, in the Temple building, Ottawa. A number of experts on fisheries economics gave addresses and took part in the discussions. In addition, special attention was given to the question of the protection of game and particularly of game birds.

Caution children not to play with matches, and warn them of the danger of bon-fires to both life and property.

A lantern should always be hung up, especially in the barn or stable. It should never be set on the floor, where it may be easily tipped over.

The rank and file of employees must be made to feel that safety work is their work, just as much as it is of their superiors in directive positions.

## Water Meters and Sanitation

Not Intended to Curtail Use of Water but to Stop Waste.

The contention that water-meters, by curtailing the use of water, are a menace to sanitary conditions, is unfounded in fact.

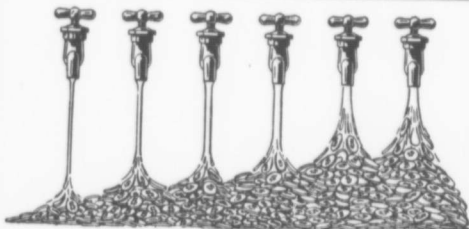
The object of water-meters is not to curtail the use, but to reduce waste, of water. It may even be said that, in decreasing the waste, they actually increase the useful consumption and improve sanitation by ensuring a supply of water for everybody.

In an actual test made in a large American city, before installing meters, it was shown that one-half of the water pumped was wasted by less than one-fifth of

the people served. In other words, four consumers out of five were deprived of a portion of the supply to which they were entitled, owing to waste by the fifth. If this wasted water had been fairly divided for useful consumption among the five consumers, it doubtless would have contributed in a far greater degree to the sanitation and cleanliness of the city.

Water-meters merely ensure that each consumer pays an equitable and proper proportion of the total cost of supplying water to all. There is no "threat" involved in the placing of a meter, except to a wrong doer, and it should be welcomed by all good citizens.

Those who consider water-meters prejudicial to health should bear in mind that in helping to reduce water waste to a minimum they lessen materially the cost of securing a purer water supply. —L.G.D.



UNDER AVERAGE WATER RATES AND PRESSURES THIS IS THE WAY LEAKS RUN INTO MONEY

Each 1-64 inch leak wastes 2 gallons per hour and costs	1c. per day
Each 1-32 inch leak wastes 8 gallons per hour and costs	5c. per day
Each 1-16 inch leak wastes 34 gallons per hour and costs	21c. per day
Each 1-8 inch leak wastes 137 gallons per hour and costs	86c. per day
Each 1-4 inch leak wastes 514 gallons per hour and costs	\$3.21 per day
Each 1-2 inch leak wastes 2,057 gallons per hour and costs	\$12.84 per day

## Electric Cooking Popular

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In this connection the following summary, giving the results of scientific research, is of interest:

1. The best temperature for roasting is 100 deg. Cent., the loss in weight of the roasts being greater if a higher temperature is used.

2. It is cheaper to roast at a temperature of 100 to 120 deg. Cent. than at 180 deg.; the only advantage of the higher temperature is that the time required is shorter.

3. For the purpose of searing, the oven is sometimes heated for a very short time to 240 deg. Cent., but it is found that by performing this operation on top of the stove at least one kilowatt-hour may be saved.

4. For baking, the temperatures should be materially higher. Biscuits require a temperature of 220 deg. Cent.; a small size loaf of bread, 210 deg. Cent.; sponge cake, 180 deg. Cent.

5. In baking large quantities, when an oven must be used during a fairly long period without being allowed to cool between batches, it is more economical to use

slightly higher temperatures than those given above. For instance, if several batches of bread are to be baked, the temperature of the oven should be raised to 230 deg. Cent.—L.G.D.

## Securing Results

Forestry Activities of Japan in Korea on Progressive Lines

Since the annexation of Korea by Japan, in 1911, rapid strides have been made in forestry work, not only in the better management of existing forests, but also in the reforestation of denuded lands chiefly valuable for timber production. The developments in the province of Chosen are indicated in a recent consular report.

The encouragement of afforestation is most closely connected with the improvement of the agricultural industry. In Chosen, in consequence of the ruthless felling of trees and the denudation of mountains, floods or drought frequently occur, and not only the agricultural industry but roads and railways suffer much damage. To eradicate the evil

the authorities early undertook to encourage afforestation.

In 1908 the residency general caused the Korean Government to provide regulations for the administration of forests in general, as well as for the management of state-owned forests, and thus fixed a comprehensive policy with regard to afforestation work in this peninsula. After annexation, in 1911, in order to complete the adjustment of forests and foster a general love of forests, the old regulations were abolished and new forestry regulations were promulgated.

Strenuous efforts were also put forth to encourage afforestation work. After due investigation of state-owned forests, those most needing protection were selected and their areas fixed, special offices for supervising them being created.

As the retention of state-owned forests was considered unnecessary, it was arranged to lease these to private persons undertaking afforestation, and that, should they succeed in their work, the forests should be transferred to their possession.

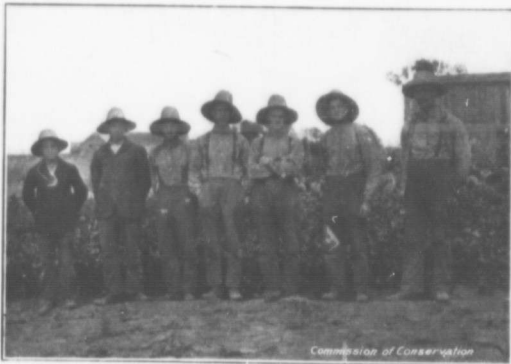
In July, 1913, there were in Chosen 319 nurseries, including one maintained at state expense, 270 maintained by local revenue, and 48 maintained by proceeds from the imperial donation fund. In these nurseries, seedlings of pines, acacia, chestnut, poplar, and a few other trees were reared and distributed free. There are also several similar institutions established and managed by private persons and companies, and these contribute in no small degree to the growth of afforestation work.

In 1911 Arbor Day was established in Chosen, April 3, a great national holiday, being selected, and 4,650,000 young trees were planted on that day by officials and private persons throughout Chosen. In 1912 there were 10,160,000 young trees planted and 12,430,000 in 1913. The steady increases in number will show how people in general are becoming cognizant of the benefit of afforestation.

## TEXAS APPOINTS FORESTER

Texas has joined the ranks of states which are taking a progressive attitude with regard to forestry. A state forester has recently been appointed, whose work will combine administrative, teaching and investigatory features. Texas is one of the great forest states of the Union, and her definite adoption of the forestry principles will mean much in bringing about better methods for the protection and perpetuation of this great industry.—C.L.

The city of Bergen, Norway, has undertaken to guarantee the bonds up to 85 per cent of cost, of building corporations erecting workmen's houses.



#### KEEPING THE BOYS ON THE FARM

This farmer in Quebec studies and practices progressive farming methods. He thus secures larger profits and, at the same time, retains the interest of his sons.

## Safety in Our Schools

**Every Available Precaution Should be Taken to Protect the Pupils.**

At 8.30 a.m. (Sunday) an alarm sent the firemen to Hopewell Avenue school. A heap of rubbish in the basement was found to be on fire. It was extinguished without much difficulty and the damage was small.—*Ottawa Citizen*.

The following Wednesday evening the Collegiate Institute in the same city was considerably damaged by fire. Supposed cause: Defective electric wiring.

The foregoing are only two instances of the dangers to which school children are continually exposed. Fortunately both of these fires occurred when the pupils were not at school. No credit, however, is due to the school management that such was the case.

With the great number of lives in the care of school authorities, it is certainly incumbent upon them to take every precaution to assure the safety of the children placed under their charge. There appears to be a looseness in the management and inspection of our schools when conditions such as the above surround the children. It should be the first duty of teachers and others in authority over the school children to provide for their safety from fire and panic, and it is due to the parents that during the time the children are at school they may feel that their safety is assured.

The prevention of accidents is the duty of both employer and employees. Simple precautions may save lives.

## PROTECT THE IMPLEMENTS

The business ability of the farmer is in no way more clearly indicated than by the condition of his tools. Allowing his machines to remain in the field where last used or uncovered in the barnyard results in quick decay. Nothing so injures machinery as exposure to the weather.

If an implement shed is not available, the machines should be assembled where they can be covered with temporary roofing, to keep off the snow and ice.

Roofing is cheap. Any farmer can erect a frame work to carry a roof. The two sides whence the storms approach should be closed. The protection thus afforded will amply repay the owner, while as an additional advantage, he will be able to utilize spare time in cleaning and painting his implements when close at hand and protected, which he could not do were they scattered over the farm.

## The Farmer

I do not want to deal with this subject more than in a passing way, but I would like to point out, gentlemen, that after all, whatever you may do for agriculture, there must still be much of loneliness and isolation and tragedy for the man who tills the soil, in a country like this of Canada. No great success, or permanent success, of course, can be reached without some knowledge of the basic facts which underlie what one might call the scientific side of agriculture. The man who is happy in his task, can take a keen delight in it, or make a great success of it, must be able to link his efforts with the great forces of nature that contribute to the success that he otherwise could not achieve. . . . The farmer, after all, stands for the necessities. In the great household of Nature, the farmer stands at the door of the bread room, and weighs to each man his loaf. He has the final say in this thing.—*Hon. Martin Burrill, before the Ottawa Canadian Club.*

## Forest Nurseries

**Future Timber Supplies are being Provided for through Replanting**

The State of New York has planted on state lands, up to the end of 1914, over four and a half million trees, enough, at the rate of 1,200 trees per acre, to reforest nearly 3,800 acres of land. From the state nurseries there have been sold to private landowners, for reforestation purposes, over thirteen million trees, while more than two and a quarter million have been furnished free of charge to state institutions.

In Canada similar work, though on a somewhat smaller scale, is being done by the provincial nurseries at St. Williams, Ont.,

and Berthierville, Quebec. Similarly, the Dominion Forestry Branch has a large nursery at Indian Head, Sask., and another is in process of preparation at Sutherland, Sask., from which nursery stock will be available during 1916. The number of trees shipped from the Indian Head nursery has steadily increased from over two and a half millions in 1910 to about three and three-quarter millions in 1914. These trees are distributed among farmers throughout the prairie provinces, mainly for shelter-belts, woodlots and the beautification of grounds around buildings.—C.L.

"Mica Bran" is being manufactured by some United States factories. It is used for concrete facing work to produce rock effect.

## Forest Fires and Settlers

**Permits for Burning Necessary to Overcome Loss From Settlers' Clearing Fires**

Formerly, one of the chief sources of fire damage in the Adirondack mountains of New York was the setting of fires by settlers in forest sections for the clearing of land. The damage resulting from the escape of such fires, set in periods of drought, was so great that a law was enacted providing for the regulation of settlers' fires, by requiring that a permit for burning be first secured from a forest officer. The result is that it has become a rare exception for a settler's fire to escape and cause damage. Out of a total of 413 fires reported in 1914, only 20, or less than five per cent, were caused by settlers clearing land, and of these only one did appreciable damage. This indicates clearly both the desirability and the practicality of controlling this menace in such a way as to reduce the hazard to a minimum, while at the same time interfering as little as possible with the legitimate development of agricultural lands.

The same lesson has been learned by all the provinces of Canada, and all except Ontario have made material progress in applying the lesson in a concrete way, through improved legislation or regulations. Quebec and British Columbia have provisions requiring settlers in forest sections to take out permits before setting clearing fires, and the same is true as to the Dominion forest reserves in the prairie provinces. New Brunswick has recently made a similar provision, applicable to the settlements of Hazen and Grimmer, where serious damage was caused by unregulated settlers' fires during the past summer.

In Quebec, notable progress toward securing better observance of the permit regulations was caused by unregulated settlers' fires during the past summer. In Quebec, notable progress toward securing better observance of the permit regulations was caused by unregulated settlers' fires during the past summer. In Quebec, notable progress toward securing better observance of the permit regulations was caused by unregulated settlers' fires during the past summer.

The organization of forest protective associations by limit-holders, and the enactment of a settlers' permit law by the provincial government would constitute notable steps in the progress of forest protection in Ontario.—C.L.

Efficient provision for first aid treatment and the instruction of employees in first aid to the injured should be a branch of safety work in every well-organized establishment.