

Conservation

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Achievement of Bird Protectionists

Uniform Protection for Birds Throughout Canada and the United States

Bird lovers throughout North America are deeply gratified over the recent conclusion of the treaty under which Canada and the United States will co-operate in extending adequate protection to insectivorous bird life. The treaty applies to useful birds of migratory habits, and includes practically all our Canadian songsters, most of which are invaluable destroyers of insect pests. An absolute close season throughout the year is imposed on migratory insectivorous birds, enumerated as follows: Bobolinks, catbirds, chickadees, cuckoos, flickers, fly-catchers, grosbeaks, humming birds, kinglets, martins, meadowlarks, nighthawks or bull bats, nut-hatches, orioles, robins, shrikes, swallows, swifts, tangers, titmice, thrushes, vireos, warblers, waxwings, whippoorwills, woodpeckers and wrens, and all other perching birds which feed entirely or chiefly on insects. Except for scientific or propagating purposes, these birds, their eggs or their nests may not be taken at any time.

Bird protectionists in general, whether actuated chiefly by sentimental or economic motives, have fought a hard battle and achieved a magnificent triumph. The greatness of their cause, from a purely material standpoint, may be appreciated when it is stated on competent authority that the annual loss in the United States on farm and forest products, chargeable to insect pests, exceeds \$500,000,000. As Canada's losses are no doubt proportionately great, it is evident that no efforts should be spared to protect birds and all other insect destroyers.

Bird protection in Canada is a matter of provincial jurisdiction, and in most cases the laws have been fairly adequate. If properly carried out, however, the provisions of the treaty, offering uniform protection of the continent, should enable North American bird life to thrive and increase as never before.

Municipal Skating Rinks

Their Establishment Justified as a Measure of Health and Public Safety

Open air possesses a fascination for the Canadian youth unsurpassed by any other attraction. One result of this yearning has been the organization of the playground movement in many of our cities and towns. Wherever established, playgrounds have met with immediate success. Regulated play inculcates lessons of discipline intermingled with pleasure, and creates a lasting impression upon the young.

In the majority of cases the playgrounds were originally established by public-spirited citizens who had the welfare of the children at heart. The success of the movement has led to its adoption by municipalities, who are now making appropriations for maintenance.

Our winter, however, militates against a long season for the playground, and in the cold weather, a substitute attraction, *viz.*, the skating rink, should be provided. Municipal outdoor skating rinks have many advantages, not the least being the counter-attraction to the pleasures of hanging on sleighs or coasting on the public streets, both dangerous practices.

Open-air rinks can be provided at very small cost. School grounds, vacant lots or other open spaces may be used. The area should be enclosed with boards eight inches wide, set vertically, and supported by wooden pegs driven into the ground on the outside. The fire department can flood the rinks and a few of the street employees can keep the ice clear of snow and preserve order.

The municipal skating rink is a wholly commendable investment of public funds; it supplies pleasure and recreation to the masses, as an offset to the provision of good roads for the owners of automobiles or other conveyances for pleasure. If, however, it serves no other purpose than taking children off the street, it well repays the expenditure as a measure of public safety.—D.

Successful Results

What Can Be Accomplished When Necessary Legislation is Provided

The extent to which preventive measures can be made effective in forest fire protection is indicated by the experience this season of the St. Maurice Forest Protective Association. This is an association of limit-holders, representing some 12,000 square miles of forest land on the St. Maurice river watershed, Quebec. In previous years, much loss has resulted from fires due to the carelessness of settlers in clearing land, and of river-drivers and others who had occasion to build camp fires in the woods. A vigorous campaign of education has almost eliminated these sources of fire damage within association territory. This result could not, however, have been accomplished in the case of settlers' fires, without a strict enforcement of the law which prohibits settlers from setting out clearing fires during the summer season, except on permit issued by a forest ranger. The enforcement of this provision, in combination with the vigorous campaign of education, has been so effective that the manager of the association, Mr. Henry Sorgius, reports that, this season, only one fire within association territory has been set by human agency, all the other fires reported having been caused by lightning. There has been no trouble with settlers, and it is reported that they are very generally in favour of the permit system.

In view of this admirable record in an important section of Quebec, it is evident that the province of Ontario must consider very seriously the adoption of the permit system, if a repetition of the clay belt disaster of 1916 is to be avoided, and if prospective settlers are to be assured that life and property will be sufficiently safeguarded to justify them in making their homes in the north country.—C. L.

School Teachers' Influence

Foundation for Many Needed Improvements May be Laid in Schools

To the rising generation must we look for many changes and improvements in our municipal conditions.

The children of the present, under the influence of a broad-minded teacher, will absorb lessons which will later be an enormous influence for good. A recognition of this fact, and of the great dependence placed upon them should be in the mind of everyone entrusted with the upbringing of our youth. The extent to which this power to influence children for good is recognized may be gleaned from the number of appeals made to the school teachers for assistance. Every interest working for the betterment of Canada and Canadians lays stress upon the necessity of securing the recognition and support of the children.

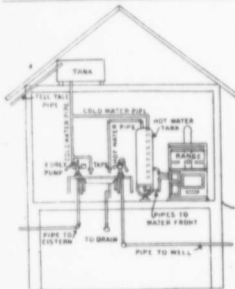
To this already long list has been added a call for the influence of school teachers in the keeping of streets free from litter. To a large extent the children are responsible for this. Waste paper, chewing gum and candy wrappers are thrown on streets and sidewalks regardless of the untidiness they cause. This litter is carried by the wind, and, blowing about the streets, frightens horses, causing many runaways and sometimes serious accidents. Waste paper also collects in sheltered places, falls through grates into basement window openings, or accumulates against wooden buildings or fences; a lighted match or a cigar or cigarette stub carelessly thrown aside may fall upon this accumulation of litter and cause a fire. All fires are the same size at the start and it is the apparently small and harmless fire which sometimes causes the greatest loss, both of property and lives.

The school teachers have it in their power to inculcate in their pupils a spirit of pride in the appearance of the streets, and great benefits will accrue from this effort on their part.—D.

Greater Home Comforts

A Water Service Yields Large Returns in Conservation of Women's Health and Strength

Only two and one-half per cent of the 400 farmers visited in connection with the Agricultural Survey of the Commission of Conservation in 1915 had the complete service of water on tap, bath and toilet in their houses. Five per cent had automobiles; 38 per cent had pianos, 32 per cent had organs,



Cut 101 Running hot and cold water in the kitchen removes much of the drudgery of housework for the farmer's wife. A plan for installation is shown above.

and 22 per cent had gasoline engines on the farm. While it is well that 70 per cent possess sufficient musical interest to have either a piano or organ in the house, it is regrettable indeed that 39 out of 40 have not installed the water service and bath.

No investment yields more in conserving the women's health

and strength, in creating greater home comforts, and in elevating the general tone of the material side of living than the installation of water service and the sanitary conveniences in the home. Thousands of farmers who could well afford to do so have not put in the service for various reasons—because they have not thought of it, or because they do not know how to go about it, or because they think it too expensive. The cost is not so great as many imagine. A bath tub can be purchased for \$10.00, a sink basin for \$3.00, a closet for \$16.00, a 30-gallon hot water tank for \$10.00. Various means are employed in obtaining pressure at the taps, such as a force pump to elevate water to a tank in the attic or the pneumatic tank in the cellar, and the cost of piping and installation will vary according to circumstances.

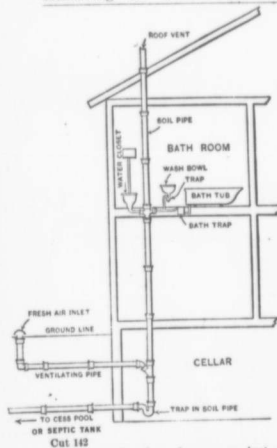
One farmer had the hot water attachment, tank, bath and dry closet installed for \$50.00, the farmer himself helping the plumber to do the work. The complete service, which would be used 365 days in the year, can be installed on the average farm for less than the farmer pays for the binder he uses for a few days at harvest time and which stands idle for the balance of the year. The man on the farm thinks he cannot get along without the many labour saving devices. How about a labour saver for the farm women? It is unquestionably a common-sense business proposition to have the water service and bath in the house as a comfort to every member of the family and a constant labour saving convenience for those who do the daily recurring work of the household, the farm women.

The diagrams in connection with this article are used by courtesy of Carleton J. Lynde, professor of Physics, Macdonald College, and author of "Home Waterworks."—F. C. N.

MAY CANCEL INSURANCE

Unless some better fire protection is given in Northern Ontario, several insurance companies will withdraw from the country. In fact, some have already withdrawn. This is the intimation given *The Northern Miner* by the manager of one of the largest insurance companies operating in Northern Ontario, who has been surveying his company's loss from the big fire. It is possible that some insurance on plants and buildings of mines in the outlying districts will be cancelled, as the insurance companies are privileged to do, on notice.

The insurance men state that, until the Government puts the fire ranging on an efficient basis, the situation will not change. They claim that their losses have been so great that it will take many years of premiums with no further losses to catch up.—*The Northern Miner*.



Cut 102

Bathrooms for farm houses are just as necessary as for city homes, and the cost is not prohibitive. The above diagram shows plan for installation.

Commercial Fertilizers

Resultant High Crops Secured by Germany Through Its Use

The extensive use of commercial fertilizers has been a primary cause of the relatively high crop yields in Germany, and an important factor in maintaining the food supply of that country during the war. The following table shows the comparative yields of certain crops in various countries:—

Country and Year.	BUSHELS PER ACRE				
	Wheat	Rye	Barley	Oats	Potatoes
Germany, 1913.....	35.0	30.4	40.9	61.0	235.4
Russia, 1912.....	10.1	14.3	16.1	23.6	121.3
Austria, 1912.....	22.3	23.2	29.7	36.1	148.7
Hungary, 1912.....	18.8	18.4	25.8	28.9	125.3
France, 1912.....	20.5	16.4	26.9	35.9	142.7
Canada, 1913.....	21.04	19.28	29.96	38.78	165.88
United States, 1914.....	16.6	16.8	25.8	29.7	109.5
Argentina, 1912-13.....	13.8	39.2

In comparing the crop yields in Germany and France, the statistics show that thirty years ago these

countries were equally productive, but that during the last three decades, Germany's yields per acre have nearly doubled, while those of France have increased by only 10 per cent. Germany's progress is due partly to the effects of co-operative agricultural societies and schools, together with technical improvement in agriculture, but mainly to the increased use of commercial fertilizers. As the table shows, Canada's crop yields per acre are much below those of Germany, but if Canadian farmers used fertilizers as extensively as they are used in Germany, the production would be increased

immensely, without placing an additional acre under cultivation or employing extra help.—W.J.D.

Painting of Farm Implements

The painting of farm implements for their protection and preservation has apparently received very little consideration by Canadian farmers, if one may judge by the information secured by the Commission of Conservation in the survey conducted on 100 farms in each of four counties in Ontario. In Waterloo, not one farmer who painted his implements, was found among the hundred, in Carleton only one, in Northumberland three, and in Dundas eleven.

The use of paint on both the wooden and metal parts of machinery gives a protecting cover against deterioration by use and weather, apart altogether from the general improvement in appearance. The cost of prepared paint for the purpose is very small, and experience in the work is unnecessary.

The initial cost of farm implements means to the farmers a large outlay. This investment should be protected. Depreciation from rot and rust is rapid, when once these conditions are established. For the more prosperous appearance it gives to the farm and farmer, the regular overhauling and painting of the farm implements should be a recognized part of the year's work.—D.

Cats as Bird Destroyers

In an address on the protection of bird life, delivered recently before the Commission of Conservation, attention was directed to the fact that the domestic cat is one of the most destructive enemies of wild birds. This contention is supported by the following quotation from a report by the Massachusetts State Board of Agriculture.

"Most people do not realize how destructive cats are to bird life because their attention has never been called to the facts and because most feline depredations occur at night. In my investigations much evidence has been secured which is convincing. In the year 1903, at the instance of the secretary of the State Board of Agriculture, an inquiry was undertaken regarding the decrease of birds in Massachusetts. As a part of this investigation a questionnaire was sent out to some 400 correspondents, which was filled out and returned by more than 200. In response to a question regarding the effect produced on birds by their natural enemies, 82 correspondents reported cats as very destructive to birds. This was a much larger number than those reporting any other natural enemy as destructive. Nearly all who reported on the natural enemies of birds placed the cat first among destructive animals."

Commission of Conservation

CANADA

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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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OTTAWA, OCTOBER, 1916

ALLUREMENT OF SPECULATION

Few days pass when farmers, young and old, are not asked to invest in financial concerns, in speculations which dangle untold riches before their longing eyes. The agents are clever and persevering. They have a thousand strings to their bow. Town lots, mining claims, natural gas and oil wells, patents, are all means of enticement, all the more alluring since the risk which accompanies them is hidden more or less honestly under the name of some master of finance, or by an advertisement cleverly inserted in a conspicuous place in a newspaper of wide circulation. It is a veritable scourge, a plague. One must live in the country and hear the wails of the victims, to grasp the whole situation. I do not think that I exaggerate when I declare that in one county where I live, \$100,000 and more have simply been thrown away by our farmers. Some of these, seized by a fatal frenzy, have not hesitated to sell their beautiful farms, the heritage received from their forefathers, in order to barter the value for a scrap of paper which guaranteed them the ownership neither of an inch of land nor a pennyweight of silver.

Can this evil not be remedied? Is it necessary to leave the farmer to learn wisdom at his own expense by becoming the prey of greedy plunderers? Is it necessary to allow him and his descendants to be deceitfully allured from their ancestral calling and brought to ruin?—*Mgr. Choquette, at Seventh Annual Meeting of Commission of Conservation.*

Do not depend upon your landlord to protect you. Inspect your home yourself from cellar to attic, and insist that unsafe conditions be made safe.

Canada's Fire Loss

Its Effect upon Production and Competition for Foreign Trade

The fire loss of Canada has reached enormous proportions. The drain upon her financial resources constitutes an economic loss which no country can afford and still meet competing nations on an equal footing.

The war has had far-reaching effects upon commerce. European countries, in greater or less degree, are realizing their latent powers, production is being speeded up, resources are being developed, trade openings are being sought and established. Prior to the war Canada found herself handicapped in any scheme of trade expansion by the lower cost of production in Europe. It therefore follows that, with the realization by European countries of their commercial possibilities, this trade handicap will be greatly accentuated.

On the basis of averages, and from the data available as to the cost of insurance and upkeep of fire departments, the following comparisons may be deduced:—

For the past three years the average rate for fire insurance in Canada has been \$1.18 per \$100 of insurance. The average rate in Sweden is .40, in Austria .30, in England .23, in Germany .22, in France .21, in Spain .19, and in Italy .19.

A Canadian employer of labour with 100 employees, carrying an insurance of \$50,000 on plant and buildings, and, assuming that \$2,000 insurance is carried or paid for by each employee on furniture and dwelling,—or a total of \$250,000—would, on the foregoing basis, have to provide in wages and overhead charges \$2,950. His competitor in Sweden would only require \$1,000, in Austria \$750, in England \$575, in Germany \$550, in France \$525, in Spain and Italy \$475.

For upkeep of fire departments Canada is heavily taxed in comparison with competing countries. In 1914, Paris, France, with a population of 2,846,986, had a total fire department expenditure of approximately \$56,479, or 23 cents per head. Toronto, for the same year, with a population of 470,144, spent \$675,146 on her fire department, equal to \$1.43 per head.

The Toronto manufacturer—and this is only an example for all Canada—has to provide for himself and family and for each employee and his family \$1.43 to cover fire department costs, as against the 23 cents his Paris competitor must provide; or, with an average of five to a family, for his 100 employees, he would have to pay in salaries and wages \$722.15 as against \$116.15 by his European competitor.

For insurance and upkeep of fire department the Toronto employer of 100 hands, as representative of Canadian industry, must pay \$3,672 against \$641 in Paris, a handicap equal to \$30 per employee.

The Census Report of 1911 gives 515,203 as the number of employees engaged in manufacturing in Canada; consequently at \$30 per head, there is a handicap of \$15,456,090 against Canadian manufacturers in the cost of fire insurance and municipal fire departments.

The salaries and wages paid to these 515,203 employees amounted to \$241,008,416, an average of \$467.80, or approximately \$9.00 per week. The foregoing handicap of \$30 per employee represents the wages for 3.23 weeks of each employee.

In 1910 the fire departments of Canadian manufacturers were valued at \$1,165,975,639. This charge for insurance and municipal fire protection therefore represents an added tax of 1.3 per cent upon Canada's entire output of manufactures.

The fact that much the larger portion of this amount is buried in the pay-roll can be accepted as the reason why our employers have given so little attention to the question. The charge must be met, however, whether by direct or indirect means.

Employers complain of the rising cost of manufacturing; employees complain of the rising cost of living and demand increased wages. In view of the foregoing, employers should seriously consider reduction of the burden imposed by the enormous destruction of our created resources by fire—that their earnings may not be reduced by these charges, and thus remove one of our heavy handicaps before Canadian employers and employees meet world competition under the new trade conditions which will develop after the war.—D.

Do not allow combustible rubbish to accumulate in or about the house, but do not burn quantities of paper, or other rubbish in a fireplace or in the firebox of a stove or furnace. The ashes clog the flue passages, and the long flames are liable to overheat flues or start soot fires. Burn such material in the ash box below the firebox, where it can do no harm.

It cannot be expected that any appreciable number of people who have left the farm can be induced to return to it, but everything possible must be done to make farm work, the farm home and farm surroundings so attractive and profitable that the boys and girls now on the farm will be glad to stay there.

Establishment of Basic Industries

Developments in Mining Industry Show Concurrent Progress of Subsidiary Enterprises

The remarkable economic conditions created by the war have revealed the immensity of the unsuspected industrial opportunities in Canada. Facts, hitherto unknown or disregarded, are now being considered by the manufacturer, producer and the public with a view to securing greater scientific application, accuracy and economy in industry and the maximum return to Canadian capital and labour. While it is essential to investigate and initiate methods to eliminate waste in production, it is equally important to study the waste in industry due to purely economic conditions and to promote the more efficient utilization of our natural resources to the advantage of the nation.

On account of the comparatively small population of Canada, and the consequently limited home market for our products, basic rather than subsidiary industries should be primarily encouraged. This object having been achieved, subsidiary industries will naturally develop.

Recent developments in the mining industry, the products of which are essential to nearly all forms of manufacturing, exemplify the concurrent growth of basic and subsidiary enterprise. The progressive policy of the Consolidated Mining and Smelting Company, Trail, B. C., furnishes a specific instance. For several years this company has mined and smelted lead ores, and operated the only large lead refining plant in Canada. Since the war three large Cottrell plants have been installed and are recovering valuable mineral from the smelter gases. Owing to the demand for zinc and copper in the manufacture of munitions, the company has recently installed a zinc plant, and is also contemplating an electrolytic copper refining plant.

As the zinc process depends upon a supply of sulphuric acid, the company has just completed a sulphuric acid plant, having a capacity of 10 tons of acid per day. The sulphuric acid is made from fume collected from the smelter. Five tons of acid will be used in the lead and zinc refineries and the remainder for commercial purposes. A portion of the sulphuric acid and refined zinc will probably be used in the manufacture of galvanized iron in British Columbia.

The foregoing developments, actual and proposed, form a splendid example of how the establishment of a basic industry may lead to the growth of subsidiary undertakings.—W. J. D.

Railway Fire Protection

Dominion Chartered Railways Have Secured Excellent Results

In times past, the railways of Canada have been charged with being the most important single source of forest fire damage. That this charge can no longer be justly made has been proved conclusively by the results of the present season. Reports received by the Fire Inspection Department of the Railway Commission show that, with very few exceptions, the Dominion chartered railways have faithfully observed the requirements relative to fire protection imposed upon them by the Board. Notwithstanding the exceptionally dry season, practically no serious forest fires have occurred which could be attributed to railway agencies. It is true that numerous fires have started, resulting unavoidably from the operation of trains, but the records show that, in general, the railway employees have been prompt in discovering, reporting and extinguishing them before they did material damage.

Special care has been taken by the companies in keeping the fire-protective appliances of engines in good order; also, much has been done in disposing of inflammable debris on rights of way, notwithstanding the extreme difficulty of securing labour. This work prevents the rapid spread of fires and facilitates prompt extinguishment. Special patrols have been maintained in forest sections, supplemented on all lines by the observance of special instructions to all regular employees relative to the reporting and extinguishing of fires in the vicinity of the track.

Not only have the railways efficiently handled their own fires, but they have extinguished or aided in extinguishing many fires that originated at a distance from the track, due to outside agencies. They have co-operated wherever possible, with governmental or private fire-protective agencies, with such beneficial results as, a few years ago, might have been thought impossible.

It would be difficult to make every farmer father believe that lack of sanitary equipment for his household and neglect of his barnyard caused sickness and deaths in his family. It may be impossible to convince him that the death of his wife at an early age was a result of too much pumping, churning and washing by hand; but they are really so closely related as cause and effect that one might almost declare that only the willfully blind will or can fail to see their relation.—*Community Builder, in American Lumberman.*

Conservation of Manure

Farmers' Greatest Asset in Soil Maintenance Wasted Through Lack of Care

While manure is only a by-product on the farm, it is the farmer's greatest asset in the maintenance of soil fertility. That

Have tight floors in the stable to prevent loss of the liquid, and, if there is not enough litter to absorb it, drain it off into a receptacle from which it can be occasionally taken and spread upon the land. *Don't waste it.*—F. C. N.

The government of New South Wales has purchased and is operating a number of deep-sea trawlers.



Fig. 143

WASTE OF LIQUID MANURE

The draining the liquid from the stable and discharging where it will be no good.

it is not properly valued and given the care that it deserves is strikingly shown by the results of the Agricultural Survey of the Commission of Conservation in 1915. Seventy-seven per cent of the 400 farmers visited in Ontario were exercising no care to prevent waste of manure, twenty-two per cent claimed to be exercising some care, while less than one per cent claimed to be exercising really thorough care of the manure. Only one and one half per cent were saving all the liquid manure, which contains more actual plant food than the solid excrement. The annual loss amounts to millions of dollars and it can be readily seen that our system of farming is not on a sound basis if this waste is allowed to continue. Any farmer who knows these facts, but takes no steps to prevent the waste, commits an injustice against himself and his country, and is preparing to leave to succeeding generations a heritage of poverty.

This loss can be prevented in several ways. Now, at the beginning of the stabling season, prepare a supply of litter to absorb the liquid manure. As the straw crop is short this year, it is advisable to store a quantity of leaves, dry sods or saw dust for this purpose. Where circumstances permit, it is a good plan to draw the manure to the field as made. If it has to be piled see that it is piled so as to prevent heating and leaching. Mix the cow manure and horse manure together and keep the pile compacted and level on top. A concrete floor in the barn yard is a paying investment, although it may seem expensive.

STURGEON FISHERIES

Thirty years ago, when Canada's sturgeon fisheries were first being exploited commercially, the flesh of the sturgeon sold for four or five cents per pound, and the prepared eggs, or caviare, for ten cents per pound. The fishery was prosecuted very energetically, and, in 1897, when the record output was attained, caviare had advanced in price to 25 cents per pound. To-day, as a result of continued overfishing, the fishery is virtually depleted, and sturgeon flesh and roe are the most valuable products of Canadian waters. The eggs are worth over \$1.00 per pound, while the flesh is the highest priced of all our fish. The production has steadily declined, until, during the last five years, the annual output has averaged less than one-third of that of twenty years ago.

While the revival of the sturgeon fishery presents considerable difficulty, it should be undertaken, if at all feasible. The sturgeon has been accused of predatory habits, but has been acquitted of this charge by the foremost Canadian scientists. Every portion of the fish can be utilized for the manufacture of some valuable commodity; there is absolutely no waste. The sturgeon fishery has never figured prominently among Canada's fisheries resources, but, carefully protected from over-fishing, it should form a permanent and very remunerative source of revenue to Canadian fishermen. To permit such fisheries to become extinct, unless detrimental to others of more value, is commercial waste and inefficiency.

Excessive Water Consumption

Use of Water Meters would Materially Reduce Waste

The excessive water consumption in Canadian cities constitutes a very serious problem. The average daily consumption in the Dominion is 111 gallons per capita; in individual provinces it reaches as high as 143 gallons per capita, and in certain centres of fairly large size attains a maximum of 292 gallons. There is no doubt that these figures can easily be lowered. The consumption in Great Britain is below 25 gallons in several cases, and the highest rate is only 70 gallons per capita.

That the more extensive use of meters would remedy conditions to a great extent is shown by two of our prairie provinces, Manitoba and Saskatchewan, where meters are more widely used than elsewhere, and where the average consumption falls to 50 gallons and 55 gallons, respectively,—less than half the average for the remaining provinces. Nor would the introduction of meters mean an increased cost to consumers. The average estimated cost of water for Canada is 10.9 cents per 1,000 gallons, the only provinces materially exceeding this being the two prairie provinces, where meter rates have already been widely adopted. The rates charged on the meter basis could be adjusted to meet different local conditions, so that the amount paid by each consumer would be practically the same as at present, but all wastes would be avoided. Many Canadian municipalities have both flat and meter rates in force, the consumer having the choice between the two, but as a rule the meter rates are so ridiculously high for the average consumer that there is in reality no choice. For instance, although the estimated cost for Canada is 10.9 cents per 1,000 gallons, numerous cities and towns charge 30 cents and over, with several charging even over \$1.00 per 1,000 gallons. Our excessive consumption is not due to the liberal and beneficial use of water, but to the careless waste by a few consumers in each community. Meters will not affect the former but will very effectively check the latter.—L. G. D.

In banking up houses for the winter, do not use leaves, straw or other inflammable material, unless entirely covered with earth; a chimney spark, a carelessly thrown match or a cigarette or cigar stub may ignite it.

Six additional government fish shops are being opened in Sydney, New South Wales, and suburbs for the sale of fish.