Conservation

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Public Health Week

A British Innovation that Might Well be Tried in Canada

Public health depends on education. Unless the people appreciate the need for maintaining sanitary conditions throughout the community, the passing of legislation can be of no avail. Consequently, every effort that is put forth to enlighten public opinion in this very vital matter should receive undivided encouragement.

An interesting experiment in this line was tried in Great Britain last year. A National Health Week was promoted and the results were so satisfactory that it will probably remain an annual institution. The National Health Week Committee outlined the general programme for the week, but the details were worked out by local committees. This made it possible to take the greatest advantage of local possibilities. Thus some schools were more highly trained than others, and the scholars from these were enlisted to give gymnastic and other displays, which demonstrated one branch of physical training for the young. In other places Medical Health officers, Sanitary Inspectors and nurses gave valuable assistance, and their "popular talks" on health matters were listened to with great interest and profit. Again, by means of sermons in churches; addresses in Sunday Schools; addresses to school children by their own teachers throughout the week; the use of health films in the moving picture shows; having ratepayers visit the water, gas and sewage works of the municipality; and by carrying on demonstrations in nursing and cooking, very many people were made to understand something of the meaning and value of health.

Of course, it may be urged that such spasmodic efforts are apt to have mere transitory results, and that, to be effective, the work must be continuous. But it is well to remember that it is often necessary to shout to awaken a sleeping man, and even wide awake people are interested by the unusual.

While no central organization exists in Canada for carrying out a National Health Week programme, it should be feasible for many municipalities to accomplish such a task. And the spring season, when the snow has melted and uncovered the refuse of months, is the time for such work. Health and cleanliness go hand in hand.—*A. D.*

A Word as to Our Policy

Few men are in a better position than the rural clergyman, to further the conservation idea. His work is closely concerned with the men who are developing and utilizing the country's natural resources. As a recognition of this fact the Commission of Conservation is endeavouring to enlist the support of clergymen in its work. To this end, some 3,500 rural clergymen have already been added to the mailing list of CONSERVATION and it is hoped that subsequent issues will reach every rural minister in Canada.

The April issue will contain a short bibliography of the best books on agriculture, and other conservation literature which should prove of interest, not only to ministers, but to school librarians, and to Canadians in general.

What Do You Pay For Your Water?

Some Canadian Water-works Statistics That are Both Interesting and Valuable

On the average each person in Canada served by water-works uses 113 imperial gallons of water a day and pays $4.12 a year for it, according to a report on the water-works of Canada in preparation by the Commission of Conservation.

New Brunswick has the highest per capita consumption in Canada, viz. 161 gallons per head per day, while Manitoba and Saskatchewan have the lowest—46 gallons per head per day. The more general use of meters in the Western provinces reduces waste and keeps the per capita consumption down to about the same amount as in European countries. The people of Manitoba pay the highest per capita rate for their water—$6.27 per year, while those of New Brunswick come next with a per capita cost per year of $4.82.

The following table shows the estimated cost per 1,000 gallons, the estimated cost per capita, and the daily consumption per capita:

Province.	Estimated Cost per 1,000 gal. (cents)	Estimated Cost per Capita per year (dollars)	Daily Consumption per Capita (imp. gal.)
Nova Scotia	7	3.76	147
Pr. Ed. Isld.	16.4	2.87	48
N. Brunsw'k	8.2	4.82	161
Quebec	9.5	3.92	113
Ontario	9.6	4.21	120
Manitoba	20.6	5.46	46
Sask.	23.	3.86	46
Alberta	13.	6.27	132
Br. Col.	8.2	3.44	115
Canada	10	4.12	113

Clam Farming

Clam Flats on Cape Cod are Said to be Worth $500 an Acre

Clam farming is said to be a good paying industry. Clam flats on Cape Cod for instance produce an average yield of $500 an acre, and if the clams are little-necks or quahaugs, experts say that careful handling will result in an acre being valued at $1,000. A brook running over a clam flat will wash away impurities and carry food to the clams, and is therefore a desirable factor. Dr. L. Belding, in charge of a laboratory at Wellfleet, Mass., and who has for years been working under the direction of the Massachusetts Commission on Fisheries and Game, is authority for the statement that $3 worth of clams planted in good ground increase in value to $15, on an average, in a year. Dr. Belding also states that in cold weather any clam will live for days and some for weeks out of water. A low flat gives the clams more feeding time and therefore develops a better crop.—*Ex.*

Production of Beet Sugar in Canada

From the three sugar beet factories at present in operation in Canada there was produced during the sugar-refining campaign of 1911-12 from Canadian grown sugar beets a total of 22,157,155 lb. or 11,078 short tons of beet root sugar, as compared with 20,612,276 lb. or 10,306 tons in the previous campaign of 1910-11. The three factories are situated at Wallaceburg and Berlin in Ontario and at Raymond in Alberta.

Utilization of Coal

How the Mines of Nova Scotia Make Use of the Coal Produced

Among the economic uses of coal in Nova Scotia may be mentioned, (1) The generation of power for mining purposes, (2) The coking of coal in by-product coke ovens, (3) The briquetting of slack coal and (4) The generation of electric energy at central power plants and its transmission to the surrounding collieries. This has been developed to such an extent that some of the collieries are now operated entirely by electricity. Electric cables are carried underground by means of bore-holes and the energy is used for mine haulage and pumping purposes.

These plants present many new and up-to-date features such as low-pressure and high-pressure steam turbo-generators and mechanical stokers for firing the boilers with low-grade slack and splint coal.

The Dominion Coal Company has recently installed a power plant at Waterford lake in which Bettington boilers, fired with pulverized low-grade coal are used to generate steam for the turbo-generators. The boilers are the first of their kind to be installed in America. It is claimed that they will give a higher efficiency than any other boiler on the market.

Practically all the coke produced is made in some type of by-product oven. The Dominion Coal Company recovers the by-products—gas, tar and ammonia. The Nova Scotia Steel and Coal Company recovers only the gas from their coke ovens, but are considering the erection of by-product ovens. The coking of coal in by-product ovens is of importance, not only on account of the value of the by-products recovered, but also because the basis of a briquetting industry is dependent upon a supply of tar or pitch as a binder for the briquettes.

Much slack coal is now made in mining operations in Nova Scotia and as the higher grades of coal become less plentiful, lower-grade seams will be worked and more slack coal obtained.

There are at present, two coal briquetting plants under construction and one in operation in the above mentioned province. The Dominion Coal Company also has a briquetting plant under consideration but has not yet decided where it is to be erected.—*W. J. D.*

Building Materials in Western Canada

Valuable Resources Being Gradually Opened Up

With the exception of British Columbia there is very little building stone produced in Western Canada. This is due to two causes. First, the rocks which underlie the developed portions of the Prairie Provinces are of comparatively recent age and are consequently soft in character and weather rapidly; second, there are very few rock exposures in the settled portions of these provinces except in the Rocky mountains and the foot nills.

In British Columbia there are large potential resources of building stone. They have, however, been developed only in certain localities on the Pacific Coast and have been confined to Cretaceous sandstone and certain volcanic rocks, situated on Vancouver Island and adjacent islands. Varieties of marble are also quarried on Texada island.

Building Stones and Clays

While the Prairie Provinces have not been proved to contain building stone in great quantity they possess large deposits of lime-rock shales and clay suitable for the manufacture of cement; also large deposits of clay and shale suitable for the manufacture of brick of various kinds, tiles, sewer pipe, etc.

The region bordered on the east by the Great Plains, and on the west by the Coast range, does not, so far as known, contain extensive clay resources. Shales also are rare because, in most instances, the deposits of argillaceous material have been altered to slaty rock or schists.

Exploration in the Pacific Coast region has, thus far, disclosed only a limited extent of clay resources, but important shale deposits are found at Sumas mountain, southeast of Vancouver. Surface clays are more extensive than the shale deposits and a number of these clays are found in the vicinity of Vancouver, Victoria and on several of the islands in the strait of Georgia.

The cement plants in operation in Western Canada are situated at:

Babcock, Manitoba.

Winnipeg, Man., (under construction).

Calgary, Alberta.

Exshaw, Alberta.

Blairmore, Alberta (one operating and one under construction).

West of Edmonton, Alberta, (one under construction).

Todd inlet, British Columbia. (one operating and one under construction.)

During the summer of 1911, owing to a shortage in the supply of cement in Western Canada, the duty upon cement was reduced by 50 per cent. for a period of six months.

In the above list there are four new plants described as under construction, but all expect to be in operation in the spring of 1913. The Rocky Mountains undoubtedly contain enormous deposits of raw material similar to that used at Blairmore and Exshaw which will be developed as the demand increases.—W.J.D.

CENSUS GLEANINGS

Growth of Western Canada and What It May Mean

Census statistics for the Prairie Provinces open up a field for some interesting and instructive comparisons. During the last census decade the rural population of Manitoba increased from 184,738 to 255,249 or at the rate of 38·1 per cent. The urban population increased from 70,473 to 200,365, or at the rate of 184·3 per cent. In the older portions of the Province the increase has been almost entirely urban, one rural electoral district even showing a small decline.

In Saskatchewan, Canada's greatest wheat-producing province, and in which the most marked advance in population was made, the rural population increased during the census decade from 73,729 to 361,067, or at the rate of 389·7 per cent. At the same time the urban population increased from 17,550 to 131,365 or at the rate of 648·5 per cent. No fewer than 211 new towns and villages were incorporated in Saskatchewan during the census decade.

Alberta shows a rural increase from 52,399 to 232,726, which is a percentage increase of 344·1. The urban population increased from 20,623 to 141,937, or a percentage increase of 588·2. In all, 82 new towns and villages were organized in Alberta during the census decade just closed.

These three provinces show a total rural increase of 538,176, or 93·6 per cent of the rural increase for the whole Dominion. The urban increase was 365,021 making a total of 903,197, or almost half the total increase recorded for the whole of Canada. The centre of population has, therefore, taken a decided move westward.

In view of the fact that vast areas of land are still to be opened up, it is probable that the next census will show further great gains in the rural population. But it is significant that the urban population is growing with much greater rapidity than is the rural. Further, the specialized form in which agriculture is carried on in the Prairie provinces is certain to have an important bearing on the movement of population. Many Western farmers are of the nomadic type. Their methods of farming make them such. Specialization in agriculture as it is practised in the West must inevitably lead to soil depletion. The valuable wheat producing constituents of the soil are being steadily mined, and it is only a matter of time till nothing is left but "wheat sick" soil, which is largely devoid of humus and other plant material. Already, Manitoba has thousands of acres of abandoned lands, as a direct result of over-specialization.

It would be well if the farmer would remember that specialization in any industry is only permanently possible where the supply of raw material is unlimited. Moreover, where a high degree of industrial specialization is engaged in without adequate care being taken to utilize the by-products, there is sure to be very serious waste. Indeed, the modern captain of industry is frequently as much concerned in seeing that the by-products are turned to good account, as he is in supervising the manufacture of his staple product. And the farmer must be equally business-like if his work is to be permanent.—*A. D.*

Lake States Forest Fire Conference

Divorce of forest fire organizations from politics, efficient forest patrolmen and co-operation between the State and private fire-fighting associations formed between timber owners and lumbermen, were the slogans of those who attended the second annual meeting of the Lake States Forest Fire Conference, held at Lansing, Michigan, January 21st and 22nd.

The legislative committee also recommended:

"Absolute divorce between game and forest departments; Work of forest protection and administration to be placed in handsof a competent and non-partisan board; Appointment by Board of Commission of an expert and competent forester, together with necessary assistants, who shall have charge of and supervision over all forest administration and protection; General forest and fire law along lines of the present Minnesota law, with annual land tax based on soil values, and timber tax based on value of timber at the time it is removed from the land; Appropriation of sufficient funds to enable the State Forester to enforce the full existing forest and fire laws and such others as may be passed."

The province of Ontario was represented at the conference by Mr. E. J. Zavitz, Provincial Forester.

Resolutions were adopted urging that the Lake states and the province of Ontario provide larger appropriations for fire protection; that new associations for fire-fighting be formed, to co-operate with all forest fire-fighting organizations; and to urge and advocate the reservation of non-agricultural lands.

It was shown at the Conference that the new forestry law of Minnesota is the most progressive in the Great Lakes region and that of Michigan is the most inefficient. —Ex.

Eighty-two per cent. of the 20,000 fires whose origin has been tabulated by the Texas State Insurance Board, are due to preventable causes. How the insurance rate would be reduced if even half of these preventable fires were actually prevented! Judging by the scanty information available similar conditions exist in Canada, but our Statistical facilities are so inadequate that we cannot make such convincing statements on the subject as Texas can.

Latent Water-Power in British Columbia

Recent Provincial Report Gives Much Valuable Information

The Minister of the Department of Lands of British Columbia—Honourable W. R. Ross—who has jurisdiction over the waters of the province, has just issued his Annual Report for the year ending 31st of December 1912.

This report is a comprehensive and valuable publication and sets forth the work which is being performed, and which has already been accomplished in connection with the administration and use of the waters of the Province. More particular attention is given to the subject of irrigation on account of the great importance which attaches to the use of water for agricultural purposes in British Columbia. Specific reference is made to some of the more important water-power streams in the Kootenays. For example—a special investigation has been made upon the Kootenay river which has a total fall of 330 feet in a distance of 18 miles. As is known the well constructed plants of the West Kootenay Power and Light Company which supplies electric energy to so many of the mining plants in the 'Boundary country' are situated upon the Kootenay river at Upper and Lower Bonnington Falls.

Reference is also made to the Pend d'Oreille river. It is one of the more important water-power streams of the Northwestern States, the larger part of its drainage area of over 25000 square miles is in the United States. In Canada the Pend d'Oreille has a fall of 423 feet in 16 miles.

When one bears in mind the grant recently made by the United States Government to the Montana Water and Power Company, which company proposes to supply the power for the electrical operation of 450 miles of line of the Chicago, St. Paul and Puget Sound railway between Harrowtown, Montana and Avery, Idaho, at an estimated annual saving to the Road of $250,000 per year, one is impressed with the latent hydro-electric possibilities of important rivers like the Kootenay and the Pend d'Oreille.

This report of the Department of Lands contains the report of the Minister, reports by the heads of various branches, including the Forest Water Branch, and Survey Branches. It contains acts and regulations appertaining to various natural resources, and descriptions of how applications may be made to secure various grants and permits permitting their use.

According to a press report, Mr. R. D. Prettie, Chief Forester for the Canadian Pacific railway stated recently, at a banquet in Toronto, that that Company was spending as much on forestry this year as is being spent by the whole United States Forest Service.

DAIRY FARMING

Pointers on Building up a Dairy Herd—Care and Good Feed Essential

Few other branches of agriculture present greater advantages than dairying. The production of milk and butter-fat and the disposal of these to cheese factories and creameries is one of the most profitable of the activities of the farm. Then, the feeding of skim-milk, buttermilk and whey along with alfalfa and clover to calves and pigs increases the profits very largely. Again, no other branch of farming surpasses dairying as a means of building up and maintaining soil fertility. The wise policy for the farmer is to transform his grain into meat, butter, cheese or other products ready for consumption. Selling grain is merely selling soil fertility. It is wasteful and at the same time does not bring in as much money as it would if fed to stock.

Improving the Herd

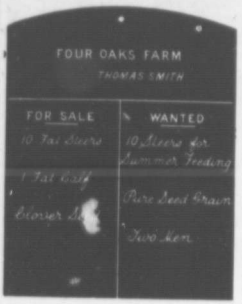
The easiest, most satisfactory and economical way to build up the dairy herd is through the introduction of pure bred sires. In grading up a herd there are a number of things that a farmer must take into consideration to obtain the greatest success. First of all, of course, he must make a choice of breeds. Then, having made that choice, he should not change unless for very important reasons. For example, some farmers change from one breed to another every few years simply because their neighbours take a fancy for some other breed. As a consequence, they never have anything but mongrel stock. The breeding of a pure-bred herd requires years of patient effort. The secret of success lies in the ability of the farmer to set an ideal and then work intelligently towards accomplishing it.

A new sire should be selected for part of the herd, at least every three years. A good one should be retained as long as possible. In selecting, care should be taken to get one like, or a little better than, the former one. Pedigrees should be gone into, and in no case should an animal showing signs of a poor constitution be bought. It pays too, to buy of a reputable breeder.

Again, the farmer must constantly keep weeding out the poorer individuals of his herd. If this is done carefully, a few years effort will cause a vast improvement.

Success in dairying depends as much on the kind of care and management bestowed on the herd as upon the breed. Ordinarily, much too little attention is paid to these very important matters. Apply the principle of "the golden rule" in the dairy stable at all times. It will pay big dividends.

Liberal feeding of the dairy herd is always essential, but is of especial importance in winter. The dairy cow is a sort of factory for transforming food into milk, and the factory should be kept running to its full capacity.—*J. F.*



One of the difficulties that face most farmers is the lack of some simple means of advertising their wants. The illustration given herewith shows a method that a number of farmers have used with good results. It is simply a small blackboard fastened up at the farmer's gate. The name of the farm and of the farmer and the words "for sale" and "wanted" should be painted on it. The articles wanted or for sale may be written in with chalk. This little device will prove a big help during the busy seasons. By the way, it is a good thing to have enough pride in one's farm to give it a suitable name.

An Opportunity for the Rural Minister

Farmers, as a rule, do not lead farmers, and in that is the minister's opportunity. The country minister should become a leader in the better farming movement. For this leadership he has some distinct advantages. He is associated with the adults, with the young people, and with the children. He is likely to be less migratory than the country teacher, and is trained for leadership in some directions which will help him to lead in others. In too many instances he does not know agriculture as he should know it. He should strive to know more about the things with which the farmer is closely associated; the crops; plants of the field; the soil; the live stock. He must be in full sympathy with; must understand; and live the daily life of those with whom and for whom he works. If he is able to counsel and advise the farmer regarding things which pertain to his material welfare, the farmer will be more ready to assist and co-operate with him in his efforts to advance the religious and spiritual welfare of the community. —*F. C. N.*

It costs 6·25 cents to produce a quart of milk from the average cow, that is one giving about 3,200 lbs. of milk a year, according to the dairy department of the Ohio State University. Where cows that produce much more than the average are kept, the cost of production per quart is greatly decreased.

Co-operative Protection Against Forest Fires

One of the most encouraging signs during the past year, in connection with better fire protection in eastern Canada has been the organization of the St. Maurice Forest Protective Association. This Association is composed of limit-holders in the St. Maurice Valley Quebec. A manager, three inspectors and 50 rangers for patrol work were employed during the past season. As a result while 97 fires were extinguished, only one attained proportions of any consequence, and this was in an old cutting. In addition to patrol, a start has been made in the construction of permanent improvements such as trails, telephone lines and lookout stations. The cost is met by an assessment upon limit-holders in proportion to acreage, aided by a contribution from the Quebec Government, in consideration of the protection of Provincial property. It is greatly to be hoped that the activity of this association will be extended, and that others will be formed.

The rapid development of the co-operative idea in the fire protective work in the United States is shown by the fact that the subsidiary organizations comprising the Western Forestry and Conservation Association last season patrolled approximately 20,000,000 acres holding fully five hundred billion feet of timber or one fifth of the entire supply of the United States.

They kept about 450 patrolmen in the field, supplied these with the necessary extra help to handle fires and built hundreds of miles of telephone lines and trails. What is more to the point, they kept the area of merchantable timber burned over down to 14,000 acres, or about 1-16th of 1 per cent of the area protected. Only about 700,000,000 feet of timber was damaged by fire, and most of this will be logged without loss. The actual destruction was only about 76,000,000 feet, or about 1-70th of 1 per cent. They spent, to make this a remarkable record, about $200,000 or a cent an acre for the entire area guarded, although, as it was necessary to protect fully double the area that actually contributed, the cost to association members averaged about 2 cents an acre on their own holdings.—*C. L.*

OIL-BURNING LOCOMOTIVES

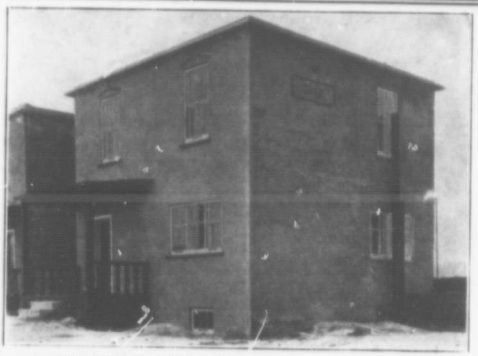
The efficiency of oil burning locomotives in connection with the prevention of forest fires is well illustrated on the Great Northern Railway in British Columbia. Oil has been used for fuel on the locomotives operated by this company during the past two years. Since the installation of oil-burners, no fires have been reported as starting from locomotives, whereas previously they were fairly frequent during the dry season and caused much damage.

The use of oil has also been very effective in this respect on the main line of the Canadian Pacific between Kamloops and Field, British Columbia, where oil-burners have been installed during the past season.—*C. L.*

Some Contrasts of Interest to Farmers

The Right and Wrong Ways of Doing Things and the Difference in Dollars and Cents

Cost of ploughing one acre with a double plough, $1.35.	Cost of ploughing one acre with a single plough, $2.00.
Cost of discing one acre with a double cut-away, 45 cents.	Cost of discing one acre with a small single disc, 90 cents.
Seeding with a three-horse machine, 18 acres can be sown per day at a cost of 22 cents per acre.	Seeding with two-horse machine, 12 acres can be sown per day at a cost of 25 cents per acre.
Cost of cutting one acre of hay with a seven-foot cutting bar, 30 cents.	Cost of cutting one acre of hay with a four-foot cutting bar, 55 cents.
To cut one acre of grain with an eight-foot binder costs 26 cents.	To cut one acre of grain with a six-foot binder costs 40 cents.
Harrowing one acre with sharp toothed harrows (once over), 15 cents.	Harrowing one acre with dull toothed harrows (twice over necessary), 30 cents.
A good mixture of grasses and clovers sown 20 lbs. to the acre will give heavy crops.	Timothy and clover sown 6 to 10 lbs. to the acre will give a medium crop in a good season, but will be a total failure in a poor season.
Heavy seeding smothers weeds and adds humus to the soil.	Light seeding encourages weed growth in the vacant spaces and adds little fertility to the soil.
A one to two-year-old sod when ploughed under will enrich the soil as much as would manure applied at the rate of 10 to 12 tons per acre.	Old, worn out sod harbour weeds and insects, and is of little value as a fertilizer.
On breaking a new meadow it is easy to secure a fine seed bed.	To obtain a good seed bed on an old meadow a great deal of extra labour is required.—*J. F.*



A workingman's home, built entirely of concrete. The walls have continuous cavities, a unique feature in this kind of building

Cement and the Housing Problem

Continuous Cavity Cement Walls Are Dry, Warm and Sanitary

Roughly speaking a half million immigrants will pour into Canada during the present year. They must be housed, and cimatic conditions make comfortable houses a necessity. Co-incident with this great influx of new citizens there is a steady and rapid rise in the price of lumber. According to the Labour Gazette the index number for this important building material rose from 165 in January, 1912, to 170.9 in January, 1913, and the probability of a further rise is by no means remote.

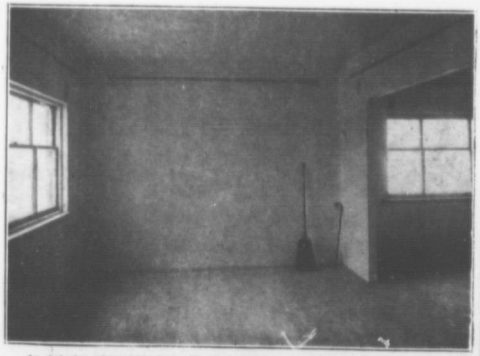
Housing Requirements

Such a situation bears most heavily on the labouring and artisan classes. When the cost of building materials is excessive, and the demand for homes rapidly on the increase, housing conditions among the less well-to-do are certain to degenerate. It is indeed surprising that architects and builders have not devoted more time to the construction of buildings that would prevent in large measure, the development of slums. Working men's homes, in common with others should be comfortable, thoroughly sanitary, well ventilated and lighted and attractive in appearance, and these features must be obtained at a minimum cost.

Of all building materials now in use, cement promises to fulfil these requirements in greatest measure. It can be used for the construction of walls, partitions, stairways, roofs and floors. It can be applied to advantage in the making of bathroom, laundry and kitchen equipment. It is easily kept clean, it is fire proof and construction can be carried out cheaply and rapidly. In addition, its plastic qualities make it easy for the architect to devise attractive designs.

Advantages of Cavity Walls

Solid cement walls are, of course, almost invariably damp and cold, but by using "continuous dead air" cavities this defect has been overcome. The building of such walls, however, requires special moulds, and efforts to construct the latter so as to build a wall quickly and cheaply have been largely successful. The house illustrated in this number, is that of a better class artisan's or workman's home, having outside dimensions of 24 feet by 24 feet by 26 feet high. The walls are of cement and have continuous air cavities. The partitions are of solid cement three inches thick and the floors and the roof are of reinforced concrete. The building contains a basement; three rooms and a hall on the ground floor; and three rooms, a hall and a well equipped bathroom on the second floor. The cement construction-work, including the setting up and taking down of the forms occupied some 17 working days and this in spite of the fact that the moulds had never been tried before. The total cost of the house, complete with heating, plumbing and lighting apparatus, painting and finishing will be about $1,800 and can be profitably rented at $16.00 to $18.00 per month. The maintenance charges for such houses need not be heavy. Fire insurance is not essential. They are practically frost, damp and vermin proof, and much less fuel is required than in the ordinary veneered house. Herein is surely a suggestion of great importance in the solution of the housing problem in Canada.— *A. D.*



An interior view of the home illustrated above, showing cement walls and partitions. The floor is overlaid with wood

Public Health a Federal Question

"It seems to me, particularly with respect to the Maritime provinces, that, if there is one thing that we should be rid of, it is the administration in respect to Public Health; if there is any subject that should engage the attention of the Federal administration and should be subject entirely to Federal legislation, that subject is public health. In the Maritime provinces, particularly with our limited revenue, we have not the money to efficiently protect the public health, and, secondly, because if there is any one thing common to the whole of Canada, it is public health.

Take tuberculosis, with which we are trying to deal locally in Nova Scotia; what matter can be more easily discussed from one province to another, than tuberculosis? If there is any subject that this Commission could effectually deal with and assist us with, particularly in the Maritime provinces, it is this question of the prevention of disease throughout Canada, and the impressing on the Federal government of the necessity for dealing with this subject of public health."—*Hon. O. T. Daniels, Attorney-General of Nova Scotia, at Fourth Annual Meeting of the Commission of Conservation.*

WIRELESS USED IN FORESTS

The United States Forest Service is conducting experiments in the use of wireless telegraphy and wireless telephones as a practical means of communication between fire patrolmen and the headquarters office. Quick communication means the arrival of fire-fighters in the early stages of a fire. This in turn means that many fires will be extinguished in their incipiency, with only nominal loss.—*C. L.*

The average value per acre of farm land in the United States rose from $15.57 in 1900 to $32.40 in 1910, a rise of 108 per cent.—*United States Census Bulletin.*

Leisure is a universal right in a society which boasts an economic surplus.

Facts Concerning the Beaver

Canada and Siberia the Only Countries where Beaver are found Outside of Reservations

The upper waters of the Peace and Fraser rivers and the watersheds lying between the St. Lawrence and Hudson Bay may be regarded as the last homes of the beaver in America.

Their extinction in the regions of Canada just referred to, would render Government reservations a necessity in order to prevent their complete extermination.

The Beaver in Europe

The history of the beaver in Europe is instructive, in that it foreshadows what may occur in America. In the eleventh and twelfth centuries, the rights of hunting were carefully awarded and were highly valued. By the sixteenth century, we find efforts being made to prevent extermination of many of the most important beaver colonies. In 1714 and in 1725, edicts were issued insisting on the protection of those on the Elbe river—a fine equal to about $200.00, being imposed for killing. Small colonies are still protected on the Elbe; on the Rhone in France; and in Sweden and Austria.

The retreat of the beaver in the British Isles was synchronous with the advance of settlement. The last colonies of beaver existed in Wales and in the Highlands and, in 1526, British beaver disappeared from the records of fur sales in England.

In Asia about 1000 are annually taken about the headwaters of the Obi in Siberia.

Very small numbers may still be found in parts of the United States and Mexico, and considerable successful restoration work has been carried out by the state of New York.

In Canada, the retreats are now being made before a civilization which is rapidly extending its boundaries. Reservations from which pot-hunters are excluded, and from which only a stated number of animals, predetermined by a study of the extent of the local food supply, may be taken annually, is the best means of conserving this very valuable fur-bearing animal. As they are given a measure of protection in Ontario, it is unlikely that they will ever be completely exterminated in that Province.—J.W.J.

OYSTER FISHING

The very stormy weather which prevailed along the coasts of the Maritime Provinces interfered to some extent with the oyster fisheries during the month of October. In Prince Edward Island, 6,148 barrels were taken in October 1912, as compared with 6,018 barrels in the corresponding month of 1911; while the catch in New Brunswick declined from 9,703 barrels in 1911 to 5,366 barrels in 1912.