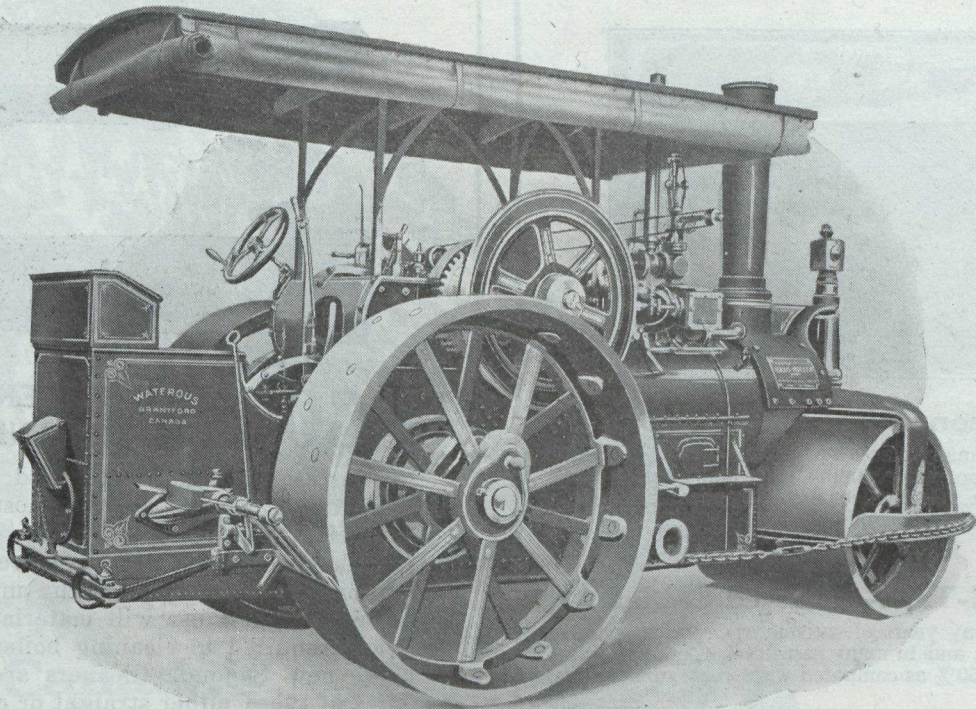


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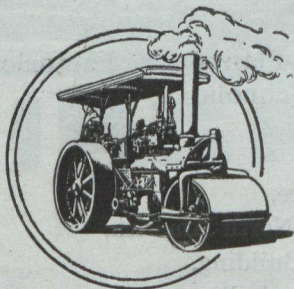
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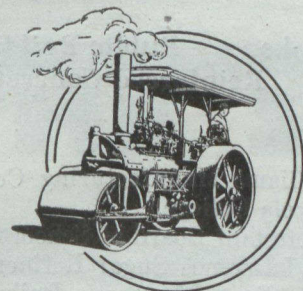
Before Investing In Road Making Machinery

Remember This:--

That in a recent address before the Ontario Good Roads Association, the Roads Superintendent of Wentworth County, making a comparison of the Waterous Roller and a Roller of another make, made the statement that the Waterous in one year was used for 202 days, ten hours each, and 76 nights of twelve hours each—2932 hours altogether. During this time the repair cost was \$189.00—practically the whole repair bill in five years. The second Roller, only four years old, was used but 129 days and 18 nights—a total of 1506 hours in all, and in this one year service cost \$197.00 for repairs. We can't add much to the force of these figures.

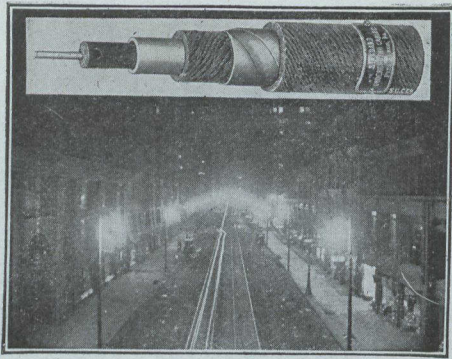


They indicate that the Waterous has staying powers above the average, that where severe and continuous service is required the Waterous is used, and in this particular case that the Waterous Roller while giving 250 per cent. more service actually costs 23 per cent. less for maintenance and repairs.



Waterous

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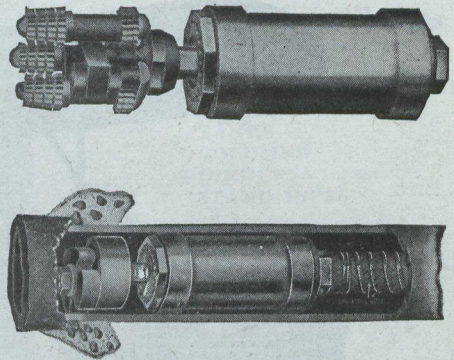
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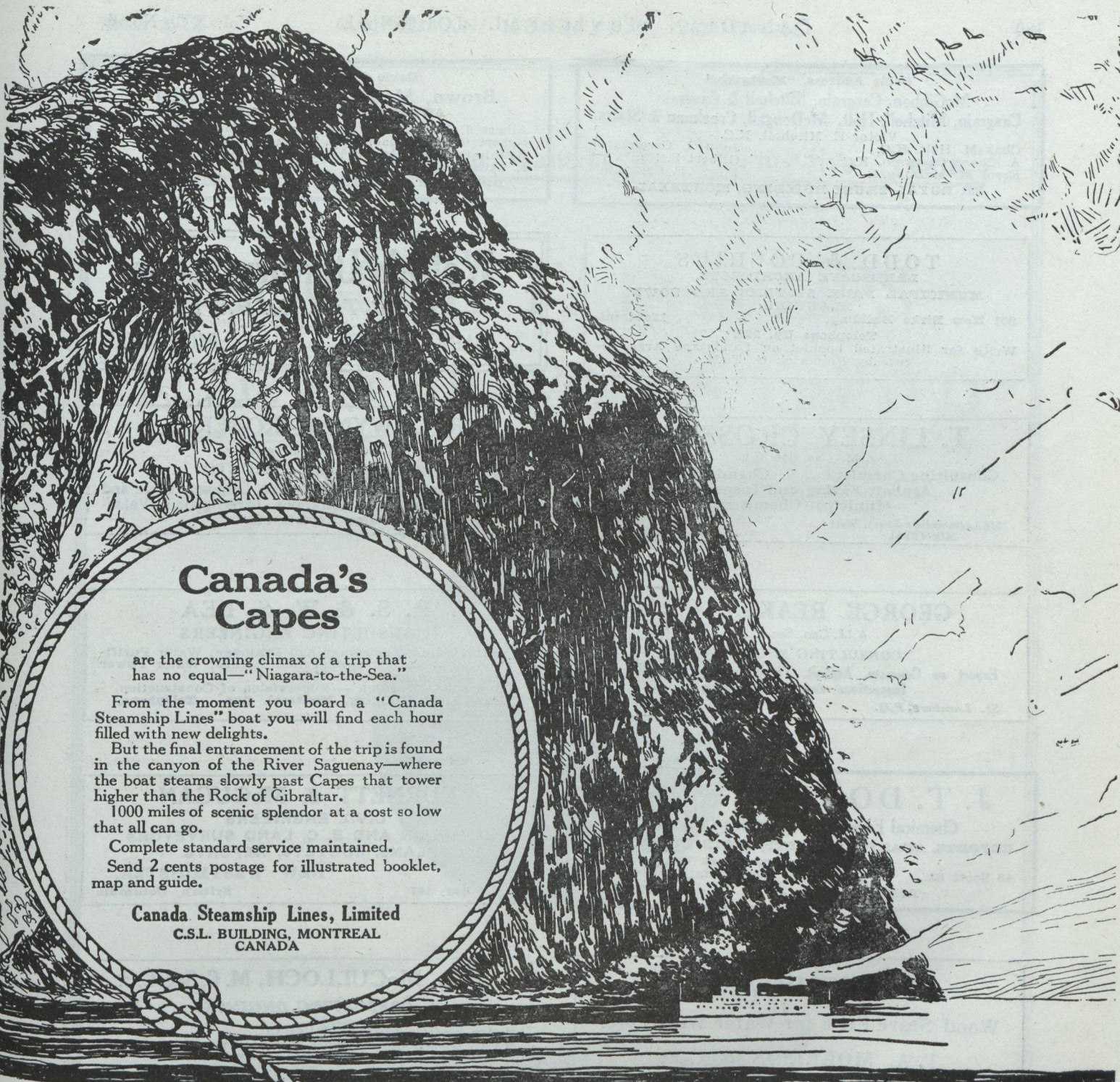
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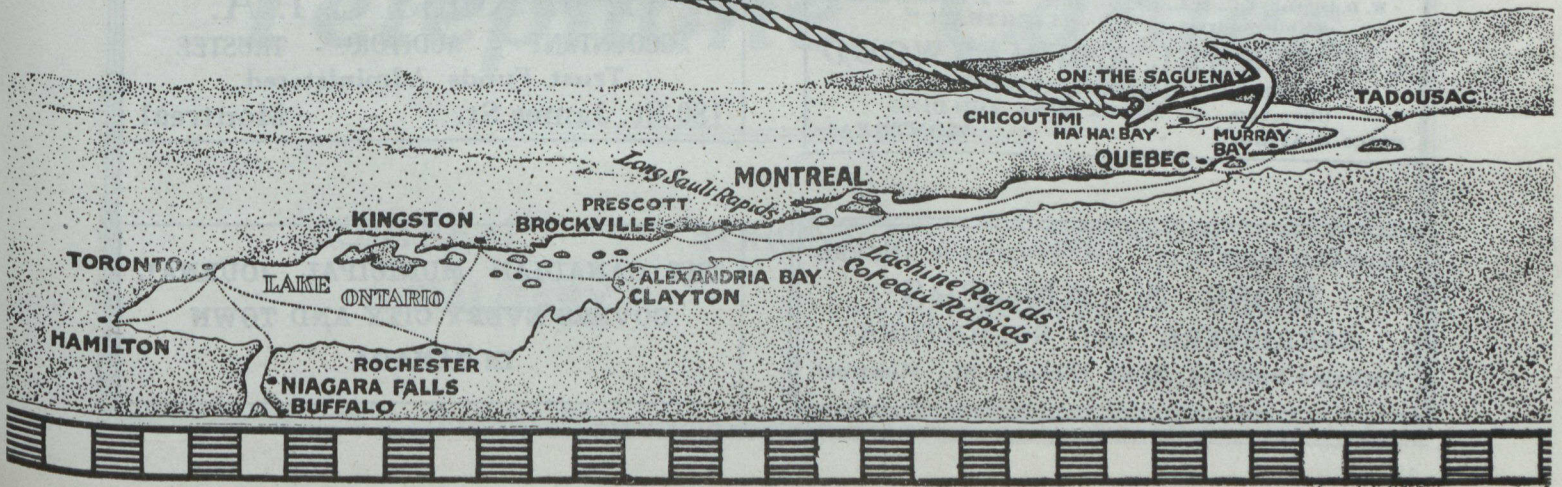
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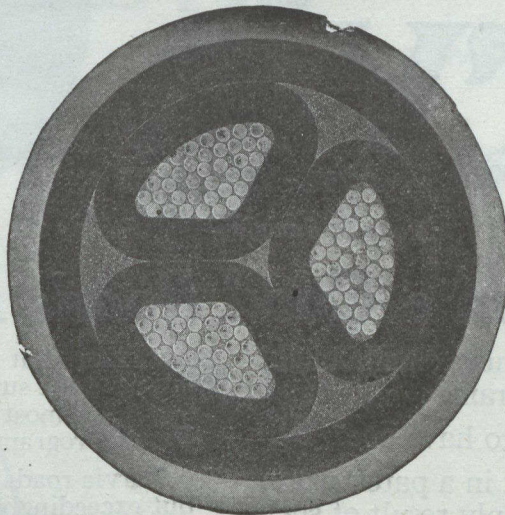
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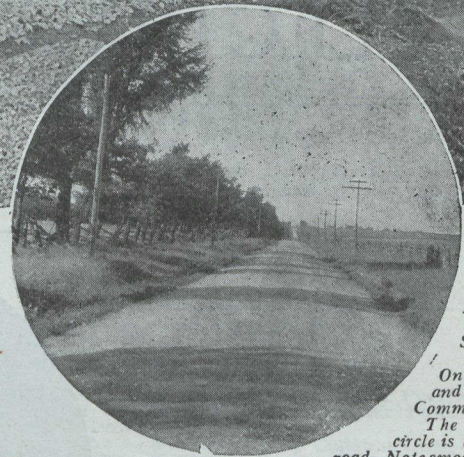
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Tarvia

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Made in Canada



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The view in the circle is the finished road. Note smooth, dustless surface.

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Roads should not be built in a patch-work, haphazard fashion, for the only result of such a policy is stretches of good roads interspersed with stretches of bad roads.

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Our service Department has persuaded many towns to work out a systematic road policy; because we have been able to demonstrate that *great sums of money can be saved* by so doing.

A system of Tarviated macadam—that is to say,

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Tarvia roads are not only low in their first cost, but exceedingly low in maintenance cost.

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There are several grades of Tarvia and a dozen methods of using the product.

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SPECIAL SERVICE DEPARTMENT

This company has a corps of trained engineers and chemists who have given years of study to modern road problems. The advice of these men may be had for the asking by any one interested. If you will write to the nearest office regarding road problems and conditions in your vicinity, the matter will be given prompt attention.

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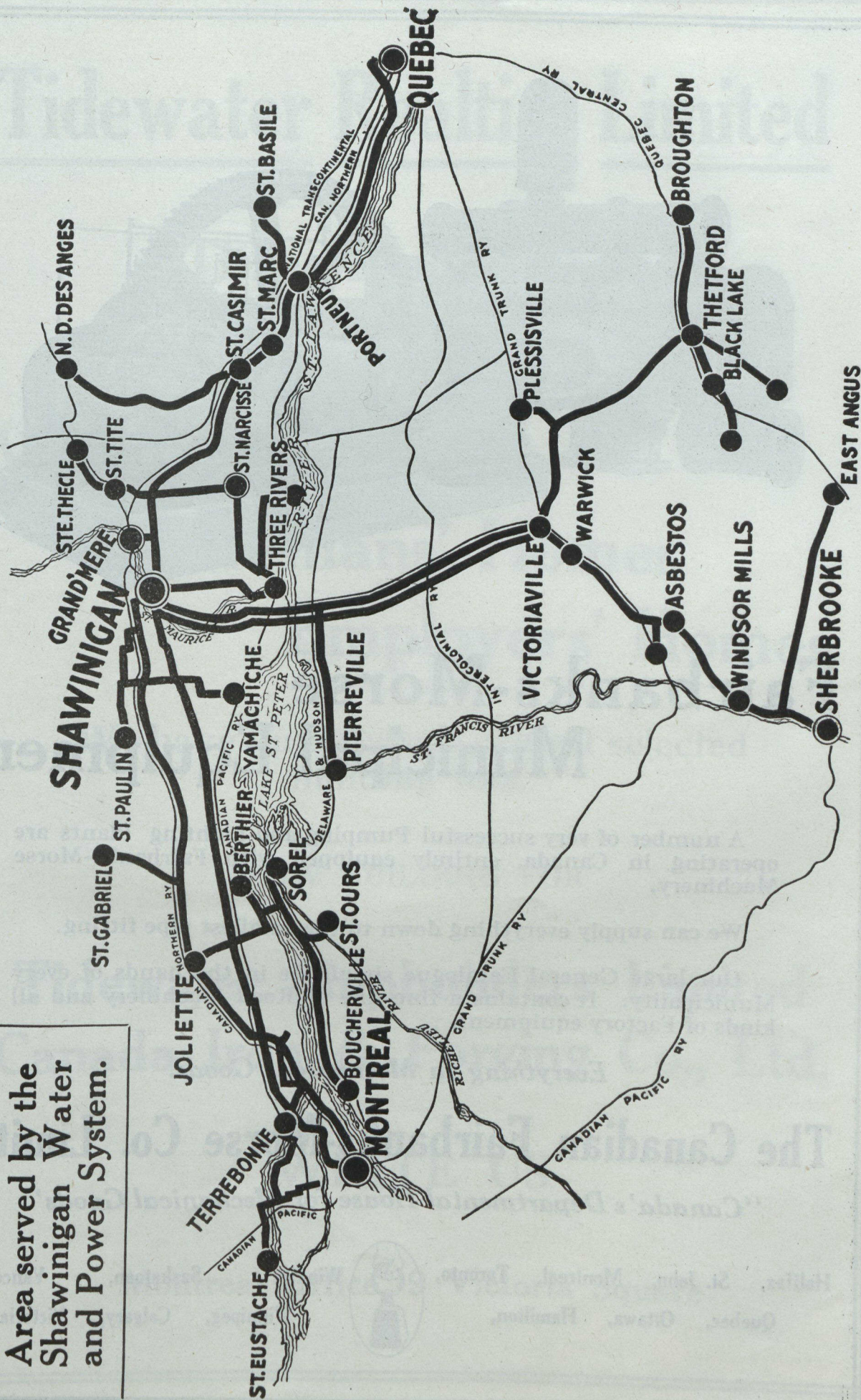
**THE SHAWINIGAN WATER & POWER
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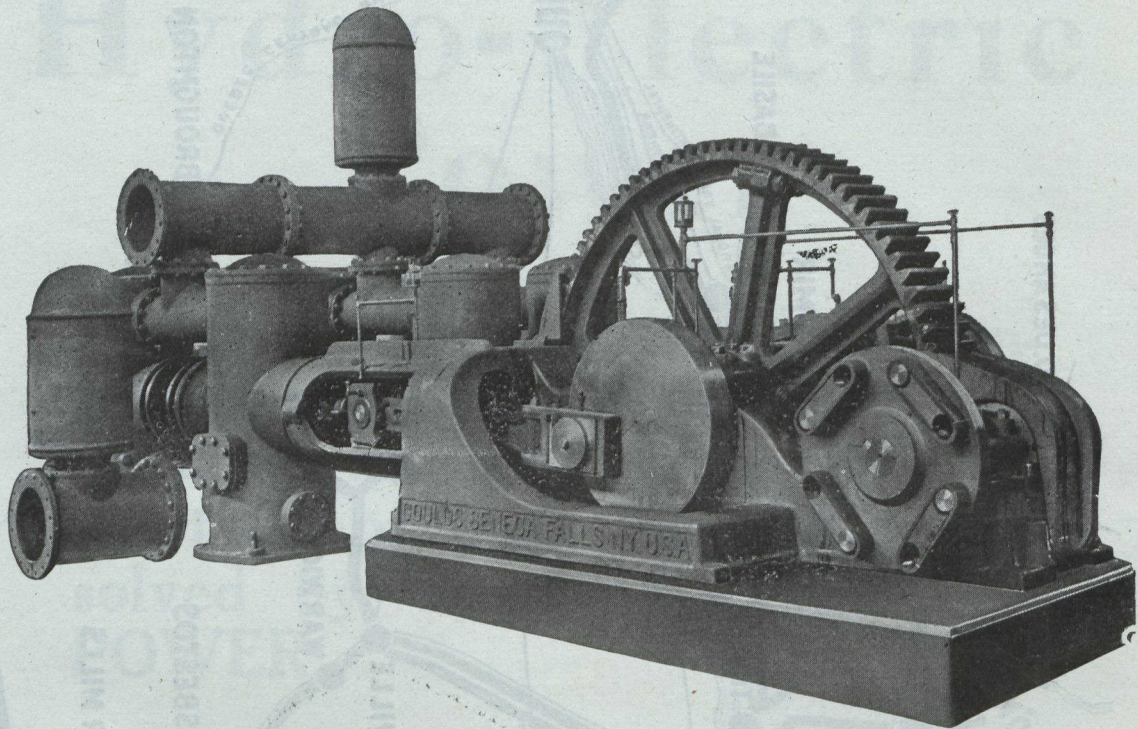
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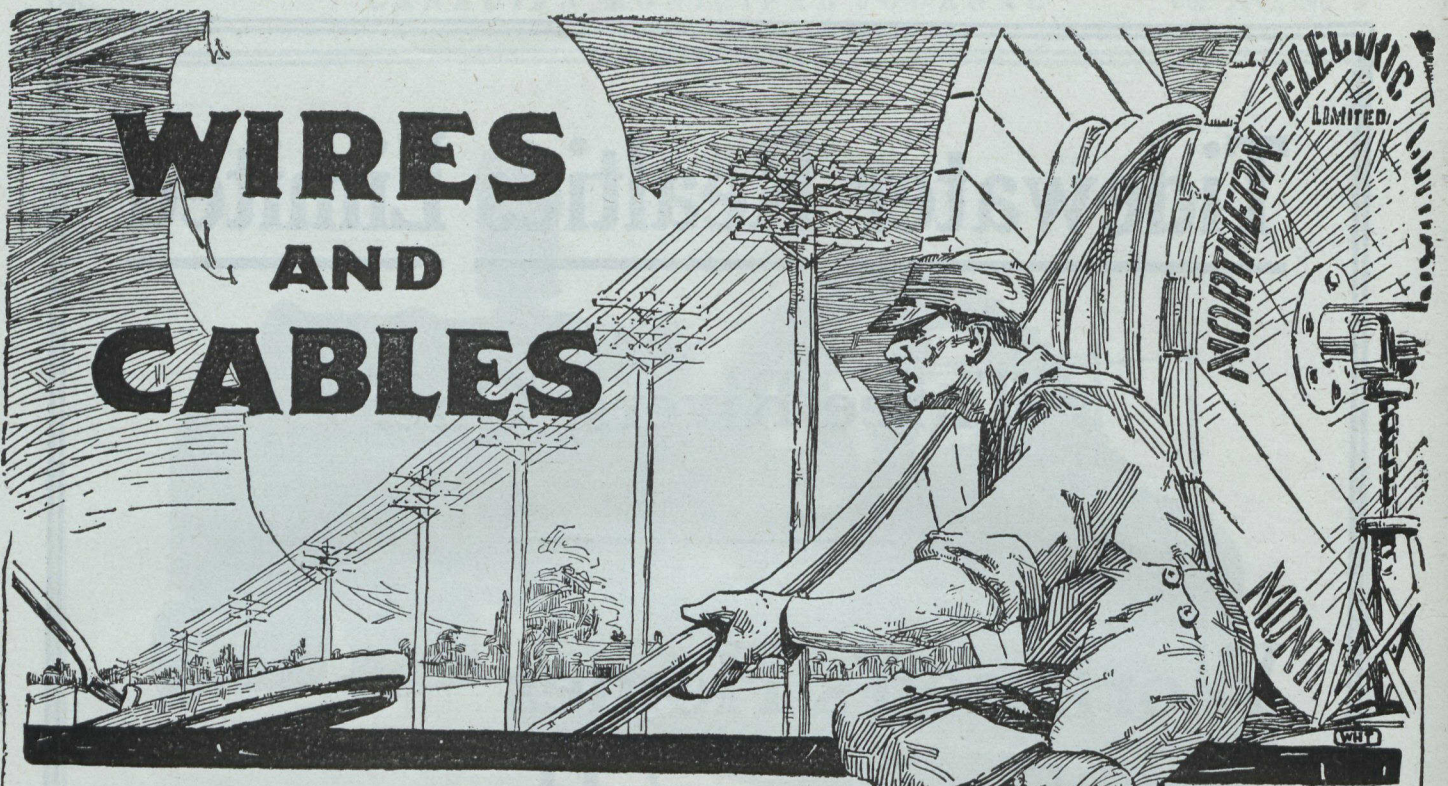
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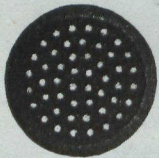


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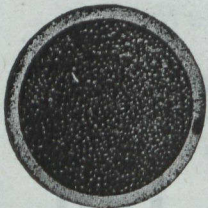
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Quality, Dependability and Service is what has made the **NORTHERN ELECTRIC COMPANY LIMITED** the largest manufacturers of bare and insulated Wire and Cable.

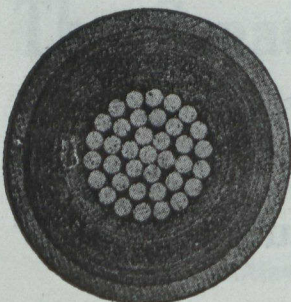
Our Nearest House will be glad to furnish specifications and prices on any type of bare or insulated wire and cable for electrical purposes—write us to-day.



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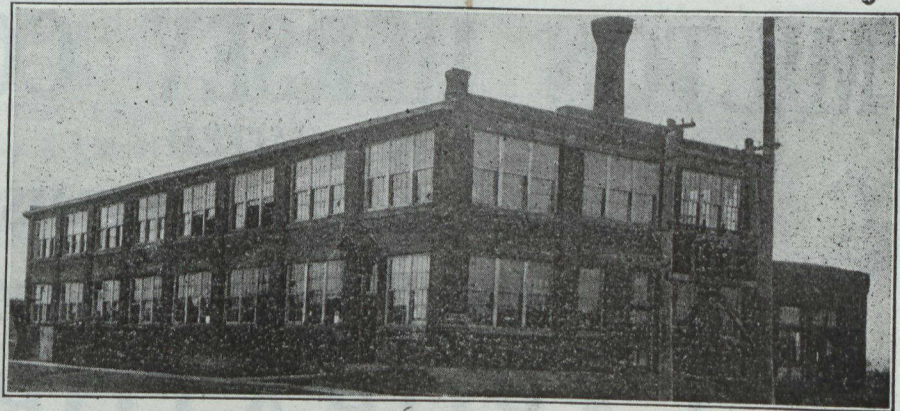
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FOR ALL HEAT TREATING

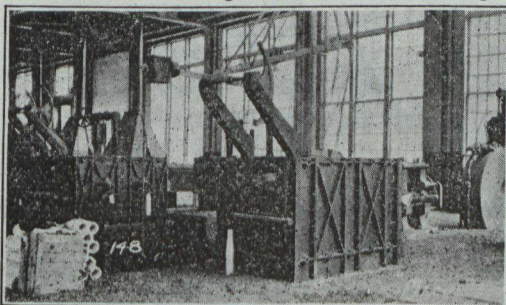
It will pay you to dispense with coal, stockers and chimneys — ash piles, soot and smoke — and to use instead

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- An Area of over 5,000 acres with 162 miles of well laid out streets.
- Over 20,000 houses, with a Population of 104,000.
- A Free Public Library, a Parliamentary Library and a Museum.
- 10 Colleges and one University.
- A Free Public Library, a Parliamentary and a Museum.
- 67 Churches (representing every denomination) and 24 Hospitals.
- 192 Separate Institutes.
- Nine Railways entering the City and eight Water Transport Lines.
- 84 Public Buildings, 19 Parliament Buildings, and 13 Public Parks.
- 47 miles of Electric Street Railway lines, with 88 cars daily.
- 55 miles Paved Streets, 213 miles Concrete Walks, 185 miles Sewers.
- Five miles Whiteway Lighting.
- 38 Banks and Branches.
- 10,000 Telephones in use.
- One Million Water Power within transmission distance.
- An Industrial Payroll of over \$5,000,000
- City Payroll \$1,000,000
- A Government Payroll of over \$5,000,000
- A Railway Payroll of. \$3,000,000
- An Industrial Capital of \$21,098,994 (1910)
- A Railway & Canal Tonnage of 1,892,350 tons

THE CITY OF OTTAWA OWNS ITS OWN WATER WORKS AND ELECTRIC LIGHT SYSTEM.

The City of Ottawa is:

- 115 miles northeast of Montreal.
- 256 miles northwest of Toronto.
- 600 miles from New York.

The City of Ottawa is Progressive, as the following facts show:

	1915.	1918.
Bank Clearings	\$211,636,519	\$357,598,751
Building Permits	1,605,160	2,577,752

THE CITY OF OTTAWA OFFERS SPECIAL FACILITIES TO THE MANUFACTURER TO LOCATE IN THE DISTRICT.

For further Information, apply to—
H. L. CORBETT, City Treasurer. HAROLD FISHER, Mayor.

Economy, Confidence and Expansion

SIR JOHN WILLISON.

No one who thinks can doubt that Canada, like other countries, has a difficult situation to face now the war is over. We must retain our population if we are to bear without excessive strain the great burden that the war will have laid upon us. But if we are wise and far-sighted we may enter through reconstruction into an era of national expansion and prosperity. Through the long war with France, Great Britain established her commercial supremacy. With the close of the Civil War in the United States began the era of American industrial expansion. The war of 1870 laid a load upon France which stimulated her people to thrift, industry and scientific utilization of her raw materials. Necessity drives nations as it drives individuals to greater economy and exertion. Few countries have such rich natural resources as we have in Canada or such areas of fertile land. We may have trade preferences in British markets and probably priority of raw materials for the industries of the Empire. Doubtless, too, we shall have an Imperial organization of shipping which will give us advantageous connections with British and foreign markets. We have a great railway system built with cheap money which may prove to be a greater asset than we would now admit. It is legitimate that the natural resources of Canada should be developed in the national interest and that processes of manufacture should be carried to completion in Canadian factories. Too often we confuse loyalty to Great Britain with loyalty to the Empire. An industry in Canada or settlement in Canada is as valuable to the Empire as an industry or settlement elsewhere under the flag. If we ever doubted this the war was a complete and final demonstration. During the first years of peace we may have little immigration from the Old World owing to the congestion of shipping, but we shall have continuous immigration in greater or lesser degree from the United States. It will be necessary to adjust immigration to conditions and with greater regard to national cohesion and national character. But the land will bring people as raw materials of manufacture will bring industries if we make the national welfare the supreme concern in legislation. We must not forget that now the war is over the United States will have a great commercial fleet and industries organized for export trade, not inferior to those of any other country. We, too, must continue to build ships and organize our industries for greater and cheaper production. We must also as never before resist public waste and extravagance. It is my judgment that in the last 20 years we have wasted \$500,000,000 of public money in Canada. If waste was censurable before the war, it is criminal after the war. But in a free country only a stern, active, energetic public opinion ensures economy in public expenditures. But primarily and chiefly we must organize to re-establish the soldiers in civil pursuits, to improve our position in world markets, to ensure that factories will not be idle and labor unemployed now that peace has come, to stimulate agriculture by generous public support and the creation or expansion of industries closely related to production, and to maintain satisfactory relations between employers and employed. It is idle to deny that we face tasks of tremendous magnitude, but with organization, courage and confidence and undeviating devotion to the common national interest we can repair the ravages of war, reconstruct our industrial system, and build upon stable foundations a greater and happier Canada.

We have shed much blood and spent much treasure to restore freedom in the Old World and maintain it in the New. To those who come back to us maimed and broken we have an eternal obligation. If we cannot restore we must maintain. The soldier's widow and his orphan we must protect and cherish. I cannot think that the scale of pensions is yet adequate. Nor can I think that the people of Canada are yet fully conscious of the difficult problems which lie in the future. It is altogether desirable that soldiers who will go upon the land should be assisted to establish themselves. But they cannot be subjected to restraint or compulsion. For many of those who choose other avocations, many whose courses at college or university were interrupted in the natural time of preparation for the future, many of those of middle age whose businesses have been ruined and whose old

connections have been broken, we shall have to provide a system of credits in partial compensation for losses that never can be wholly repaired. Actual shortage of money will be one of their most serious handicaps. Thus far the necessity for financial assistance has been recognized only in the agricultural programmes of the various Provinces and the land settlement proposals of the Federal Government. But the extension of substantial credits on easy terms to war veterans is necessary if re-establishment is to be successfully accomplished, and is an obligation upon the Dominion which, in justice to its soldiers, it cannot ignore. We will meet the test of peace far less nobly than we met the test of war if those who seek employment seek in vain; if we fail in adequate preparation for the conditions and problems which we cannot escape now peace is restored. One feels the necessity for counsels of patience and prudence, for generous dealing with those who have ennobled Canada on many a bloody field, for energy and integrity in public administration, and that high respect for public faith and public order which so peculiarly and honorably distinguishes the Empire to which we belong. As we listen we still seem to hear across the sea the whispers of those who died, but there is now to be peace and rejoicing and for the long future free men, free seas, a free world. If we are courageous, united and confident, we shall not shame those who have kept us in honor and security by endurance, sacrifice and valour as sublime as ever was displayed in human history. "Jerusalem is builded as a city that is compact together."

HOUSES ONLY HOMES WHEN THEY ARE SAFE.

A home should be a safety centre—a sanctuary for every member of the family that occupies it. Dangerous conditions, such as defective electric or gas fittings, insanitary plumbing, unprotected stairways, or stairways without railings, and which invite accidents, are lamentably common in our houses. In a survey of nearly 30,000 accidents in the city of Chicago covering a period of eleven years, it was found that over 51 per cent. were household accidents. These caused the death, or permanently crippled thousands of persons, and yet the citizens of North America claim to be a "home-loving people." A similar analysis of Canadian statistics would probably prove that Canada was no more successful in converting houses into homes. Faulty building construction, defective wiring and plumbing are pitifully common, and, in too many instances, are winked at by so-called building inspectors. Householders themselves use rocking-chairs for step-ladders, place kettles of boiling water so that small children can tumble into them, have unfastened rugs on highly polished, slippery floors, or fasten windows down to conserve heat at the expense of ventilation. These and similar practices cause the death, or result in crippling hundreds of Canadians every year. If houses and other dwellings were transformed into proper homes, these losses, which are truly national as well as individual, would be reduced to a minimum. But that little word "if" marks a gulf that it may require generations to bridge.

LET PUBLIC WORKS TAKE UP THE SLACK.

Each day that labor is unemployed there is an economic loss to the community. Every man not employed is either a public charge or an idle-producing unit, and since it is certain that return to peace basis will take some time, public works should absorb labor as fast as possible, even under conditions which might seem uneconomical on account of high wage scales and high prices of materials. Even if the public pays a greater price for public improvements, it prevents the economic loss due to idle man-power. If, to prevent unemployment, the army is demobilized slowly, the public pays for the maintenance of the soldiers. It would be better to demobilize as promptly as the military situation permits, increasing the amount of public work to such an extent as to prevent unemployment. Such a course would mean permanent and substantial returns for the money spent, whereas the maintenance of men in camp after the military necessity ceases is a dead loss.—Engineering News-Record, N.Y.

THE CANADIAN MUNICIPAL JOURNAL

SUBSCRIPTION RATES
 City of Montreal and United States \$2.25
 Canada, Great Britain and Countries in Postal Union \$2.00

Published Monthly by
The Canadian Municipal Journal Co., Limited
 FREDERICK WRIGHT Editor
 CORISTINE BUILDING, MONTREAL

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VOL. XV.

MONTREAL, JUNE, 1919.

No. 6

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A DOMINION INDUSTRIAL COUNCIL.

It is rumored that one of the recommendations of the Industrial Commission to the government will be for the appointment of an Industrial Council to enable capital and labor to get together for the free discussion of the present situation. It seems to us that such a council will not be complete unless there is an equal representation of the municipal councils as representing the communal life and social conditions of the country. The day is past when capital and labor had just each other and each self to consider. Both have a responsibility to the community or state and as Canada is a country of great distances, with varying local social and economic conditions — such conditions being best known to the local authorities — it is only reasonable to assume that no lasting equitable arrangement can be brought about in regard to the industrial situation in Canada without due consideration being given to the living conditions of ALL workers, and organized labor as such has never seriously taken up this phase of the question. As already pointed out in these pages none of the labor unions in Canada have ever taken part in or even studied the social, economic, educational or political life of the Dominion; their activities evidently being confined to wages and the working conditions of their own members. Due consideration then can only be given to the study of this most important phase of the industrial problem — the living conditions of the citizens — by municipal men who by reason of their being in daily touch with the people are specially qualified to act.

There is no doubt that the Industrial Commission itself would have been strengthened by the addition of a municipal representative, who would have been able to interpret many of the local causes of the industrial unrest much better than did the commission as constituted because of the limitation of its make-up. Time and time again was evidence given showing the varying of rates of wages in the different parts of the country, which unless locally analyzed would give a wrong impression of any given local situation. For instance, in some parts of the country while wages were less than in other parts the cost of living was less too, such local conditions being brought about largely by the local councils. It is hoped then that the government will realize that the *municipal councils* are a factor in the industrial life of Canada and that in any Dominion council that may be appointed to consider the question they, the *municipal councils*, will be fully represented.

The Revised Railway Act

By the small majority of four the House of Commons on June 4, after a full day's session in Committee of the whole, amended the Consolidated Railway Bill as it had left the Senate, so as to give back to the municipalities the right to control their own streets, etc., and protect themselves from the inroads of Federal charter exploiters. The vote, which was 56 to 52, not only shows by how narrow a margin the municipalities may retain their autonomy so far as Federal legislation or charters are concerned—that is, provided the Senate eventually accepts the amendment—but how few members voted; less than one-third. This is not as it should be. Every member of the House of Commons is sent to Ottawa primarily to represent the **public** interest of his constituency—some municipality, or just part of a municipality, or perhaps two or three municipalities. Yet fifty-six representatives only realized their duty to those who sent them to Parliament after listening to arguments in favor of the amending clause from the following members: Messrs. H. M. Mowat, who moved the amendment; W. D. Euler, W. F. Cockshutt, Ross, T. Foster, Dr. Sheard, Hocken, Bristol, Nickle, Cahill, F. Pardee, all of Ontario; Mr. Tweedie, of Calgary, and Mr. McQuarrie, of New Westminster, B.C. The members who spoke against the amendment were Messrs. Stevens (Vancouver), McKenzie, Murphy, Boys, Hon. Mr. Carvell, Hon. Dr. Reid, and Hon. Mr. Fielding; both latter members proposing a compromise.

The debate itself was particularly instructive to the lay mind as showing the peculiar attitude of some of our Federal legislators in the matter touching the fundamental principals of responsible government as applied to the community. The sacredness of private interests had evidently become a real thing with one or two of the speakers even at the expense of the rights of the citizens who had sent them to Ottawa; and all the members that spoke against the amendment did so on the assumption—we might almost say presumption—that the spirit of fair dealing with the public was just as safe, if not safer, in the hands of private corporations owning public utilities as the municipal councils. As a matter of fact if it had not been for the clauses in the present Railway Act protecting the municipalities from the action of corporate interests, and which were inserted after many a hard and bitter fight, municipal Canada would to-day be at the mercy of the **goodwill** of every franchise grabber who knew the art of lobbying at Ottawa. What is more, we do not know of a single public utility owned by private interests, but what has at some time during its existence tried, even with the above protective clauses inserted in its charter, to beat the local authorities in some way or other. Where is the spirit of fair dealing? Some typical examples of the spirit of dealing that animates the owners of public utilities were given during the debate under discussion, examples of greed and selfishness, and exploitation of the peoples interests, that should be held as a permanent warning to those who while supposedly guarding the peoples rights are inclined to "sleep at the switch."

The municipality principally interested in the present legislation, is the City of Toronto because of

its dispute with the Toronto and Niagara Power Company. Without the amending clause as passed by the Commons this company would have the right, and which it would undoubtedly take advantage of, to erect poles and string wires anywhere it wished in the City of Toronto without having to seek the permission of the Council. The company would have exactly the same power to do the same in any other municipality in Ontario, or even in Canada. Now Toronto has other views on this subject and therefore has the moral, and should have the legal, right to decide for itself in the matter, without interference from outside, even from the Dominion authorities. The amendment as passed by the Commons has not been accepted by the Senate, a body very jealous of its privileges, which will mean the destroying of municipal rights, for which so many long and arduous fights have been made, unless better counsel prevail. It is hoped that the Senate will see that it has a moral responsibility to the people, as well as to the corporate interests.

* * * * *

The mover of the amendment (Mr. Mowat, of Parkdale, Ont.), in his speech placed his finger on one of the difficulties of collective municipal opposition to Federal legislation that may affect them adversely when he said:—

"Where definitely the rights of the public, as represented by the municipalities, come into collision with the private, corporate rights of those in a certain business, it must, and always does, follow that the case of the municipalities, being so widely distributed and the interests so general, does not receive the attention which is given to the other side of the case by large corporations who keep a close watch on legislation as a matter of business. The public has little or no machinery by which to use its persuasive powers on members of Parliament or otherwise."

For many years the Union of Canadian Municipalities and this Journal have been preaching the gospel of closer union between the municipalities for common purposes, one of which being self-protection against such discriminate legislation as has just been proved by the Senate, but because of the ever-changing personnel of the Councils this need for close co-operation is too often not seen until too late. There never was such a time as now for every municipal council in Canada to get together for the common interests of all. There is a positive danger of all the work that has been done in the past for municipal Canada being destroyed by the apathy of those who are elected to look after the interests of the citizens. One municipality can do nothing by itself, but the 3,600 municipalities of Canada joined together can amply protect the rights not only of the people as a whole, but of the individual rights of the small municipality. Let us get together.

Mr. T. Linsey Crossley, A.M.E.I.C., who has been associated for a number of years with Dr. J. T. Donald, of Montreal, and who established the Toronto laboratory of J. T. Donald & Company, consulting chemists, has taken over the Toronto office and laboratory of that firm at 43 Scott Street, and will there carry on the business of consulting chemist and chemical engineer.

Mr. Crossley has specialized in municipal chemistry and the technology of pulp and paper manufacture.

The Winnipeg Strike

There was one phase of the Winnipeg strike that is of special interest to the local governing bodies, namely, the attempt made by the strikers to practically take over the administration of the city. This is Sovietism pure and simple. Naturally the attempt failed, and rightly so, and we congratulate Mayor Gray on the firm stand that he took on behalf of the citizens. What would have happened had the Mayor been a spineless leader can easily be imagined. Chaos would have reigned. When the strike committee attempted to determine the conditions under which food, water, gasoline and oil should be distributed it was trying to usurp the functions of the City Council, which alone can determine, and that only under special conditions, the distribution of food, etc. Such usurpation cannot be tolerated for a moment in a democracy like Canada, and the sooner this fact is realized by labour, whether it be organized or not, the better it will be for itself as a unit, and for its members as private citizens. The municipal council being elected by the people, must carry out its mandates, and no pressure from any self constituted body is strong enough to di-

vert the powers entrusted to the Council. If organized labour wants to take an active part in local administration, it must be by constitutional means, that is, through the polls.

Another phase of the strike that is also of interest to municipal administration was the attitude of the police. There is no doubt that their attitude was that of passive resistance so far as putting into practice their duty as guardians of law and order, and as such they were undependable. This phase brings up the very delicate question of the right of the police to form unions of their own, particularly bearing in mind that the principal weapon of organized labour is the strike. No one doubts for a moment the right of the police to organize for their own protection, but one does doubt their moral right, considering the conditions of their employment, to look sympathetically on the strikes of others to the extent of being undependable in their duty to the citizens who employ them for their protection. It is to be hoped that the Dominion Association of Police Chiefs will take up this question seriously at its Edmonton convention.

Public Retail Markets

One evening in May one of the lecture rooms of McGill University was given over to the study of Public Markets, and it is doubtful if that room had ever, in all the history of the famous seat of learning, been used to better purpose, even though it was just for a talk on retail marketing. The lecturer was Mr. G. B. Branch, of the Federal Bureau of Markets, Washington, D.C., who for five years had made a close study of the public markets in the United States and his lecture and his slides were full of information. More than that he gave his audience food for thought. He showed how location would make for success or failure, and how proper management paid; but above all, he showed the necessity of well appointed—not elaborate—public markets in the solving of high prices in foodstuffs. A further point that Mr. Branch made, and proved, was that Public Markets were an incentive to greater production in foodstuffs, particularly when the surrounding country was properly circularized with the right kind of advertising matter. In fact one could not help but be impressed with the thoroughness of the Washington Bureau of Markets—of which Mr. Branch is a product—in its investigations, particularly considering the limitation of its opportunities because of the comparative small number of public markets in the United States—less than 300. In Canada we are much better off in public market accommodation, that is, in the number of markets in proportion to the population, but our American friends are far ahead of us in studying up the possibility of the Public Market as a factor in the community life of the people.

As illustrative of the potentiality of the public market there are at least two instances of successful privately owned markets in the United States—successful because properly managed—in both of

which are overhead charges reduced to a minimum inasmuch as no telephones are allowed in the stalls and no dealer is allowed to deliver the goods bought. The delivery constitutes a separate department through which parcels can be delivered for 10 cents each. We hope in a future issue to publish a report of the investigations of the Washington Bureau with the hope that something of a practical nature may be done in Canada to make our public markets of real benefit to the citizens.

THE GOOD ROADS CONGRESS.

The Canadian Good Roads Congress which was recently held in Quebec was the most successful convention of its kind ever held in Canada. Eight of the provinces had government representatives and many of the municipalities sent their engineers, all of which goes to show the keen interest in the good roads movement by Provincial and Municipal Canada. Even the Dominion government sent its Commissioner through whom Federal aid to the extent of twenty million dollars was promised to the provinces. When the Dominion, Provincial and Municipal authorities' programmes have been carried out Canada will be one of the best roaded countries in the world, not even excepting Europe, though the countries there have been many centuries building roads. For this proud position we have much to thank the Canadian Good Roads' Association which under its old name, the Dominion Good Roads' Association, did such splendid pioneer work in educating the people of Canada to the advantages of well built roads and the fact of its last convention being the success that it was is still further encouragement to the executive to carry on the good work.

EQUITIES MAKE VALUES.

We are informed by one of our financial contemporaries that "Equities make values." They surely do, as instanced in the increased value of Bell Telephone stock, when the Railway Board empowered the company to increase its rates by 10 per cent., in spite of the strong protests of the municipal councils and the Union of Canadian Municipalities. In other words, the Railway Board simply handed to the Bell Telephone Company a large equity at the expense of the public. We find, too, that many of the privately owned utility companies have increased the value of their stocks by equities of the same nature—increased rates and fares. The pity of it is that they get away with it so easy.

HIGH COST OF LIVING COMMITTEE.

The House of Commons has appointed a special Committee to inquire into the cost of foodstuffs, clothing, fuel and other necessities of life. Such a committee ought to have been appointed long ago, but even late as it is there is no reason why it should not do good work in bringing to light some of the reasons, and excuses, for the high prices of every necessity of life. Much valuable evidence has already been given, most of which shows the excessive profits made by the middleman. In clothing alone the evidence proved that in many instances the middleman's margin was greater than the whole amount that went to the farmer, manufacturer and laborer. And no doubt the same reason will be given for the cost of many of our commodities. But assuming that the principal reason for the high prices is the excessive margin between the producer and the consumer, what is the remedy? So far as our observations go we would say that the only remedy is control of prices, starting with the retailer as being the one in touch with the public, and working back to the grower or producer. But such control must be real control which so far as we can see can only be made possible by the closest co-operation between the Federal and Municipal authorities. There is at the present moment an Order-in-Council delegating certain powers to the Municipal councils in the matter, but these powers are limited and indefinite and therefore unsatisfactory. The consequence is nothing has been done and nothing is likely to be done under the present arrangements. We would suggest that the Committee take up this phase of the question as a possible solution of the problem.

QUEBEC'S FOREST WEALTH.

Ottawa, May 31, 1919.

The Editor:—

We notice in your May issue a paragraph claiming that Quebec's forest wealth is in excess of that of British Columbia. There must be some error in connection with this item. We believe that you have confused the forest area with timber contents on such area. It may be quite true that Quebec possesses 130 million acres of forest land, while British Columbia has 100 million acres, but the average stand per acre in British Columbia is very much higher than that of Quebec. As a matter of fact, British Columbia contains to-day approximately one half the total timber stand of the whole of Canada. This differs quite radically from the statement in your issue that "Quebec has 30 per cent more timber than British Columbia."

Yours very truly,
ROBSON BLACK,
Secretary.

INVITATION TO MAYORS.

The Cost of Living Committee of the House of Commons has passed the following resolutions:

"That, with a view to assisting this Committee, we request the Mayors of the following cities, viz.: Halifax, St. John, Quebec, Montreal, Toronto, Hamilton, Fort William, Port Arthur, Winnipeg, Regina, Calgary, Edmonton, Vancouver and Victoria, to form a committee consisting of the presidents of the Boards of Trade, presidents of the Trades and Labor Councils, presidents of G.W.V.A., and two representatives of women's organizations, or such persons as the foregoing organizations may appoint.

"Such committees to ascertain the base cost to importer or manufacturer of following staple articles: boots and shoes, ordinary articles of clothing, meats and meat products of packing companies, fresh and cured, flour and cereals, coal, silk, and bread; also average rentals for residents of working classes; also average general rate of bank interest on commercial paper, also the ultimate retail prices charged in ordinary retail stores, to consumers, delivered, of such articles.

"That the above committee be asked to perform the above duties as an emergency public service, to assist the committee in its work.

"That the object is to find out the spread between the original producer of common articles of necessities of life, and the price charged the consumer. That these committees be asked to report as early as possible on these items, and to furnish subsequently such other information as they may desire."

FOREST FIRES.

Quebec, June 2, 1919.

Dear Sir,—Since we have had dry weather that, if continued for some time, may be a cause of damages to our forests, I would be greatly obliged if you would kindly call the attention of your readers to the great necessity that exists for them to be extremely careful, when they have to travel in and near the forest, to take the necessary precautions to properly extinguish their camp fires, to watch their pipes, etc.

For the same reason the settlers who must kindle their clearings should remember that they are under obligation to request, beforehand, a permit to do so, and also thoroughly clean the surroundings of the brush pile so as to prevent the fire to escape from their control and attack the adjoining green timber. Furthermore, they are compelled by the law to watch or have watched the combustion so as to prevent any danger of conflagration.

Thanking you in anticipation for the help you will give us in this occasion, I remain,

Yours very truly,

J. PICHE,
Chief of the Forest Service,
Province of Quebec.

THE NATIONAL MUNICIPAL REVIEW.

With the May issue of the National Municipal Review, published by the National Municipal League, from its headquarters in Philadelphia, the magazine becomes a monthly instead of a bi-monthly, as heretofore. This welcome change is made because of the increasing importance and interest of the Review, and in response to a wide-spread demand. As a magazine for everyone interested in good municipal government the National Municipal Review has achieved an illustrious record during the seven years of its existence, and has numbered among its contributors practically all the foremost specialists in municipal government.

The National Municipal Review enjoys a unique position in the United States, even among periodicals, giving special attention to municipal affairs, in that it has maintained a remarkable leadership in progressive municipal reforms. It is to-day formulating and discussing the ideals which the general public will be considering five years' hence, and adopting in a decade. A search in a library for reference on any current municipal topic usually shows that the earliest article on the subject was published by the National Municipal League, and that the latest and most complete evidence is also among the League's publications. The Review is therefore invaluable to all who are concerned in American municipal government.

Your Place in Repatriation

All Canada's sacrifice in blood and service will have been in vain if out of the turmoil men have not come to a realization of the fact that we are every one his brother's keeper.

The old selfish attitude of "let George do it" must find no place in this new era of re-construction. There is a task for every hand to do; a vision of work for each to catch, and your part in Repatriation as an individual only commences where the plans of the Government leave off.

Organizations, municipalities, churches, employers and individuals, all working towards the one end was the ideal of the Repatriation Committee, which has been steadily urged upon platforms and through the spirit of the press during the past twelve months.

From end to end of Canada the gospel of Repatriation has been preached, and it is now up to the man in the street to go out and live up to the ideal. As far as the Government is concerned its scheme of Repatriation deals with the return of our fighting men to civilian life, medical care, pensions, vocational training, the establishment of employment offices, and refitting the returning man in every way after his demobilization, from pensions and artificial limbs to re-education, establishing his home, and finally finding him a job.

Over and above these tasks there are many others, which can only be carried on through the co-operation, good will, and energy of the individual—the employer, the municipality, the churches, and all organizations dealing with human factors.

Home is the central idea of Repatriation. The boys are coming home. Home is being prepared for their coming. The people saw a vision during the war and that vision is a Canada made fit for the returning men, who have achieved such resplendent glory at the front for their country and themselves.

Repatriation is an attempt to make tangible that vision. It asks whether or not Canada is ready to receive the returning men. Is Canada able to give them the opportunities for employment commensurate with their services? Is Canada organized to make use of the energies, the courage and the ambitions of the returning men? Have the returning men grown too big for Canada, as she was, and is Canada to-day capable of measuring up to their needs and their ideals?

The men who went over the top faced a thousand deaths and in exaltation overcame death by the mere fact of seeing beyond it. Death has no fears for them. But it may be that they are more fearful of the monotony of the task of living.

Thus, repatriation suggests a house-cleaning on the part of Canada, against the home-coming of the returning men. Canada has to take stock of her possessions and her equipment in the light of what will be required of Canada by them.

Old things have passed away and, behold, all things are become new. This is what has come to pass in Canada. The dawn of a new era has come. Canada cannot go back to the old conditions, if she would, and she ought not, if she could.

Definite events mark the culmination of every struggle for some particular goal in the world's journey to proper ruling. Immediately following the event comes the necessity for stabilization, in order that the goal attained be not lost. Canada must not lose the opportunity of obtaining for succeeding generations working and living conditions which will guarantee proper development for the people.

The scientific placement of men in positions, the right man in the right job; the improvement of living conditions by establishing a standard of working men's houses; the care of those disabled by the war, which will make them self-supporting; the employers' realization of their true relation to their employees; more wisdom in education; a greater brotherhood in our social reactions. All these things are rendered possible because the war has "set a tide running in the hearts of men," which is without parallel in history. These things are being done and the vision seen during the war will not be forgotten, and the anguish, the pain, and the death will bear fruit in the mitigation of sorrow, because they have not been in vain.

Repatriation is more than transportation. It includes the establishment in civil life of all returning men who have sacrificed their positions to go to the front. It puts upon the Government and the citizens of Canada the necessity of insuring adequate opportunities for all returning men to do better than to take up life where they left it off. Repatriation is a social and industrial task, which will never be solved until the returning men feel that the opportunities for advancement which were within their grasp when they went to the front are returned to them.

When it can be said that no citizen who took up arms lost ground in the struggle for existence; that no widow or child of a fallen soldier has been bereft of the opportunity to live in comfort, and to obtain the education that would have been certain but for the sacrifice of a soldier's life; when positions of responsibility throughout Canada are as free to the returning men as to those who did not go overseas, then Repatriation will have been accomplished.

Repatriation is the biggest task Canada ever undertook. It is not a thing for an hour, but it is forever. It is a national stock-taking. The Government has prepared the machinery to receive the returning men and fit them back to civil life, but the persistent co-operation of the people of Canada is necessary if Repatriation is to be a success.

Mr. Citizen, what are you doing about it?

MUNICIPAL ICE PLANTS.

Twenty cities in Kansas have asked the state legislature for a bill permitting cities to purchase or build, and operate, municipal ice plants. The proposed bill has the unanimous endorsement of the League of Kansas Municipalities.

The movement receives a great deal of encouragement from the experience of the city of Weatherford, Okla. Weatherford has a municipal ice plant, and, according to an official report, is producing ice at a cost of 50 cents a ton. This is delivered to the door at 25 cents a hundred pounds, and the city is realizing a handsome profit. In Kansas the minimum rate for ice sold by private concerns is 40 cents a hundred pounds, and in some cities consumers are paying a cent a pound.

GIVE KIDDIES A CHANCE.

Every baby should have a fair fighting chance to survive the first year of life undamaged.

At present one baby in every ten dies before its first birthday, and more still die before they are born, but terrible as is this waste of valuable young life, the child damage rate is an even greater menace to the country.

Two-thirds of the children who attain school age are found to be suffering from preventable physical defects which entail suffering to them in the struggle for life.

The National Service figures show that 40 per cent. of the male adult population are classed as C 3, and there is evidence to show that the statistics of the female population are closely similar.

The waste of life and this damage rate could be largely prevented.

At least half of these baby lives could be saved and made worth living—if we cared enough; if we, parents, doctors, teachers and all citizens, worked together to give the children a better chance.

Decide now that you will take some direct share in the campaign for saving the babies.

Give your own children every chance to grow up healthy citizens by ensuring that your home is healthy.

Dust and refuse should be burnt, flies destroyed, your rooms flushed with fresh air day and night, and your children supplied with regular meals of well-cooked, wholesome food and allowed ample sleep.

Take an interest in the children of your neighbourhood.

Get all the information you can about Baby Welfare. Visit the nearest Mothers' and Babies' Club or Infant Welfare Centre and offer your help to the committee.

Help to cultivate local public opinion in support of Maternity and Child Welfare work.

Ask at the Town Hall or the offices of the Health or Sanitary Authority for information about Child Welfare work in your district.—Bulletin, National Baby Week Council.

The Old and The New

The HON. WALTER MITCHELL, K.C.

Provincial Treasurer and Minister of Municipal Affairs for the Province of Quebec.

THE OLD. "Old Quebec" was "New France" in the bygone days, prior to the historic thirteenth of September, 1759, when Brigadier-General Wolfe, at the head of an expedition against Quebec, defeated the French on the Heights of Abraham, and died in the hour of victory. The last act of Montcalm, the French Governor of Canada—who also lost his life on the Heights of Abraham on that memorable September day—was to write the British commander: "The humanity of the English sets my mind at peace concerning the fate of the French prisoners and the Canadians."

Montreal surrendered in 1760, and by the Treaty of Paris, Canada became a British possession in 1763.

Subsequent to the Treaty of Paris, most of the French nobles and military men—both officers and rank and file—and many of the richer merchants, returned to France, leaving the trappers, coureurs de bois, or voyageurs, as the pioneers or explorers were variously termed, a few seigneurs, and the habitants.

Those sturdy pioneers of old were great men. The greatest of them all, perhaps, was Champlain, in honor of whom Lake Champlain—discovered by Jean Nicolet, in 1634—was named. Brebeuf and Chaumonot discovered Lake Erie in 1640; Lake Superior was located by De Grosseilliers in 1659; the Hudson's Bay Territory was discovered by Father Albnel in 1671, and the Mississippi by Nicolet in 1673, fifty years before that intrepid explorer, Father Hennepin, first set eyes on the world-renowned Niagara Falls, and Pierre Gaultier, in 1733, in the days when western Canada was practically an unknown wilderness, was the first white man to climb the Rockies: Walt Whitman, maybe, had these very worthies in mind when he wrote:—

Have the elder races halted?
Do they droop and end their lesson, wearied over there beyond the seas?

We take up the task eternal, and the burden, and the lesson,

Pioneers! O pioneers!

All the past we leave behind,
We debouch upon a newer, mightier world, varied world,
Fresh and strong the world we seize, world of labor and the march,

Pioneers! O pioneers!

We detachments steady throwing,
Down the edges, through the passes, up the mountains steep,
Conquering, holding, daring, venturing as we go the unknown ways,

Pioneers! O pioneers!

We primeval forests felling,
We the rivers stemming, vexing we and piercing deep the mines within,

We the surface broad surveying, we the virgin soil upheaving,

Pioneers! O pioneers!

To recount the fighting between the French-Canadians and the various Indian tribes who were constantly attacking them in the early days, would fill a volume.

The habitants, or small farmers, who, perhaps, composed the greater part of the "settler" population of that day, were the men who really colonized Quebec and cultivated the land. In those far-off days before railways were dreamed of, the highways were the rivers, and transportation was by canoe. It was for this reason that the farms generally had narrow waterfronts, and reached a mile back from the river. Behind these mile strips were forests illimitable. To this day, practically little beyond the river-fronts has been peopled.

THE NEW. In the statement of the revenue and expenditure of the Province of Quebec for the fiscal year 1915-1916 it was shown that the ordinary income of \$9,597,000 had sufficed to provide for all the outlays of the Government on administrative services, for certain special charges not liable to recur, and for nearly \$700,000 voted for patriotic works necessitated by the war. There was still a balance to the good to carry forward. No special taxation had been levied to meet unusual conditions caused by the war. The expansion of the revenue that made such a state of affairs possible was chiefly the result of the growing population and expanding trade interests of the province. (This article was written two years ago. Later budgets show even better results.—Editor.)

Perhaps the people of Quebec do not advertise their province as well as they might. It is only when the census figures are given to the public once in ten years that its right to be called one of the progressive members of the Confederation family is made clear. The records of the twenty years show its standing. In 1891, Quebec had a population of 1,488,000. In 1911 the population numbered 2,003,232. The increase of 515,000 was greater than that of any other province in the same period. The conditions which produced such results between 1891 and 1911 are still operative.

Situated on the Atlantic seaboard, with the wide and deep channel of the St. Lawrence navigable for the larger class of ocean steamships, the business houses of its cities serve the trade of practically all Canada, and when prosperity rules anywhere some of the advantage comes to Quebec. Its resources are varied and staple. Its farms, its forests, its fisheries, and its minerals, show a steadily increasing production. In the matter of water-power it is rich, probably beyond any region of its area in North America. The St. Lawrence River, the Ottawa River, and its tributaries, the St. Maurice, the St. Francis, and many streams have been harnessed for the production of electric power, to serve the industrial, transportation, and domestic needs of the community. Montreal is one of the largest users of water-produced electric current in the world; some of its growth in recent years has been due to the development of power plants within an area of a hundred miles, and the application of electric energy to industrial service. Montreal's experience is being repeated in varying degrees by other cities throughout the province.

The development of electric power has been on sound lines. No money of the province per se has been invested, and no pledge of provincial credit required. The government has, with the sanction of the Legislature, adopted a policy of leasing power sites on reasonable terms, and private enterprise assumes all further responsibility. The good results are widespread. In four years Three Rivers has increased in population from 13,000 to 19,000; Hull from 18,000 to 22,000; Sherbrooke from 16,000 to 19,000; Thetford Mines from 3,250 to 7,000, Jonquieres from 2,300 to 4,200; Grand Mere from 4,200 to 6,500. These are typical instances. They indicate a general growth that neither creates, nor suffers from, booms.

Quebec's leading industries, with few exceptions, represent the production of articles of everyday use, the consumption of which is least affected by untoward trade conditions. The census of manufacturers shows this province to be in the forefront in the production of pulp and paper, of cotton fabrics, of boots and shoes, of sugar, and of railway rolling stock. In most of these, large investments of capital are required, and Quebec has been fortunate in having men of enterprise ready to take the necessary risks of the business in which they are concerned, and by their own endeavors to win success. The province has been fortunate also in the intelligence industry, and fair spirit shown by its workers in their relations with employers. This phase, which has been noted elsewhere than in Canada, is in keeping with the general attitude of the people towards commercial enterprise, and is a beneficial factor in the general situation.

Quebec, in the matter of agriculture, shows excellent progress. The census records are proof. In 1901 the land

THE OLD AND THE NEW.—Continued.

In farms was put at 14,444,000 acres. In 1911 it was 15,613,000 acres. The increase of 1,169,000 acres was at the rate of 8.09 per cent. In the matter of farm values, the growth was even more noteworthy. In 1901 the census record credited the province with farm property of all kinds of a value of \$436,076,000. By 1911 this had grown to \$787,076,000. The increase of \$351,677,000 was equal to 80.65 per cent. The growth was in all divisions, land, buildings, implements, and live stock. Such growth is the result of intelligently applied industry. It means increase in the capacity for creating wealth and in the amount of created wealth, and is also a strong sustaining force behind the general trade of the province. It is interesting to note the comparative smallness of the extent to which farms are mortgaged. The profits made are available for farm improvement. Quebec farmers are also learning the value of co-operation. Some, without any aid from outside, have established co-operative banks; some have applied co-operative principles to the sale of wool and other articles of produce. In the dairy branch, in which Quebec products have a high reputation, co-operation has long been the rule. This advance in agriculture, with industrial expansion noted, has had its effect on general trade. The number of branch banks in Quebec has been increasing even at a time when banks were inclined to avoid any extension that looked at all likely to unduly increase their expenditures. In the year 1915 there were opened in Quebec 119 branch banks, while only 25 were closed.

The general progress of the province is aided by a system of technical instruction. The farmers of the province have the advantage of the great Macdonald Agricultural College at Ste. Anne's, where there is at their command the knowledge and experience of a highly capable staff of experts in every branch of husbandry, whose work is appreciated even beyond Canada. There are also agricultural schools at Oka, and at Ste. Anne de la Pocataire, where technical knowledge that helps to the improvement of farm practice is made available for all concerned. At St. Hyacinthe a dairy school has been doing useful work for years. All this makes for solid and permanent growth.

There has been lately put in operation at Montreal the largest technical school in Canada, where young men are instructed in the principles and details of the crafts they have chosen to follow as a means of livelihood. In the city of Quebec is a like institution. Their work, which is in continuation of that long carried on in a smaller way, is having its effect in increasing the skill and value of those who follow the mechanical arts, an advantage of permanent value to the people. There is also in Montreal a school for advanced commercial studies, where pupils are instructed in all that makes for efficiency in the management of business affairs.

Conservation work has been appreciated at its full worth in Quebec. The forests, whether owned by the province, or by private interests, are protected by laws designed to save them from wasteful exploitation or needless danger. Extensive works have been designed to maintain the needed volume of water in the streams for power or navigation purposes. The fisheries are carried on under regulations designed to prevent depletion of the waters.

Allied to the work of conservation is the development of a system of good roads. The government builds some roads, and is liberal in the assistance it gives to municipalities in regard to others. Up to the close of 1915, under authority of an Act passed in 1912, \$8,162,000 was advanced to municipalities, while direct payments for government constructed roads amounted to \$4,137,000. The result is noted in a general improvement in the conditions of the main thoroughfares for vehicular travel. This road improvement work is the only occasion for recent borrowings by the province; and both interest and sinking fund for redemption of the loans are being provided for without any increase in taxation.

What is thus outlined speaks for itself. The progress of the province has been on sound lines. The more people there are in the country, the greater will be the

SELECTING MEMORIALS.

Man has always been a maker of memorials. His desire to be so is a manifestation of his innate craving for immortality. From the very earliest times he has aspired to keep alive at least the memories of great men, or of great deeds, or of outstanding events. The Greatest of Teachers did not neglect this elemental phase of human character and one of the most beautiful services of the Christian church was founded as a memorial. With this end in view, too, men have created, often with a tremendous expenditure of labour, many different kinds of commemorative monuments. In most instances, these structures have long been of great historical value. The pyramids and obelisks of Egypt, the sculptured friezes and other forms of architecture of the Greeks and Romans and the altars erected by the ancient Israelites each and all proclaimed in unmistakable terms the character and spirit of the men who erected them, quite as much as they kept alive the memories of the objects they were designed to commemorate.

During the past six months, very much has been said and written about memorials that will most fittingly call to the mind of future generations the splendid deeds of sacrifice performed throughout the war. To do this in the fullest and noblest sense, the memorials should possess characteristics that will symbolize the spirit that animated the men who fought and died. It is left for those who sacrificed in a lesser degree, or sacrificed not at all, to determine how these characteristics are to be exemplified.

The greater number of the memorials so far suggested are designed with a view to their being of service to the communities in which they will be erected. The time when it was the custom to place bronze effigies of soldiers on granite pillars as an excuse for forgetting deeds of valour is happily past. At the same time, the building of hospitals, schools, halls, libraries, churches and other community institutions for memorial purposes should be more than expression of a materialistic age. Such institutions may be of deep and lasting service, or they may be merely utilitarian. Such structures can be memorials in any real sense only, if those who erect them have felt deep within them the spirit of service and have given adequate thought to the visible embodiment of that spirit. Further, there is a danger that these, of themselves, will in time lose their glamour. To prevent this, it will be desirable to hold patriotic festivals in them on the anniversaries of the great battles of the war in which special attention should be paid to the spirit of service as well as to the memory of men and women who transcribed their conception of service in terms of supreme sacrifice. It is essential that memorials, whatever their form, should convey something of the beauty and courage and love of country that inspired the heroic deeds. It is important that they should be well and truly built, so that centuries hence they will recall these deeds to men and women and create in them a desire to cherish the memories of those who died in a titanic struggle for human freedom. In any case, it should be realized that future generations will be in a position to judge with unflinching accuracy whether the motives that prompted the building of the memorials were worthy ones or merely shame.—A. D.

stady demand for the main products of its forests, its fisheries, its mines, its farms, and its factories. Its development has been along lines which are least affected by commercial disturbances. It passed through the first year of the war, when trade conditions were least satisfactory, without being compelled to resort to unusual legislation, to new taxation, or to special borrowing. Its financial institutions are able to care for any sound enterprise, no matter how large, that has good men behind it. Its cities have excellent means of communication with all parts of the country and with the outside world. It has people of knowledge, courage, and enterprise behind its mercantile and industrial institutions. Quebec can look forward to the future with confidence, irrespective of any conditions that may temporarily prevail.

The City and Reconstruction

R. O. WYNNE ROBERTS, C.E.

You were good enough to invite me to discuss the question of the City and Reconstruction, and I, in a moment of mental hastiness, promised to comply. But reconstruction is a subject that is receiving such attention in sermons, addresses, speeches and papers I fear my observations will have but little weight, compared with those made by prominent public men. Furthermore, it has been somewhat difficult of late to concentrate my thoughts on the matter allotted to me. I must, therefore, hope the readers will grant me their indulgence.

The President of the United States a year ago issued an executive order by which the U. S. National Research Council are authorized to study reconstruction problems. This Council has defined reconstruction, and so far as our subject is concerned, the definition means the rebuilding on normal peace lines of the activities, mental and physical, which prevailed before the war, with such improvement or advance in ideals, methods and machinery as may have been made possible by recent experience. It means the intelligent planning and execution of plans for a better community. The British Ministry of Reconstruction has issued a series of pamphlets, one of which states that "reconstruction" does not mean simply a return to pre-war conditions. On the contrary it has to give shape and satisfaction to the strong feeling which has arisen in all sections of the community, among men and women "of the most widely differing opinions and outlook that there is very much to be ashamed of when we look back to the conditions of July, 1914, and that out of justice to the living and out of reverence to the dead, we are called to rebuild the national life on a better and more enduring foundation."

We do not know in a personal manner what reconstruction means, because we have not experienced the tremendous social and commercial changes which have been unavoidable in European countries.

Reconstruction implies that certain things have been confused or destroyed, and when applied to Canadian cities it will be evident that my topic is somewhat obscure, because our cities are apparently normal, despite the world war. Indeed, it may be stated that the war seems to have induced a period of considerable material prosperity in Canada. We are told that a fabulous number of shells and other articles of destruction have been manufactured here, and that employment was found for a vast number of men and women. Superficially this would appear to be a very desirable conditions of affairs, but when we consider the matter more closely, I think we will find the situation to be confused, and the old fabric of civic development in need of reconstruction. Almost everything that was non-essential for the successful prosecution of the war was in a state of suspense, and even worse, for no community can remain in a state of stagnation without suffering in one form or another. The war has severely shaken the superstructure of modern civilization, which we innocently thought was unassailable. We see how barbarous savagery made more diabolical by subverted scientific ingenuity opened the floodgates of world-wide hostilities, which deluged our cities, towns and country places with misery, death and inexpressible sorrow. We believe that the war was the product of the disordered national mind of the Central Powers brought about by fifty years or so of grossly perverted education and ambitious political propaganda conceived, nurtured and foisted on the people by those in authority. We fought the brute forces of the enemy in the full belief that sacrifices which we were called upon to make will soon herald a new period when democracy will be firmly established, and peace, founded upon truth and justice, will be declared, and the comity of nations will be constituted on accepted principles of righteousness and amity. Whilst we may believe all this, we must remember that what applies to nations also applies to communities and persons. Brute force had to be used to meet brute force, but this is now ended, and man can once more resort to more reasonable methods of adjusting matters. Whilst the war was the most calamitous event of the time, we must not forget that unrest in many branches of human activity was very evident prior to 1915, and seemed to be drifting towards a dangerous climax. But by virtue of the war such unrest was overshadowed, and more or less stifled, although the cause

has not been removed. Are we to-day better able to meet it by scientific consideration and treatment? Are we ready to grapple with the many problems which are already confronting us? Do we as citizens comprehend the duties and responsibilities that rest upon us in the task of reconstruction of the confused social structure produced by the war? Reconstruction involves almost every phase of communal developments, and I firmly believe that Hon. Dr. Cody was right when he recently declared that "the greatest factor in the reconstruction of Canada is the factor of education. This does not necessarily mean education such as is ordinarily imparted in schools and colleges and universities. It means "education in its broadest sense, the education which relates to the body, the mind and the soul, for no man or woman is really educated unless educated all round." Dr. Cody's interpretation is wide enough to include all phases of education.

Democratized Education.

Democratized education will mean equal opportunities for all students to acquire knowledge, and afterwards to apply it. We, however, know that children do not receive equal education, for those who are slow in absorbing knowledge are not encouraged like others, and are therefore permitted to lag behind. The system may be responsible for this. Then again, probably 90 per cent. of the children never proceed beyond the public schools. It would be instructive to know what proportion of the 90 per cent. receive guidance in the selection of work, and what opportunity is given them to develop special aptitude for particular works. This is exceedingly important, because many vocations offered to youths lead to blind alleys. The cost of living often renders it imperative for parents to send their children to work so as to help to relieve the severe stress induced by high cost of food, clothing and rent. Many a bright, intellectual youth is sacrificed, so far as his career is concerned, because he has no opportunity or inducement to complete his rudimentary education. This is a problem which has exercised the best minds of Britain, and no doubt is occupying the attention of many in Canada, but I think the situation here is in urgent need of comprehensive consideration.

Technical education is essential for the development not only of Canadian resources, but also of our city industries. We are sadly deficient in the provision of institutions which will give our youths a fair show in the great industrial democracy of our land. Here are a few technical schools, and these are patronized by our young men and women, but when we consider the variety of existing industries and much greater variety of new industries which are possible we are impressed with the urgency of the need of dominion-wide application of good sound technical training. The fundamental requirement of the future is to find means by which we may produce materials, machinery and goods to enable us to meet the debt which has been created by the war. This cannot be achieved without an organized effort to provide the trained men and women for the different work. The matter of education under the terms of the North American Act is a provincial one, but the problem of liquidating the national debt is a federal one. It seems a reasonable proposition that since reconstruction involves the conservation of our natural resources as a primordial condition, money spent upon technical education by a joint authority representing the provincial and the dominion governments would be the foundation of an excellent system to satisfy that condition.

The question of education has so far been discussed in its relation to children. What about the adults? We have in our cities a large number of residents who have come from all parts of the world. We have also a large section of French speaking Canadians. It is true that daily schools have been provided for the children of these peoples, and that the French speaking Canadians have high schools and universities. But is Canadian citizenship in its web and woof so woven together into one fabric that all classes and sects and communities are intertwined so as to constitute a magnificent national tapestry from which no part can be removed without destroy-

THE CITY AND RECONSTRUCTION.—Continued.

ing the whole? In other words are the non-English speaking people thoroughly assimilated so as to form integral parts of our national life? Every nationality represented in our cities possesses many excellent traits, the perpetuation of which should, in my opinion, be encouraged. Cardinal Mercier, the giant defender of Belgian rights in Belgium, and in defiance of Prussian violence an authority in that unfortunate land, makes mention in his powerful address on "Courage, my Brethren!" that "Pope Leo XIII expressly enjoined Catholic philosophers to profit by the thought and science of others, no matter where they found them."

The non-English speaking elements in Canadian cities have talents for poetry, song, art, science and other things which make life worth living, and Canada will benefit immensely when these attributes of different nationalities are given every rightful scope for development. Reconstruction in our cities will undoubtedly consist in the sympathetic education of its inhabitants and the creation of a fuller, broader and more fraternal intercourse between the various races, who have been invited into the great fields of Canada. We have two courses to follow in the assimilation of the races, namely, to heartily encourage the open evolution of the highest and best in their nature, or by disregarding their need to passively repress their natural instincts. The results will be desirable or undesirable, according to our attitude towards them. We know that lovely aromatic flowers develop best where the atmosphere is open, warm, soft and fresh, and we also know that dark, stagnant, stifling atmosphere is conducive to corruption. We are told that there is disloyalty in our midst; that liberty which is the corner stone of our national constitution is converted into license, and ill-use is made of the hospitality which has been provided. I am not in a position to deny or confirm this, but if it is true, it would tend to show that our process of assimilation has not been effectual. A survey of any of our cities will reveal the fact that there are many non-English speaking races dwelling in poor quarters, with inadequate facilities for participation in Canadian social life. They live as a separate community. They have but few chances to enjoy the civic provision of libraries, etc. They have newspapers and journals which may or may not be elevating in tone or educative in character. In general the atmosphere for the production of strong and vigorous citizenship among the adults cannot be claimed to be of the best. The fact, however, that many of the scholarships are won by children of the non-English speaking people is a fair indication that education is eagerly sought for and encouraged and this constitutes a good omen for the citizens of the future.

Reconstruction in relation to our cities might with advantage include some scheme of organized co-operation, in educative movements. Cultivation of music and art; beautification of homes, such as flower boxes for windows in congested areas; civic pageantry in which picturesque national costumes might be displayed; competitions in domestic economy; and many other forms of co-operative ideas would doubtless contribute to create a beneficial influence. The Massachusetts Commission on Immigration studied this subject, and the following extract from the Walpole Town Planning Committee report may be useful. "Pageants and Choral organizations which would include in their programme the folk songs of Europe, can afford opportunities for social intercourse, essentially of value to the entire community. An international arts and crafts exhibition for the display of the handicrafts of the various peoples that figure in the populations would make a direct appeal to their pride and tend to promote mutual respect and might develop latent and profitable talents."

The author of "After Victory" writes, "All things are possible if we have learned the lesson of the war, and its first lesson is the fundamental necessity of a strong united national ideal."

I think it will be conceded that there is ample room in our cities for a civic idealism possessing such dynamical morality that will some day result in a citizenship of the highest quality among all the inhabitants. The war was an inexorable educator, a rigorous disciplinarian, and if it has really made a permanent and spiritual impression on our collective minds it will have been a benefactor in disguise. Unless we believe, as an article of faith, that this is the case, then truly the war was a gigantic tragedy.

A CIVIC PLAN FOR STREET TREES.

B. R. MORTON, B.Sc.F., Dominion Forestry Branch;
Author of "Native Trees of Canada."

Every-Man-for-Himself Means a Hodge-Podge of Tree Planting—Expert Oversight Essential.

It is unfortunate that in so many of our Canadian towns and cities the work of caring for and planting of street trees is not systematically carried out. Instead of having a properly organized municipal shade tree department the work is too often left to the individual property owner with results which are far from satisfactory. The individual is perhaps not to blame for the results. He is spending time and money from which the public as a whole will benefit, but he is working without instructions.

A Treeless Town!

The value of shade trees to a town or city is inestimable. Well cared-for trees in the street and parks contribute immensely to civic pride and patriotism. They are one of the greatest aids to the attractiveness of a community. A treeless town cannot be beautiful although it possess many fine buildings. A street of plain tenement houses can be made attractive by the uniform planting of trees to break the harshness of the bare rows. Visitors to a city are impressed as much by the city's trees as by its buildings, and are influenced by them in deciding if the city is a desirable one in which to live. Trees are an asset, adding value to property. From the standpoint of health and comfort well shaded streets are desirable, for they modify the temperature on the hottest days by cutting off the direct rays of the sun.

A Street Tree Department.

To obtain the best results the work of planting and caring for the trees should be entrusted to a special department. This department should be responsible for the selection of suitable species and proper spacing as well as the protection and any necessary trimming and repairing that may be required. It is only where a street tree department exists and has control of all tree work along the public highway that stately, impressive, uniform results can be expected.

Where street planting is to be done the appearance of the street as a whole should be taken into consideration. This is not done when the work is left to the individual citizens. The average owner consults only his own taste in regard to species and spacing and concerns himself only with the section immediately in front of his property without regard to his neighbour's plans. An error that many owners fall into is the planting of too many trees on their frontage. They overlook the fact that trees which appear widely enough spaced when young may be much too crowded when grown to full size. Frequently property owners will space their trees closely when planting, with the intention of removing certain ones before they begin to crowd. When the time comes for cutting, however, the ownership of the property may have changed, and the new owner either lacks courage to do any cutting or does not feel himself under any obligation to do so. As a result, the trees grow up much too crowded and spoil the appearance of the street.

Helter-Skelter Planting.

Looking along a street on which the planting and care of its trees has been left to the individual property owner one finds within the distance of a few blocks a dozen or more species, all sizes and shapes. Desirable species are mixed with undesirable, some sections planted too close and others too far apart. Long stretches will not be planted at all. Many trees will be thinned too high and others branching so low that they interfere with pedestrians and vehicles passing beneath. Flourishing trees will be found intermingling with those in need of repair and rapidly dying for lack of attention. The whole street has an untidy appearance, and lacks the impressive beauty produced only by well-cared for trees, well selected and planted.

Look along some of your own streets and decide whether the attractiveness of your town cannot be improved.

The Union of Canadian Municipalities

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"THE CANADIAN MUNICIPAL JOURNAL"
Coristine Bldg., Montreal.

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G. S. WILSON, Assistant-Secretary,
Bureau of Information, Coristine Bldg.,
Montreal

Montreal, May 23, 1919.

HIS WORSHIP THE MAYOR AND COUNCIL:—

Dear Sirs,—

By the cordial invitation of His Worship Mayor Newman and City Council, the Annual Convention of the Union of Canadian Municipalities will be held in the **City of Kingston, Ont.**, on Tuesday, Wednesday and Thursday, August 12th, 13th and 14th.

You are earnestly invited to send one or more delegates to take an active part in the proceedings. Also to draft any resolution, or any municipal question you wish to be brought before the Convention.

The Union of Canadian Municipalities is **your parliament**. It is the only Dominion-wide organization through which a municipality can co-operate and exert its influence, and requires the united counsel of municipal men.

Serious experiences of this present parliamentary session have demonstrated this.

The High Cost of Living is the big vital question of to-day.

We propose to demand relief from the Federal Government by:—

- a. Control of Monopolies.
- b. Tariff Changes.
- c. Control of Cold Storage.
- d. Control of Commissions.
- e. Control of Profiteering.
- f. Control of Stock Manipulations.
- g. Protection of Consumer in Capital and Labor Agreements.

We want you to discuss with us—

The Responsibility of the Councils in the Regulation of:—

- a. Meat and Fish.
- b. Bread and Milk.
- c. Fuel.
- d. Housing.
- e. Prevention of Crime.
- f. Fire Inspection.

Come and Discuss also—

The Responsibility of the Citizen of Your Municipality, and Your Board of Trade, regarding:—

- a. Commercial Integrity.
- b. Frauds in Weights and Measures.
- c. Frauds in Packages.
- d. Frauds in Prices.
- e. Frauds in Adulterations.

Other Live Questions are:—

Undeveloped Water Powers in Quebec, Ontario and British Columbia.

The Returned Soldier.

War Memorials.

The Value of Bureaus of Municipal Affairs, some of them recently established, and all closely touching your interests.

Faithfully yours,

G. S. WILSON,

Asst. Sec.-Treas.

The official programme is now being prepared, and a copy will be sent you, with full particulars.

We would draw your attention to the enclosed editorial from *The Canadian Municipal Journal*, and ask you to read it conjunctly with this letter.

The editorial referred to is as follows:—

Canada is now in the birth pains of Reconstruction—a period of INDUSTRIAL UNREST, SOCIAL DISSATISFACTION and HIGH COST OF LIVING—and every municipality in the Dominion is affected. This means that each municipal council, as the elected representatives of the citizens, have a grave responsibility at this moment, and the question that must be asked by every mayor and alderman is—what is our duty in this crisis?

The difficulty is that so far as the responsibility of the municipal councils is concerned the issue is somewhat clouded. The Minister of Labour, in a communication, dated May 6, to the City Council of Montreal, states very clearly that under Order-in-Council, P. C. 3069, the responsibility of controlling prices rests largely with the local councils. The councils have so far ignored this Order-in-Council because they refuse to recognize a responsibility that most of them consider as essentially belonging to the Dominion authorities. In the meantime the abnormal prices of food, though the war is over, give no signs of coming down, while the preponderance of evidence now being given before the Industrial Commission shows that the high cost of commodities of life is the root of the industrial unrest of this country.

Whatever authority is legally responsible for the

control of food prices there is no doubt about the moral responsibility of the municipal councils to the citizens in seeing that everything possible is being done to ameliorate the present living conditions of their respective communities. It will not do to merely give the denial to the Minister of Labour. Today the citizens want something more definite.

If this then is the position the municipal councils cannot get together too quickly and find out exactly where they stand in this matter of the welfare of the people, and it is evidently with this idea in mind that the executive of the Union of Canadian Municipalities is arranging the programme for this year's convention. That is, the meeting will be a conference of municipal executives to remedy as far as possible the present *industrial unrest*, so far as it is affected by high prices in food.

It is proposed that the Minister of Labour be invited to meet the delegates and frankly discuss the situation, and no doubt the Minister will take advantage of the opportunity, but if anything of a really effectual nature is to be the outcome of the conference the representatives of the municipalities must be strong in numbers and in knowledge. There is then a special responsibility resting with our councils to send delegates to this year's conference—men who know the needs and conditions of each community. What is more, they should be instructed to take an active part in the proceedings.

National Reconstruction

Commissioner C. J. YORATH, Saskatoon.

(Continued from May issue.)

Why should we not plan the development of our transportation system so that the growth of unduly large cities with their attendant overcrowding and social evils can be avoided? By properly planning the transportation facilities, instead of, as has been the practice in the past, allowing them to grow up in a haphazard manner, we can not only provide for the proper and economic development of our national resources, but can properly locate our industrial centres so that they will be in proper relationship one with the other, and also with the sources of raw material and the markets for the finished products.

Why should we not plan our education, which is nation-wide in its benefit and not local or provincial, so that the highest standard can be uniform throughout the country and the cost equally distributed over all the people instead of leaving it, as at present, to be controlled by local financial conditions?

Why should we not plan for the proper housing of the working classes? It is true that the Dominion Government has recently voted \$25,000,000 for housing, but the conditions are such that it practically means, at present, a fund for building houses where there is a house shortage, but upon such terms that it is doubtful if those who are in most need will be benefited. The proper housing of the working classes is being recognized in Great Britain as the most important social reform, and large schemes are now being proceeded with in all parts of the country. Fittings are being standardized and the munition factories are being used for their manufacture. Proper housing is the first essential towards good health and a happy and contented people.

Why should we not plan our public works so that the unemployment curve can be reduced to a negligible quantity? In the past it has almost invariably happened that public works have been proceeded with at the same time that a large amount of private capital is being expended upon the erection of buildings, etc., thereby creating an unhealthy condition of employment, invariably followed by a period of unemployment.

If our public works, Dominion, Provincial and Local, were controlled so that a very much larger percentage of the work was carried out when private expenditures and enterprises have been curtailed, the amount of unemployment would be considerably reduced, if not entirely eliminated. Public expenditures should be controlled in such a way that they would have the same effect as a governor on a steam engine, i.e., by bringing social conditions into balance during periods of unusual fluctuations caused by the tightening up of private capital.

Why should we not plan for the election of our representatives to Parliament so that they will not be dependent upon any party machine whose funds are contributed by one particular section of the community, such as capitalists, financiers and manufacturers. If we are to have a free, democratic government, then provision must be made so that any man, no matter how poor he may be, can, if he so desires, be the people's representative in Parliament. To attain such a result, election expenses, including those of the candidates, would require to be limited, stringently controlled, and provided by the Nation.

When the war started the Allies were a disorganized force and before they could become victorious they had to become thoroughly organized under one command, to plan their course of action, and co-operation was required from all. If those conditions are necessary to ensure success in times of war, then they are equally necessary in times of peace.

For a nation to be successful in its development and to attain the happiness of its people, it must plan not only for its material development but also that its social conditions will be such as to create the co-operation of all the people.

Representative Government.

The nation must choose its builders! As it has done in the past?—or does the failure of the past and the problems of the future require new methods?

If Canada is to keep pace with the other nations of the world in the race for expansion and trade which will undoubtedly take place, and if we are to make our labor conditions as attractive as they undoubtedly will be made in the countries of Europe, then we must have as leaders

men of vision; men of sterling character, free from the ties of party; men of courage; and men who are leaders in all walks of life.

As Lloyd-George has truly said, "Party Government does not really make for improvement. It makes for interest, and with us now, it is folly. What we want now is the criticism of the expert, testing, suggesting, improving, and strengthening."

Instead of government of the people by the people for the people, it is government of the people by the politician for the politician. Before an election it is usually "we, the people," but once having become the representatives of the people, they become, under our party system, "we, the politicians."

One often hears our democratic government spoken of with pride, but a true democratic government is a representative government of all the people. Can anyone say that we have such a government to-day, or have ever had it in the past. Instead of representative government we have had government by misrepresentation.

In the Federal election of 1896, the Liberals polled less votes than the Conservatives throughout the country, yet that party had a majority in the House and, again, in 1911, although the Conservatives only polled 51 per cent of the total votes, the party had an overwhelming majority in the House.

In some of the Provincial elections, although the opposition party has polled a large percentage of the votes cast, it has not been represented by one single representative in the Legislature.

In Great Britain, in 1895, the Unionists, who were in a minority in the country, had a large majority in the House of Parliament, and this result was regarded as a crushing defeat for Mr. Gladstone's Home Rule Bill. What a change there might have been in Ireland to-day, and throughout the years of the war if our "Democratic Governments" were really representative of the people.

As a result of our method of election, the labor party, in this country, has been practically disfranchised. This condition of affairs does not conduce to good citizenship, and is producing very great discontent.

A government representing the labor party only, as in Australia, or a government representing agriculture only, will not give any more satisfaction than a government of capitalists.

What we want is a government representative of all parties, where the views and aspirations of all can be voiced and a more equitable form of legislation obtained. Such a government can be obtained if we amend our election laws so as to give all parties representation in proportion to their strength.

It behoves all who love their country and humanity, to sink sectional interests and animosities and pull all together for the common good.

The demand of the labor party that their conditions must be improved is supported by the King in a recent speech, when he said:

"We have to create a better Britain, to bestow more care on the health and well-being of the people, and to ameliorate further the conditions of labor."

May that sentiment find an echo in Canada, and instead of party government, may we have a Reform Government embodying all sections of the community. Then, and not till then, can we hope to secure that reconstruction in our national life which will not only secure the economical material development of the country, but also social conditions which will produce a happy and contented people.

HOUSING AND TOWN PLANNING LECTURES.

The Garden Cities and Town Planning Association of England during April organized a series of lectures at Oxford for men and women willing to devote part of their time to speaking and lecturing in their own districts on Housing and Town Planning, and for people likely to take an active part in Housing Schemes.

The Lectures were as follows:—"General Survey of the Problem"; "Powers and Duties of Local Authorities"; "The House Plan and Lay-out"; "The Rural Problem"; "How to Organize a Local Housing Movement"; "Planning from the Woman's Point of View"; "Communal Arrangements"; "The Garden City Principle"; "Town Planning"; "Public Utility Societies."

Fire Protection and Fire Prevention

ALCIDE CHAUSSE,* Hon. Sec., The Royal Architectural Institute of Canada.

The National Fire Protection Association, assembled in Chicago on May 9th-11th, 1918, for its 22nd meeting, again called attention to the unusual hazards to life and property created throughout America by the world war. These hazards demand the utmost vigilance and initiative not only from those in authority, but from the private citizens as well. Every individual should consider himself a fire warden of the nation at this critical time, and should equip himself to serve his country by safeguarding to the extent of his intelligence and ability every form of natural and created resource. The elimination of waste, at all times the duty of good citizenship, is at this moment our profoundest public and private responsibility.

In its warfare against the needless sacrifice of human lives and property by the fire the Association advocates the following measures:

1.—The adoption by municipalities of the Standard Building Code of the National Board of Fire Underwriters to the end that fire-resistive building construction may be encouraged, the use of inflammable roof coverings prohibited, adequate exit facilities from buildings assured, and interiors so designed and fire-stopped as to make easy the extinguishment of fires therein.

2.—The adoption by all states of minimum building requirements for the protection of State and County hospitals, schools, asylums, and similar institutions outside city limits and of small communities in which the establishment and enforcement of a building code is impracticable.

3.—The enactment by each state of the fire marshal law advocated by the Fire Marshal's Association of North America to the end that official investigation may be made of the causes of all fires, preventable fires may be eliminated by public education, and the crime of arson stamped out.

4.—The adoption of the Association's suggested ordinance providing for the systematic inspection of all buildings by city fire marshals or local firemen to insure the vigorous enforcement of rules for cleanliness, good housekeeping and the maintenance of safe and unobstructed exits, fire-fighting apparatus and other protective devices.

5.—The enactment of ordinances similar to that of Cleveland, Ohio, fixing the cost of extinguishing preventable fires upon citizens disregarding fire prevention orders, and a more general legal recognition of the common law principle of personal liability for damage resulting from fires due to carelessness or neglect.

6.—The wider general use of the automatic sprinkler as a fire extinguishing agent and life saver and the more general adoption of the fire division wall as an important life saving exit facility.

7.—A careful study of the technical surveys of cities made by the engineers of the Committee of Fire Prevention of the National Board of Fire Underwriters covering the items of water supplies, their adequacy and reliability, fire department efficiency, fire alarm systems and conflagration hazards, and of the possibility of co-operation among neighboring cities through mutual aid and the standardization of hose couplings.

8.—The adoption of the Association's suggested laws and ordinances for state and municipal regulation of the transportation, storage and use of inflammable liquids and explosives.

9.—The universal adoption and use of the safety match and legislation prohibiting in all parts of factories, industrial and mercantile buildings except in such fire-proof rooms as may be especially approved for the purpose by fire departments.

10.—The education of children and the public generally in careful habits regarding the use of fire.

11.—The co-ordination of all these activities through a central administrative officer or body of the state or city having primary jurisdiction, for the purpose of promoting uniformity of action and efficient co-operation.

In the furtherance of these objects the Association appeals for the co-operation of all citizens. It asks them to help in the dissemination of its valuable literature, and in the

use of the standards of fire protection so carefully worked out by its committees to the end that the lives and substance of our people shall not continue to be dissipated by a reckless and easily preventable waste.

The most complete and comprehensive building code ordinance for a city of 50,000 inhabitants is that of Davenport, Iowa. This ordinance passed in 1916, has recently been codified and published in book form by Ralph Graham, building commissioner of the city. The code has been arranged in a manner which brings credit to the compiler. All sections are carefully grouped and follow in logical sequence, and in addition a most complete index is provided. Ready accessibility to any part of a building code in which a prospective builder may be interested is most important. Such accessibility makes for a surer and a more satisfactory enforcement of the code itself.

Among the modern requirements of the Davenport code is that on roofing. The use of the wooden shingle roof on new buildings is prohibited over the entire city. The provision became effective July 1. No existing wooden shingle roof, if damaged more than 40 per cent., shall be repaired with other than approved roofing. By approved roofing is meant only that which bears the label of the Underwriters' Laboratories. Underwriters' Laboratories Class C roofing is permitted in the residence sections, but buildings in the fire limits and those outside, of certain occupancy and size must be covered by such material as would rank with Class A or B of the Underwriters' Laboratories specifications.

The code contains requirements for automatic sprinklers and for the storage and handling of explosives and inflammable liquids. All of the principal fire hazards which have been introduced into the cities within the last decade are recognized in the code. The regulations governing the construction of moving picture theatres, film exchanges, garages and dry cleaning establishments are complete in every detail. The enforcement of this ordinance in Davenport is sure to have a marked influence on the fire loss. The ordinance is one of the most advanced in the country for a city of 50,000 inhabitants in its recognition of fire dangers and the proper means of combating them.

A few years ago attendants at the annual convention of the International Association of Fire Engineers listened to an address on "Inspection of Theatre Scenery" in which it was proposed that the International Association should formulate certain standards which, if possible, were to be adopted by members and followed by them in their inspection work. It seems that this excellent proposal did not get beyond the discussion stage. According to the semi-annual report of Edward Steinigeweg, chief inspector of the Cincinnati Fire Department, to Chief Barney J. Houston, 704 pieces of theatre scenery were condemned in the first six months of 1917. Six hundred and forty-seven of these pieces were remedied and accepted upon re-inspection, while 57 pieces were ordered out of the theatres.

The wetting of scenery during changes would account for the necessity of doing some re-fire proofing, but for a small proportion only of that which it was found necessary to do to meet Cincinnati standards. The Cincinnati, New York and Chicago Fire Departments use stickers, which are pasted upon the scenery pieces to indicate that they are O. K. when they pass inspection. A piece of scenery which has passed inspection in New York or Chicago is in almost every instance satisfactory in Cincinnati unless the fire proofing of the scenery has been destroyed by water. This is as it should be.

The adoption of a minimum standard test for theatre scenery to be used by the leading cities throughout the country would materially facilitate this work among fire departments, would insure greater safety in theatres and would also bring about a more hearty co-operation with theatre property men. The necessity for condemning a large number of scenery pieces in a few towns is clear evidence that inspection in many others is lax, faulty or is based on different standards of safety.

*Excerpt taken from Mr. Chausse's report to American Society of Municipal Improvements.

The Municipalities and the Dominion's Resources

Latent in the mind of every thinking Canadian is the question—how will the Federal, Provincial and Municipal Governments meet their debts now that the war is over? It is easy to talk on platform or write in journal of the boundless resources of a vast Dominion, but it needs more than a magic word to transform your air, water or earth into products exchangeable for cash or credit.

Even if the signing of peace is already brightening the horizon, the Federal Government will have to meet a debt of say, two billion dollars, and the Provincial and Municipal debts will approach the billion mark. On January 1st, 1919, the approximate Public debt will stand at \$250 per head for every man, woman and child, as against \$43 in 1914. Add to these the Municipal and Provincial debts, and each unit of the population stands for not less than \$300 of the total liability. The present generation will have to pay interest on the above billions, and shoulder a part of the burden by contributing largely to a sinking fund. For the production of the wherewithal, the total of man and woman power cannot be more than five million.

Short of Bolshevistic methods that raze the social structure, taxation, direct and indirect, is the one means of raising money to meet a debt and carry on a government. As indirect taxation lies mainly in customs and excise, and the volume of imported goods regulates the income derived from customs and pays for an equivalent in exports, it is clear that any means of increasing exports will aid the country to pay its debts. Further, the credit balance of gold, while not directly a source of revenue, the government increases the percentage of power and taxable value to the taxpayers. This increase of purchasing power stimulates in turn a demand for imports and the increase in taxable value enlarges the source from which direct taxes such as those on income and inheritance can be drawn. It will be a knotty problem for the economist to raise the revenue with the least hindrance to production and to investment of capital, and every ounce of energy in the nation will be required to widen the field for taxation. What is the utmost we can do to avoid stagnation, loss of credit, and financial crisis now the war-drum throbs no longer and the stream of war orders ceases to flow?

Canada has land and water indeed with all that they imply—power, soil, minerals, flesh, fish and cereals. What she needs is capital and population—development of fields for home and foreign capital seeking sound investment and population growing not only in numbers, but in productive ability.

Everything then must be done to attract the settler and the capitalist and to aid in the efficiency of the productive effort. This is why the Dominion and Provincial Governments freely spend money and energy in surveys, in experimental farms, in fish hatcheries, in forestry, in search for minerals, in education, and in gratuitously spreading wide the knowledge of Canada's resources; were it not for governmental inspection and entomological research, for instance, the apple orchards of the east would be ruined by the "brown-tail," the "gipsy," and the "ermine" moths, and doubtless the fungus threatening the pine would already be beyond control.

The function of Municipal bodies—the centres of local activity—is to stimulate trade and attract and hold a population. In every live town of any size, there is a Board of Trade or Control caring for its interests as a manufacturing, marketing or tourist centre, alive to the importance of good roads, water supply and sewerage and not blind to the bonus accruing from order and beauty. How often has the destruction of a city proved to be its birthday?

The credit of a Municipality depends on the value of the assessment area, and on the productive expenditure of its revenue or loans; these in turn depend on the established industries, on the type of population, whether thrifty or shiftless, and on the business capabilities and intelligence of those in control.

The area of *laissez faire* is dead and buried, and now it is merely a question how far civic, provincial and federal control of light, power, heat, transportation and industry will extend. Wartime experience has proved that even in countries where individualism has been most marked, the public, working through their elected heads and expert servants, can organize, co-ordinate and de-

velop industries beyond the wildest dreams of the theorist. But this experience has, we will hope, made this equally plain—that modern or super-modern government has no room for anything except efficient or expert service. Leakage and loss of power will not suit post-bellum society. An intelligent democracy can equally steer clear of such a bureaucratic system as aided in the collapse of Russia, and of a condition under which "politics" and popular election deprive the nation of valuable experts in all departments.

Assuming, for the present, conditions under which wealth can be produced in excess of home needs, how will Canada fare in the competition for the Asiatic, African, West Indian, South American and European trade, on which the prosperity of a country with huge sources of raw material and power and with a sparse population must depend?

Geographically, her position is commanding. Taking Halifax and Vancouver as typical points of departure for the Atlantic and Pacific, Halifax has the advantage over New York of 538 miles in the distance to Liverpool, and is within less than a hundred miles equi-distant with New York from Capetown, Demerara, Rio de Janeiro and Montevideo. Though Great Britain has an advantage of about 400 miles in dealing with Captown, Halifax has an advantage of more than 1,500 miles in trade distance to Brazil and the Argentine. In the Pacific, Prince Rupert is nearer to Vladivostok than San Francisco is by more than 600 miles, and Vancouver and Prince Rupert are both nearer to Yokohama and Hong Kong by quite considerable distances. By the Panama Canal, Halifax is nearer than Sydney to Valparaiso by nearly 1,400 miles, and has a start of more than 300 over New Zealand.

Distances, however, are misleading except in connection with regular steamship lines. In ordinary times, Canada is linked with Great Britain by the Canadian Pacific, Cunard, White Star and other lines, with Italy and the Mediterranean, Holland and Northern Europe by several, by the Elder-Dempster with Africa, and by the Royal Mail with the West Indies and South America, while she has direct connection with Asia and Australasia by the Canadian Pacific Railway and other companies. Canada, too, is fast becoming a shipbuilding country, and use will be found now the war is over for the many bottoms now taking the water in the development of new or existing Canadian lines.

For the conveyance of goods from inland points to the Atlantic and Pacific, the trans-continental lines and the canals connecting the Soo with Montreal are a guarantee, to say nothing of the prospects of the Hudson Bay route when the last 92 miles of steel are laid; while along the 3,000 miles of the southern border of the Dominion, the outlets to the United States can take care of an indefinite expansion of reciprocal trade.

With so many markets available, the question next arises how can a population of seven or eight millions produce the quantity and quality of goods needed to capture the market.

Canada's specialties are in the main hard wheat, pulp, fish, dairy products, and nickel, and care will doubtless be taken to keep, as far as may be, the profit of milling, paper making, canning or refining in Canadian hands. Australia is crying for paper; the nickel of Canada, whose only rival is New Caledonia, is now being refined in Quebec instead of New Jersey, and that the foreign market for dairy products is unlimited may be illustrated by the fact that before the war it was profitable to collect the butter of Siberia and ship it from Riga to Britain. That this butter had to be sold as "Danish" points to the importance of a standard brand.

The widening of the area of agricultural production is vitally important to the Municipalities, especially in the West (for in rural areas their prosperity is proportionate to the number of settlers whose needs they supply. They will therefore second every effort to foster the system of Rural Credits and Co-operative industries. Without her thorough system of Rural Credits which turned even the sandy Baltic provinces into thriving agricultural lands, how could Germany have been fed at all? In Canada, it is true the settler is generally aided by the Provincial Governments, by banks and railroad corporations, but the system has suffered from want of uniformity, and an organized and standardized system is, as yet, in its infancy.

THE MUNICIPALITIES AND THE DOMINION'S RESOURCES.

—Continued.

The Co-operative movement is fortunately spreading; e.g., the associations in Saskatchewan in the past year have grown greatly in numbers and turnover; the fruit industry of British Columbia is prospering, and that of Nova Scotia continues to prosper under the influence of Fruit Growers' Associations, and the Grain Growers' Association is, of course, a household word.

Since it is clearly vital to the municipality that the area of land of which it is the centre should be used and occupied, anything that hinders the development of good farm land that is at present unoccupied and uncultivated has necessarily a detrimental effect. In their own and the national interests, the question has often arisen whether it is advisable to sandwich new settlers between already occupied lands or to form new settlements in outlying districts before the other districts are more fully populated. Moreover, it is undoubtedly to the economic advantage of an area that an established settler should be able to procure on reasonable terms idle land in close proximity to his own rather than that he attempt to wrest a higher yield from his present holding.

As important as the question of settlement is that of labour. In a province like Alberta, which is larger by 50,000 square miles than the German Empire in Europe, with not 4 per cent. of its population, are we to return to pre-war conditions and see crowds of able-bodied men unemployed? No wonder that Trade Unions in all new countries use their influence to restrict immigration and cannot wait till labour no longer needed in the speculative building of railroads and towns gropes its way or is properly directed to productive channels. The problem is likely to be the more acute now that women have taken the place of men in so many occupations, and have come to stay; now that the minimum wage will be perhaps beyond the power of capital to pay, and the standard of a workman's home has been so admirably elevated by the model industrial villages that have been called into being by the government touch.

The responsible officers of a city having close connection with a rural district and manufacturers, should be able to do much to direct labour to remunerative channels by efficient employment bureaus and by the diversion of any temporary surplus into productive community work. They will have to be experts in "Civics" as well as practical business men. The Educational Trustees will have to equip up-to-date technical schools with an eye to the foreign trade of the Dominion; to decide, for instance, whether Spanish and Russian are not the most important foreign languages, and the study of German more than ever a necessary burden. The young people of an up-to-date city will know something of economics and practise its lessons by spending on thrift stamps for their city's loans what they deny themselves in frills.

The task, then, ahead for man, city, province and Dominion is to maintain financial credit by developing Canadian Resources. Beyond a stimulating competition, there is no animosity, in trade at any rate, between one section of a country and another, or between the members of the Imperial Body, or between the allies as units. Each division or sub-division of the Imperial Commonwealth is preparing to face the economic problems ahead, and each should avail itself of prolific ideas from whatever source domestic, Imperial, or allied, and be ready to adopt the scientific methods of alien enemies that make for success in world trade. For example, there is no doubt that Germany, cut off from the supply of nitrates, has had to develop enormously her knowledge of how to extract nitrogen from the air. (A writer in the South African Journal of Industries seems to have a just complaint that scientific men in the S. A. U. are debarred the use of German technical literature). Norway, utilizing to great advantage, her water power resources, has been able to extract economically nitrogen from the air and establish a large nitrate industry. The Imperial Conjoint Board of Scientific Societies in its preliminary report points out that Canada possesses at least one-third of the potential water-power of the Empire, and is one of the few portions of the Empire that has made a systematic investigation of this resource; that within 20 years, in view of the depletion of nitrate deposits, 4,000,000 continuous h.p. will be needed to keep up the supply of nitrogenous fer-

ROAD MATERIAL SURVEYS.

A report which the Department of Mines has at present in the press is expected to give a great boom to the Good Roads movement on the Island of Montreal. It is entitled "Road Material Surveys in the City and District of Montreal."

The Department during the season of 1917 had a survey made by Mr. Henri Gauthier, C.E., the idea being to locate the best class of material for roadways extending to and from the greatest city of Canada.

The survey covered not only the Island of Montreal, but also Isle Perrot, Isle Bizard and Isle Jesus—in other words, the area contributing daily suburban traffic as well as nearly all of the district from which market wagons drive into the city two or three times a week. The survey work consisted in mapping and examining all occurrences of bedrock, field stone, and gravel, and in sampling the more important deposits, for laboratory tests. The value of the different types of material under service conditions was arrived at by the inspection of pavements and country roads on which they had been used.

Mr. Gauthier was assisted in his investigations by the city engineers of Montreal, Lachine, Westmount, Maisonneuve, and Outremont, as well as by the numerous quarry owners and operators. The samples of igneous rocks collected by Mr. Gauthier were microscopically examined by Mr. John Stansfield, of the Geological Department of McGill University.

The report, which will be illustrated by charts and photographs, is now in the printer's hands. Copies may be had free by those interested upon application to the Deputy Minister, Department of Mines, Ottawa.

Francis Jenkins, representing the Society of Motion Picture Engineers, in a brief address before the last meeting of the National Fire Protection Association, called attention to the fact that nearly all public officials had been using their powers exclusively to bring about construction designed to prevent the spread of motion picture film fires, and had expended little effort to prevent the fire from starting. This criticism is amply justified. Old projecting machines and carelessness either in combination or separately cause most film fires. The setting of the highest standard for projecting machines in use would eliminate the chief physical hazard causing these fires. Old projecting machines chew the film in small bits, making it almost like wood shavings, causing it to ignite readily if the film remains stationary before the light for even the smallest instant.

Mr. Jenkins also referred to P. W. Nicholson, Fire Marshal of the District of Columbia, as a pioneer in carrying out the excellent idea of doing away with flimsy enclosures about projecting machines being used for temporary exhibition. Mr. Jenkins' point was well made that enclosures of this character only encourage carelessness in the handling of films by concealing the operator from view. If the operator were in full view, he would not be smoking, he would be much more liable to keep all films not in use in metal containers. The temporary concealing booth defeats the purpose which it is designed to fulfill.

tilizer alone; that whereas the average cost per h.p. for a year is perhaps \$50, in Canada the cost should not exceed \$10 or \$15, and that development might be aided by a state guarantee of a slight minimum interest on the necessary capital.

Canada, at any rate, is preparing. Whether, to take haphazard examples, it be the growing of flax for the British Government from Siberian seed, experimenting in the distillation of straw, and the briquetting of lignite, she is alert.

Nor is she behindhand in the publicity campaign to attract population and capital. She is provided with a full record of her investigated resources and gratuitous information is at the service of any applicant. Every Canadian soldier who has crossed the ocean has been an advertisement of his country; reading matter, lectures, lantern slides in the many rest camps attracted interest to Canada, and there must be many a war-weary veteran who will be drawn to the wider breathing space of the near Dominion. The rush of events has cleared the way, and now "Full speed ahead!"

The Federal Government Housing Project (Continued from May Issue)

General Principles and Standards Recommended for Consideration in Schemes.

Subject to the four requirements set forth in this memorandum, the Federal Government does not impose any conditions in regard to the nature of the scheme or the type and character of the dwellings to be erected, but strongly recommends that in framing schemes, consideration be given to the following matters:—

(1) **Acquisition of Sites, etc.**—The success of the housing movement depends upon the requirements of suitable land at its fair value, and at a cost which working men can afford to pay. It is essential, therefore, that statutory provision shall be made by the Provinces for a cheap and speedy method of compulsory taking of the land required for housing purposes. To facilitate proper planning and to secure economy in connection with housing schemes comparatively large sites should as a rule be chosen so as to permit of comprehensive treatment. Such sites should be conveniently accessible to places of employment, means of transportation, water supply, sewers and other public utilities.

(2) **Planning of sites, etc.**—Where Housing Schemes are proposed, the sites as well as the buildings should be properly planned so as to secure sanitary conditions, wholesome environment and the utmost economy. The land should be sold under building restrictions that will insure its use for residential purposes only, and should it thereafter be desired to utilize any of the lots as sold for stores or other business purposes, the increased value for such business sites should be made available for public purposes in connection with such scheme.

(3) **Loans for separate or individuals houses.**—In those cases where loans are given to working men owning lots, care should be taken to ensure that the site proposed to be built upon occupies a healthy and convenient situation and that suitable provision can be made in such situation for the erection of a sanitary type of dwelling with adequate provision for open spaces.

(4) **Limit of Income of persons to be provided with dwellings.**—In order to ensure that the money shall be loaned to those who most need it, no person in receipt of an income exceeding \$3,000 per annum should be eligible as a purchaser or tenant of a house erected with the aid of Government funds in any schemes carried out by Provincial Governments, Municipalities, Housing Associations or owners of lots.

(5) **Construction of Local Improvements to precede occupation of dwellings.**—In cities and towns, local improvements, comprising necessary sewers, pavements, sidewalks, water-mains, and lighting services, should be constructed as far as practicable prior to, or simultaneously with the building of houses, and no house should be permitted to be occupied until provided with proper means of drainage and means of sewage disposal and an adequate supply of pure water.

(6) **Reservation of sites for playgrounds, etc.**—In all new housing schemes, provision should be made for reserving at least one-tenth of the total area of land being developed for building purposes, as open space for playgrounds, etc., and also for reserving suitable sites for such institutes, public buildings and stores as may be required.

(7) **Loans to be used for purchasing and developing land and erecting dwellings.**—Advances should be made for: (a) The purchase of suitable land for housing schemes; (b) the construction of the necessary local improvements on and in connection with the development of such land as part of a Housing Scheme; (c) the erection of sanitary and economical dwellings.

(8) **Proportion of cost of land to dwelling.**—The proportion of the money lent in respect of the capital value of the bare land (i.e., irrespective of all local improvements or other public services provided to adapt the site for building purposes) should not as a rule exceed one-tenth, and in no case should exceed one-eighth of the above gross cost of the dwelling. In computing the value of the bare land under this clause, the cost of such improvements as have been made should be deducted. For instance—the sum of \$3,000 might be lent in the following proportions:—

Cost of dwelling	\$2,400
Cost of land	300
Capital cost of local improvements	300
	\$3,000

If the value of the bare land is estimated to exceed one-tenth (\$300, in this case), the extra cost should be met by the owner.

(9) **Recommendations as to minimum standards in regard to sites.** (a) **Streets.**—All dwellings erected in cities and towns should face on streets so constructed as to provide dry and convenient means of access to such dwellings, or on approved courts opening on to such streets and in no case on lanes or alleys. (b) **Sanitary Provisions.**—In cities and large towns, sewers and water-mains should be provided to enable connections to be made as buildings are erected; and in small towns, villages and rural areas where no sewers exist, there should be proper sanitary provision for sewage disposal, to the satisfaction of the Board of Health or Sanitary Engineer of the Province. (c) **Water Supply.**—All dwellings should have connected to them an adequate supply of pure water before occupation is permitted for purposes of habitation. (d) **Drainage of Sites.**—No building should be erected on a site which shall not have been drained of surface water, or which shall have been filled up with any material impregnated with faecal matter, or with animal or vegetable matter, unless and until such matter shall have been removed, and the ground surface under such building shall be properly asphalted or covered with concrete or other dry and hard material to a thickness of six inches at least.

(10) **Recommendations as to minimum standards in Houses.** (a) **Space around dwellings.**—Provisions should be made for securing ample garden and air space surrounding the dwellings to be erected. In cities and towns, each dwelling should occupy a lot comprising at least 1,800 square feet, and, in villages and rural areas, at least 4,500 square feet. Not less than 50 feet of clean open space in depth should be provided at the rear of dwellings should not occupy more than 50 per cent. of the lot, and the buildings should not occupy more than 50 per cent. of the lot. Spaces between the gable or end walls of adjacent buildings should be provided as follows:—

Between all buildings (single or in pairs), the walls of which are built entirely of wood or partly of wood and partly covered with stucco or brick veneer, or between all buildings which are more than two rooms deep and have side windows—16 feet.

Between buildings, the walls of which are built of brick, brick veneer, stucco, hollow tile, stone or concrete, with fireproof roofing material, which do not exceed two rooms deep—9 feet.

Dwellings erected of stucco or frame or brick veneer must be either detached or semi-detached (See clause 2, **Maximum cost of dwellings, etc.**). In all cases hollow walls should be provided.

(b) **Sanitary conditions and ventilation.**—Baths and water closets should be provided in each dwelling, preferably on the bed-room floor. Baths and sinks should have hot and cold water. Water-closets should never open from a room and should have a window opening to the outer air. Basements should not be used for habitation. Every habitable room should have at least one window opening to the outer air. Each room should have a window space of at least one-tenth the floor area, and cross ventilation should be provided where practicable.

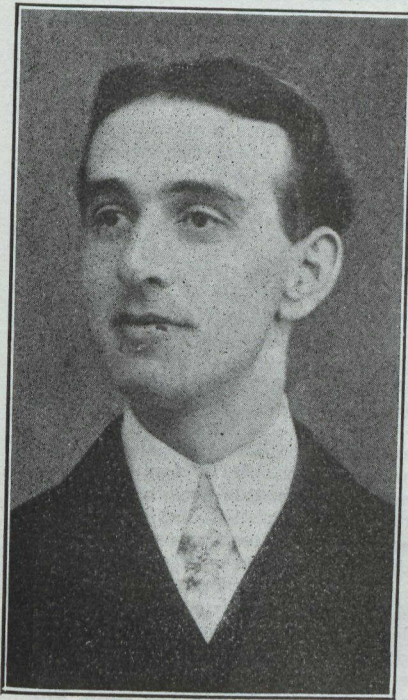
(c) **Height and sizes of rooms.**—Rooms should not be less than 8 feet in height on the first floor and 8 feet over two-thirds of the floor area in bedrooms. One living room should not be less than 144 square feet, and two of the bedrooms not less than 130 and 100 square feet respectively.

(d) **Height and type of buildings and character of construction.**—Buildings should not exceed 2½ stories in height, except in the case of cottage flats, which might be permitted to be three stories if constructed of fireproof materials. Houses should have 4, 5 or 6 rooms, and in exceptional cases for large families, 7 rooms, excluding bathroom.

(e) **Conversion of dwellings into stores, etc.**—Provision should be made to prevent dwellings being converted into stores or used for any purpose other than a dwelling, except with the authority of the Provincial Government or other suitable authority, and only then on receipt of a petition of two-thirds of the owners and occupiers in the street in which the dwelling is situated. Brick, hollow-tile, stone or concrete should be used as far as practicable, preference being given to those materials that are produced locally.

Why Engineers and Architects Should Get Their Building Material Tested

EMMANUEL MAVAUT.*



One often wonders why it is that so many engineers and architects seem adverse to having their building and structural materials inspected and tested before accepting them for use in their work. Too often this is omitted during the construction of high-priced dams, bridges, breakwaters, office buildings, theatres, etc., where the professional reputation of the engineer or architect, the capital of the investor, and, quite frequently, the lives of many people are at stake.

Is it through ignorance? Is it through jealousy and selfishness; not wanting any other engineer or chemist to share the credit for the appearance or assured safety of the structure? Or is it through a mistakenly

economical point of view? We will review these points one by one.

Is it through ignorance? I may answer that in quite a few cases it is. Engineers of high standing have deliberately claimed to me that it was not necessary to test anything, using as an argument that the cement was standard, that any experienced man could tell good sands at sight, and that, as far as stone was concerned, limestone was limestone and that was all there was to it.

These men start the work without knowing the quality of the materials they are using; and, too frequently, their structures fail. If it is concrete, the mass crumbles, disintegrates, cracks, or otherwise goes to pieces, and the average person who sees it concludes that, after all, concrete is a poor investment.

Arguments Against Testing.

Let us review the arguments of these engineers. They claim that cement is standard. I say it is not; though I know the cement manufacturers, especially the larger ones, do all in their power to have cement not only up to specifications, but as near perfect as practically possible. But the chemist and superintendent can not be all over the works at once and, for that reason, there is always a possibility, though it may be remote, of the cement coming out too fresh, too high in sulphuric anhydride, or in magnesia, or too low in specific gravity.

These defects, which can not be found without having the cement tested, will cause many different troubles in concrete work. For instance, one defect will cause the cement to set too quickly; that is, it will take its initial and sometimes its full set before being placed on the job, or, in other words, while the men are mixing it. In this case, there will be no cementitious qualities between the different lumps of concrete as it breaks up when being deposited, and so many stones covered with mud might just as well be thrown into the forms; the result would be as good.

On the other hand, another defect might cause the concrete to set too slowly. This naturally retards the work, because the forms can not be taken off as quickly as planned. If the risk is taken and the forms removed, there is a great possibility of the structure failing. If slow setting cement is used in the winter time and freezes before it sets, the concrete will soon disintegrate. Even if it should

not totally collapse, it will be a constant cause of expense for repairs and an ever present eye-sore.

\$11,000 Worth of Cement Condemned.

I had occasion, some time ago, to condemn eighteen cars of cement, containing over sixteen thousand bags, and amounting to over eleven thousand dollars in value. These eighteen cars, which had been purchased by two of our largest Canadian manufacturing firms, were condemned for the reason that the setting took place in from eight to twenty minutes. It should take at least one hour as determined by the Gilmore needle. Had not that cement been tested, it would naturally have been used, and, without a doubt, the work would have failed because of the concrete setting before being placed.

Outside of this particular case, I have had occasion to condemn cement quite a few times in different parts of the country. In the majority of cases, the cement manufacturer was not to blame for these failures in cement, but either the railway company or the contractor was responsible. Cement is often stored in unsuitable sheds where dampness and rain injure it. How many of us have not seen bags that were set as hard as rock taken out of temporary storage sheds? In such an instance, while only certain bags may be unusable, many others, and frequently a very large quantity, have been effected to such an extent that they should not be used.

Another instance came to my personal attention last summer. An electric power development company situated in the Province of Quebec, were about to raise their dam. The cement was purchased and stored beside the falls in an enclosure with no front. After this was filled with cement, a few boards were put up to protect the cement from the spray of the falls; but cracks ranging from one to ten inches were in evidence. The result was that the spray reached many of these bags of cement, making some of them so hard they had to be broken up with shovels before using. I drew the attention of the superintendent to this fact, but his answer was that the cement was first class.

It stands to reason that had this cement been tested before using it would certainly have been condemned, as chemical action had already taken place, rendering it of little value. This is but one of the many cases where the cement company was not to blame, and similar instances occur almost daily; but, whether the manufacturer or the contractor is responsible, if the cement is not tested, and the work supervised by an experienced concrete inspector, the investor is likely to suffer.

Sand Argument.

Now let us go into the sand question. It is claimed that any engineer or experienced man can tell good sand at a glance. That is impossible. He may be able to tell that it is too fine, if it is very much too fine, or too dirty, if it is very much too dirty; but, beyond that, there are no engineers or experienced men who can tell at sight whether this sand or that is good and reliable for strong and dense concrete work.

All sand contains more or less silt or dirt. The reason for this is that it is composed of small particles of broken rock, of different sizes and compositions, coming from different parts. These particles have been washed away or transported from their different sites at different times and settled in layers of different thicknesses in what is now a workable sand bank or deposit. Therefore, there is no guarantee or even likelihood of uniformity, and one car load of sand may be first class and the next of very poor grade for concrete work.

Also, the dirt and silt, which is very often injurious to sand for concrete purposes, are bound to be present in some parts of the sand bank; because the small particles of rock that were washed towards the banks will naturally carry with them more or less of this fine material.

The above shows conclusively that, in order to be sure of good results, the sand should be tested; not only once, but continually while the work is in progress.

Besides the avoidance of injurious silt, there is the size or grading of the sand to be considered. It should be

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TESTING BUILDING MATERIALS.

(Continued from Page 209.)

well graded, having a certain proportion retained on each sieve from, say, the eighty mesh to the one-quarter inch sieve. If all of the sand grains are of nearly the same size, the voids will be too great, and, unless an additional amount of cement is used, the voids will not be filled. If too fine, the concrete will not be of the required strength. The reason for having sand well graded is so that the fine particles will fill the voids of the coarser particles, thus reducing them to a minimum.

In order to properly proportion a concrete mixture, it is necessary to determine the voids; for, without this information, the engineers are working blindly and probably wastefully. Where they are figuring on having a good dense concrete for a reservoir, oil tank or foundation, the result is apt to be different; and, if the water goes through the wall, concrete once more gets a black eye.

Some years ago, I had occasion to deal with a very interesting case of the above type. A company decided to build a concrete laundry building in Eastern Ontario on the site where an old stable had been standing for years. They tore down the old building; and, in excavating for the cellar of the new, ran across such nice looking sand that they decided to use it in the concrete mixture for the new structure. They had no end of trouble. The concrete would not set, and the walls fell in.

In carrying out an investigation, it was found that briquettes made of this sand would crumble in the hand after seven days' setting. These briquettes were so disintegrated that they could not even be put in the machine to test. An analysis was made, and we found that the sand was saturated with ammonia, which had percolated through from the horse manure.

As a result of this investigation, the sand had to be taken away from the site of the work, the old concrete thrown out, forms rebuilt, new sand purchased, and the work reconstructed. All this delayed the work, cost money for material and labor to replace that wasted, and inconvenienced the owners. A sensible programme of testing would have prevented any of this trouble.

Another very bad fault in some sand, which can not be determined without testing, is that they contain injurious chemicals. Sometimes the drainage from some industrial plant such as a chemical works, soap factory or tannery, though located several miles away, will contaminate a sand supply, rendering it unfit for use in making concrete. As a rule, such contamination is discovered by making three-to-one briquettes with the sand under consideration and also with standard sand. A comparison of the results will soon tell whether or not there are injurious chemicals present.

I would venture to say that three-quarters of the failures in concrete are due to poor sand; and then some engineers will not hesitate to state that it is unnecessary to have sand tested.

As far as stone is concerned, the same argument holds as in the case of sand. In order to regulate the mixing of concrete, the voids must be determined; and, in order to get good results, the stone must be clean, strong, well shaped and well graded.

Large Corporations Have Material Tested.

It might well be stated that the best argument for the general inspection and testing of all building and structural materials is that every large corporation, such as the Canadian Pacific, the Grand Trunk, the Canadian National Railways, the Montreal Tramways, the Montreal Light, Heat and Power Company, the Harbor Commissioners of Montreal, Toronto, Hamilton, London, Peterboro, the departments of the governments, provinces, states, the counties and municipalities that are at all progressive, and large private concerns, too numerous to mention, all have their materials thoroughly tested before using. The sooner other engineers and architects make up their minds to have testing and construction supervised by experienced men, the sooner eyesores, failures and constant repairs to concrete work will stop.

Is it Through Selfishness?

Is it through selfishness? I happened to interview the City Engineer of one of the larger cities of Canada on the subject of supervising concrete construction, and the testings of materials for same. After a long conversation, he agreed that the construction materials should be test-

ed, but turned around and said: "Where do; we come in. You will be the party doing the work, and getting the credit. The Municipal Council will say: 'These engineers of ours are no use if they must get their materials tested and work supervised.' If we were to do that, we might find ourselves out of a job."

Whether it is the effect of the above policy or not it is hard to say; but this particular city has had constant trouble, and very heavy expenditures for replacing defective work; which expenditure has, of course, fallen upon the taxpayer. They erected a Fat Stock Show building, and the whole thing collapsed. Their water main cracked, and, as it was a suction system, sewage, polluted water, and so forth, was sucked into the mains and contaminated the drinking water. This caused a typhoid fever epidemic that carried off in the neighborhood of a thousand people, and forced the city to open emergency hospitals that it had to furnish and provide with doctors, nurses and orderlies. The boiler in one of their municipal buildings exploded, killing one man, injuring others and wrecking the building. A pavement about twenty-five city blocks in length took the form of a corrugated road and had to be relaid a few years after it was first put down.

It goes without saying that all this trouble cost the city many thousands of dollars; which expense might, and very likely would, have been avoided had all the materials used in these constructions been tested and the work supervised by some one particularly familiar with each type of construction. Any possible loss of prestige to an engineer or architect through the employment of outside specialized inspection and testing service could not conceivably injure him as much as one such failure, as we have mentioned. In fact, after the failure, some one will ask why he did not have knowledge enough to understand that he needed such specialized service. The family physician does not try to operate on his patient's heart; the City Engineer should not think it necessary to pretend that he knows it all either, and the same applies to the outside engineer or architect. Specialists usually pretend to know but one thing, but to know that one thing uncommonly well.

Is it Through An Economical Point of View?

Is it through an economical point of view? With some engineers and architects it is. A good many of them will say that this or that work is not of sufficient importance, or will not be seen, so spending money on tests for it is wasting. This is very unwise economy; in fact, not economy at all. It is a case of saving the pennies to throw away the dollars; for, when the construction materials are tested and accepted by specialists, and the work supervised by them, the engineer or architect is practically relieved of all responsibility except that of having selected competent specialists to do the work. He can not do all this himself. He must hire some one; so why not those particularly competent to take care of the particular matter for him.

Besides, if his plans and specifications are correct, he is sure there will be no unwarranted expense for repairs, and the structure will be there to stay as a monument to his name and a foundation for his future reputation in the engineering profession.

The engineer and architects who are foremost in their professions would not consider for a moment the proposition to have their plans and specifications executed without full inspection and testing as the work progressed; therefore, why should men who have not reached the pinnacle of professional success risk failures that might forever preclude their arrival.

QUEBEC'S FOREST EXPENDITURE.

The legislature of Quebec has appropriated \$100,000 for the provincial forest service, and the inspection of lands for the fiscal year ending June 30, 1920; also \$7,000 for the maintenance of the provincial forest nursery at Berthierville. These amounts are very materially supplemented by the expenditures on forest fire protection incurred by the Ottawa River, St. Maurice, Laurentian and Southern St. Lawrence forest protective associations, which patrol the great bulk of the licensed and privately owned timber lands in the province. The expenditures of these four associations on fire protection during the past year total \$177,729.—C. L.

EXPERIENCE OF THE MUNICIPAL REPRESENTATIVE.

By HARRY BRAGG.

It was a great change of environment to jump from newspaper work to the Civil Service, and become "Municipal Representative" of the Repatriation Committee, a sub-Committee of the Privy Council.

This was increased by the fact that my new duty was to create a position that would secure co-operation between the Federal Government and the municipalities without causing any jealousy on the part of the Provincial Governments, in whose care the municipalities rest.

That the whole municipal situation was an unknown quantity is proved by an incident that occurred at the first Conference of the heads of the branches of the Committee. Mr. Daley, as Director, was arranging the work of each, and in my case, put down "Cities, Towns and Villages" on the blackboard, and then turned to the questions to be asked. On my asking if he did not want to include every municipality, he said, "Yes," and I said that less than half were represented on the board, the others being rural municipalities under various names in the different Provinces; and apparently caused general surprise by saying there were over three thousand five hundred in all.

Naturally, my first step was to ask the support of the different Provincial Ministers, who look after the municipal affairs, and I am glad to say that all gave me their hearty support.

The three Provinces that are lucky in having a Minister and Deputy Minister of Municipal Affairs, Saskatchewan, Alberta and Quebec, were, naturally, most prompt, and had pamphlets with full information which were sent in reply to wires. The others gave the information as quickly as possible.

The first appeal, by wire, with letters following, was made as soon as the Committee was sufficiently organized to have letter paper on which to write. This was on Dec. 5th, last year, and the lists of municipalities began to arrive next day.

At a Conference of the Provincial Secretaries of the Soldiers' Aid Commission, I was led to understand that every Province was well organized with local committees to look after the returned soldiers; but a few informal journalistic talks after the meeting, told a different story, one Province having only four committees. Then a talk with Col. Healey, then Deputy Minister of Soldiers' Civil Re-establishment Departments, and his energetic aids, Major Anthes and Mr. Stevenson, led to harmonious co-operation with them.

A questionnaire was prepared on what each municipality was expected to do, which has appeared in this and other municipal papers, and a brief article on the tenor of the replies has also appeared in the same pages. When the return postcards were received, they were studied and collected, and the information sent to the Department of Soldiers' Civil Re-establishment.

I tried to emphasize the importance of good housing, for the existing scarcity of houses points to overcrowding and slum conditions, which create disease, crime and death.

Another questionnaire was prepared and sent out—after many unfortunate delays—asking about municipal public works—copies of which have been published. The delays to which allusion has been made, have prevented many returns coming in before my branch of the "dissolving" committee vanished. But those received were very interesting.

In many places, the encouraging reply was received that "Returned Soldiers were given the preference."

Some places asked my department to secure certain kinds of skilled men; others suggested that many men could be used on the farms; some said lumbering in the fall would absorb a large number.

A few grouches came in! One city said it was the duty of the Federal Government to furnish employment there

WAGES HIGH UNDER MUNICIPAL OWNERSHIP.

The experience of San Francisco shows that with unwatered stock a street railway, honestly conducted, can prosper on 5-cent fares, pay the highest wages and give the best service.

The last report of the municipal railway system of San Francisco, dated January 31, 1919, says:

"The municipal railways have paid their bills, paid for important extensions, all the interest charges on bonds, met their bonds as they matured, and earned a surplus profit for the county treasury."

The city borrowed the money to build these municipal railways. The people patronize them in preference to privately owned lines. The gross earnings, according to past report, were \$9,825,722, the cost of operation \$6,137,657, leaving a profit of \$3,688,065. Interest on the city bonds issued to purchase these municipal railways calls for only \$1,174,077.

The wages and hours on the municipal railway compare as follows with those of the privately owned United Railways of San Francisco operating in the same streets:

	The city owned railroads.	The privately owned railroads.
Hours of work	8	9 & 10
Platform men, per hour	50c	38c
Inspectors, per month	\$135	\$135
Car dispatchers, per month	\$135	\$125
Machinists, per hour	75c	56c
Linemen, per hour	75c	56c
Electricians, per hour	87½c	56c
Carpenters, per hour	87½c	47c
Painters, per hour	87½c	56c
Car repairers, an hour	65c	42c

Wages have always been high on the Pacific Coast, but the comparison between public and private ownership there is illuminating.—Chicago Herald and Examiner.

Messrs. MacKinnon Steel Company, Ltd., have just taken a contract for the supply of all necessary steel work in connection with an eight storey apartment house being erected on Drummond Street, Montreal, by P. R. Du-Tremblay. The name of the general contractor is Alex. MacKay, Montreal. The valuation of the complete structure is \$500,000, and the steel work will amount to approximately \$60,000.

by building a post office. Another complained of enemy aliens occupying positions that should go to soldiers. One wanted a branch railway line built.

I tried to do my little best for every place that asked me, but, of course, could only pass on the request, complaint or information to the proper department.

Quite a few requests came in for individuals, from officials, and these were all given careful attention.

Altogether, something over 18,000 circulars were sent out in the five months, besides letters and telegrams.

One interesting item was the production of a diagram, showing the constituent parts of municipal activity in the Dominion. Prof. Clark, of the Department of Labour, had drawn the other branches, and I expressed chagrin at mine being left out. He confessed he had studied mine, but had not arrived at any idea. I promised a suggestion in the morning, and from this very crude idea, he devised one that shows the story at a glance, and for the first time in Canadian history, municipal organizations are shown in a diagram.

The Committee used me several times as a lecturer, and I was proud to go out and plead for proper appreciation of the men who have fought and suffered for us. I had hoped to have been able to do more of this all over Canada, but my branch "dissolved" too quickly.

Owing to the distance from Ottawa, the members of the Advisory Committee of the Union of Canadian Municipalities could not aid me by their presence, but their sympathetic support was an encouragement.

My journalistic friends supported me splendidly, and I felt very proud when our "Exchange Editor" Mr. Fowler, reported that ninety per cent. of the dailies were using my matter, and that fifty per cent. were using it both as news and editorially.

The work has been most interesting, and if, in spite of all the weaknesses and mistakes, it has helped in solving the great problem of the Returned Soldier, it has been worth while.

The Merchants Bank of Canada

Proceedings of the Fifty-Sixth Annual Meeting of Shareholders on June 4, 1919

The Fifty-sixth Annual meeting of the Shareholders of The Merchants Bank of Canada was held Wednesday, June 4th, in the Board Room at the Bank's Head Office at Montreal. The meeting was called to order at 12 o'clock noon.

On motion of Mr. K. W. Blackwell, the President, Sir H. Montagu Allan, was asked to take the chair.

Mr. J. M. Kilbourn was appointed Secretary of the meeting, and read the notice calling the meeting.

The minutes of the last annual meeting were taken as read.

The President, Sir H. Montagu Allan, then presented the Annual Report, as follows:

THE ANNUAL REPORT.

I beg to submit on behalf of the Directors the Fifty-sixth Annual Statement of The Merchants Bank of Canada as at the close of business on the evening of the 30th April, 1919, together with a Statement of the Profits covering the relative period.

Notwithstanding ever-mounting operating costs, the net profits resulting from the year's business were \$1,383,569.40, being an increase over last year of \$146,888.44, a showing which, I believe, you will regard with satisfaction.

During the past year your Directors felt warranted in distributing an extra dividend of 1 per cent and in placing the stock upon an 11 per cent basis. No doubt their action in this respect will have your entire approval.

The financial position of the Bank as reflected in detail in the Balance Sheet before you, will meet, I am sure, with your full approbation.

Another Victory Loan last autumn was generously subscribed to by the Bank's clientele throughout the country, their total subscriptions reaching the very large sum of \$45,810,400, of which but \$4,333,800 was made up of conversions from previous issues. This left a net amount of \$41,476,600 paid in cash through the six months' period, and yet, despite this heavy withdrawal, our deposits for the year show the gratifying increase in total of \$24,780,330, or 21.85 per cent over last year's figures, the Savings Department receiving \$15,958,008 of this gain.

Commercial Discounts have also grown apace, having increased \$19,680,410 during the year, indicating that the earning power of the Bank has been well maintained and that we are, to the common good, lending our full support to the agricultural and other producing industries of the country. For, it may in truth be said, this important increase is made up of advances in one way and another towards assisting essentially productive industries throughout the Dominion.

An issue of \$1,400,000 of new stock has been made, but as the allotment

(Continued on Next Page.)

STATEMENT OF THE RESULT OF THE BUSINESS OF THE BANK FOR THE YEAR ENDED 30th APRIL, 1919.

The Net Profits of the year, after payment of charges, rebate on discounts, interest on deposits and making full provision for bad and doubtful debts, have amounted to	\$1,383,569.40
The balance brought forward from 30th April, 1918, was	437,973.92
Making a total of	\$1,821,543.32
This has been disposed of as follows:	
Dividend No. 124, at the rate of 10 per cent per annum	\$175,000.00
Dividend No. 125, at the rate of 10 per cent per annum	175,000.00
Bonus 1 per cent paid 6th January, 1919	70,000.00
Dividend No. 126, at the rate of 11 per cent per annum	192,500.00
Dividend No. 127, at the rate of 11 per cent per annum	192,500.00
Government War Tax on Circulation	\$805,000.00
Written off Bank Premises Account	70,000.00
Contribution to Officers' Pension Fund	300,000.00
Contribution to Joint Campaign, Canadian Red Cross and Navy League	50,000.00
Contribution to Y.M.C.A. Military Service Fund	15,000.00
Balance carried forward	7,500.00
	574,043.32
	\$1,821,543.32

H. MONTAGU ALLAN
President.

D. C. MACAROW,
General Manager.

STATEMENT OF LIABILITIES AND ASSETS AT 30th APRIL, 1919.

LIABILITIES.		
1. To the Shareholders.	1919.	1918.
Capital Stock paid in	\$7,000,000.00	\$7,000,000.00
Reserve Fund	7,000,000.00	7,000,000.00
Dividends declared and unpaid	194,194.00	176,900.00
Balance of Profits as per Profit and Loss Account submitted herewith	574,043.32	437,973.92
	\$14,768,237.32	\$14,614,873.92
2. To the Public.		
Notes of the Bank in Circulation	13,316,033.00	12,327,168.00
Deposits not bearing interest	43,552,214.61	34,886,747.83
Deposits bearing interest (including interest accrued to date of Statement)	91,904,993.37	75,946,985.48
Balances due to Banks and Banking Correspondents in the United Kingdom and foreign countries..	105,076.96	1,161,976.79
Bills payable		
Acceptances under Letters of Credit	464,153.05	598,851.20
Liabilities not included in the foregoing		
	\$166,725,404.95	\$140,937,544.97
ASSETS.		
Current Coin	\$4,946,946.33	\$4,890,061.36
Current Coin	\$4,946,946.33	\$4,890,061.36
Dominion Notes	8,405,602.50	5,912,092.50
Notes of other Banks	985,044.00	893,076.00
Cheques on other Banks	6,082,616.99	5,311,786.12
Balances Due by other Banks in Canada	3,215.80	4,704.37
Balances due by Banks and Banking Correspondents in the United Kingdom	123,496.50	82,580.53
Balances due by Banks and Banking Correspondents elsewhere than in Canada and the United Kingdom	1,903,040.10	1,357,843.03
Dominion and Provincial Government Securities, not exceeding market value	6,005,573.65	5,435,464.66
Railway and other Bonds, Debentures and Stocks, not exceeding market value	4,119,705.32	4,060,204.70
Canadian Municipal Securities and British, Foreign and Colonial Public Securities other than Canadian	15,238,399.32	14,589,065.54
Call Loans in Canada on Bonds Debentures and Stocks	5,134,690.71	5,223,953.88
Call Loans elsewhere than in Canada	2,801,857.72	3,906,648.93
	\$62,750,188.94	\$57,667,481.62
Current Loans and Discounts in Canada (less Rebate of Interest)	95,874,426.04	76,194,016.15
Current Loans and Discounts elsewhere than in Canada (less Rebate of Interest)	332,918.12	339,987.29
Liabilities of Customers under Letters of Credit as per contra	464,153.05	598,851.20
Real Estate other than bank premises	782,326.64	312,928.11
Overdue Debts, estimated loss provided for	386,973.56	272,226.60
Bank Premises at not more than cost (less amounts written off)	5,253,269.48	4,886,438.98
Deposit with the Minister for the purposes of the Circulation Fund	366,000.00	355,000.00
Other Assets not included in the foregoing	515,149.12	310,615.02
	\$166,725,404.95	\$140,937,544.97

H. MONTAGU ALLAN,
President.

D. C. MACAROW,
General Manager.

REPORT OF THE AUDITORS TO THE SHAREHOLDERS OF THE MERCHANTS BANK OF CANADA.

In accordance with the provisions of sub-Sections 19 and 20 of Section 56 of the Bank Act, we report to the shareholders as follows:

We have examined the above Balance Sheet with the Books of Account and other records at the Chief Office of the Bank and with the signed returns from the Branches and Agencies and have checked the cash and verified the securities of the Bank at the Chief Office against the entries in regard thereto in the books of the Bank at 30th April, 1919, and at a different time during the year and found them to agree with such entries. We also attended at some of the Branches during the year and checked the cash and verified the securities held at the dates of our attendances and found them to agree with the entries in regard thereto in the books of the Bank.

We have obtained all the information and explanations we have required. In our opinion the transactions of the Bank, which have come under our notice have been within the powers of the Bank and the above Balance Sheet is properly drawn up so as to exhibit a true and correct view of the state of the Bank's affairs, according to the best of our information and the explanations given to us, and as shown by the books of the Bank.

Montreal, 23rd May, 1919.

VIVIAN HARCOURT
GORDON TANSLEY,

Auditors.

(of the firm of Deloitte, Plender, Griffiths & Co.)

(Continued from Last Page.)

was to Shareholders of record at 30th April, the matter will fall for reference more appropriately at next year's meeting. Suffice it to say in the meantime that the new allotments are being satisfactorily taken up—a large proportion indeed, having already been paid for in full in advance of the instalment dates.

Since the signing of the Armistice on the 11th November last, we have opened numerous Branches and Sub-Branches at points carefully selected during the long period (ending with the Armistice), in which all the Banks maintained a strict embargo against branch extensions. These new fields of endeavor and profit are, in practically every case, realizing our expectations, and while the relative initial expense is not inconsiderable, we have every reason to believe we shall be rewarded by amply profitable results in due course.

You will, I am sure, join with your Directors in extending to the members of the staff, one and all, a word of cordial appreciation for their loyal and efficient services, to which the measure of progress the Bank has enjoyed is in no small degree attributable.

During the course of the year death removed our esteemed colleague, Mr. Andrew A. Allan, and in his untimely end the Bank has suffered a heavy loss, deeply deplored by all connected with the institution. He was a man of sound judgment and high principles, whose advice was at all times as valued as he personally was esteemed and respected.

The vacant seat upon the Directorate has been filled by the appointment of Mr. Lorne C. Webster, a large shareholder in the Bank and a man of wide business experience, connected with many important commercial enterprises.

All the various offices of the Bank have been inspected during the past twelve months.

The Auditors' Certificate is appended.

All of which is respectfully submitted.

H. MONTAGUE ALLAN,
President.

THE GENERAL MANAGER'S ADDRESS.

The General Manager, Mr. D. C. Macarow, in addressing the meeting, said:

Mr. Macarow:—In the first place I would like to express, speaking on behalf of the Executive Officers of the Bank, indeed on behalf of the staff at large, our pleasure at having Sir Montagu Allan again amongst us and to extend to him our most cordial welcome.

In the mighty work overseas now happily satisfactorily and, let us hope, permanently concluded, Sir Montagu has, indeed, borne his share and it must be a proud thought to him, as it is a gratifying reflection to us, that in conjunction with that great work, his is a record of high and patriotic duty manfully embraced and efficiently carried through. (Applause.)

My words, Sir Montagu, but express feelings sincerely entertained. Your welcome is one of unaffected cordiality.

The moment is opportune, I am sure you will agree, and I gladly take advantage of it, to pay a tribute to the Vice-President, Mr. Blackwell, who has filled the chair throughout the President's absence with such a measure of outstanding capacity. From the rich storehouse of his wide, varied and practical business experience, he has given with an unstinted hand, and it is no empty conventionality to say that the measure of progress the Bank has enjoyed during his incumbency is due in no small degree to the benefit of his sound advice and the inspiration of his constructive courage. Withal, his courteous and considerate demeanor to everyone has made his a figure around the Executive Offices of the Bank as welcome as it is honored and respected. (Applause.)

After the concise yet comprehensive references and explanations made by the President in his address, which you have just heard, any attempt on my part at amplification with respect to the outturn of the year's operations in the matter of profits and to the general financial statement would, indeed, be superfluous and time-wasting.

I will, therefore, content myself by saying that I hope the situation as reflected by the figures given will be satisfactory to all and measure up in full degree to the expectations and wishes of everyone interested in the Bank's progress.

Last year you may remember, I said that you might entertain with full confidence the comfortable assurance that the whole asset column represented dollar for dollar in actual value. I take pleasure in repeating that assurance this year—and with double emphasis.

May I be permitted to add a few brief and sketchy words of a general character and interest?

It is with feelings of intense relief that we now find ourselves gradually moving into peace times, leaving behind us that stressful period so darkened by the war's depressing shadows and under the dread pall of which we had become accustomed to live and to view things. But in this transition period we cannot fail to realize that with the readjustment come many difficult problems, financial and otherwise, to face and solve. This, however, is a country of well-nigh boundless potentialities, and we can, I think, whatever be the perplexities of the moment, view the ultimate future with every measure of confidence.

Of the spirit and virility of the Canadian people, we have had abundant illustration during the past few years. That spirit has carried us through the difficulties of the war period; that spirit, I know, will enable us to meet the no less difficult and complex questions by which we are now confronted. Sanity and co-operative effort are all that are needed. Let reason reign.

Reference was made last year to the paramount necessity of keeping the wheels of industry uninterruptedly moving, and to the major import-

ance, with that end in view, of developing along broad lines our export trade, to which, indeed, we must look in large measure for the carrying and eventual liquidation of our war indebtedness.

Much has been done during the twelve months in preparation for realizing upon the exportable surplus of this country's raw materials, food-stuffs and manufactures, but as the development of a broad foreign trade is not a matter of a single year or even decade, it is to be hoped that having set our hand to the task the efforts already put forth will continue to be pushed forward with vigor and resourcefulness.

Canada's magnificent achievements during the war period have made this Dominion known the world over, presenting to us opportunities awaiting only development at our hands along far-sighted and progressive lines.

In this connection it may be pertinently added that a solidly-established mercantile marine of our own is of the greatest national importance, if not indeed, an absolute essential, if we are to succeed in any large and permanent way in world trade. That this country will in course of time have its own ships in which to carry its own products to the markets of the world is a consummation devoutly to be wished and courageously striven for.

Without in any way attempting to touch upon matters having, perhaps, a more or less political aspect, may I be permitted to draw attention to the question of Imperial Preference and to express the keen feeling of interest and appreciation which we all must experience at the mother country's first step in the development of this far-reaching and all-important policy. Imperial preference and Inter-Imperial trade arrangements, will, I hope and do verily believe, be the liveliest kind of issues by the time we again meet for the purpose of submitting and discussing another year's business.

You will be interested in knowing that according to our reports the condition of Canada's greatest industry, agriculture, is this year rich in promise, especially in the Western Provinces, where the crops have seldom, if ever before, got away to a better start.

We recently organized and put in motion the Bankers' Trust Company, which will operate to some extent as an auxiliary to the Bank. Such companies, well managed, are excellent, both as conservers of old and creators of new business for the Bank with which they are associated, and we expect our Company, which opened its doors on the 1st of May, will prove a strong, conservative and useful ally. The want of such an affiliated Company has been felt in an increasing degree for some years past.

Just one further word as to that all-important asset which the Balance Sheet does not reveal—the staff; I cannot too strongly endorse the words of appreciation so fittingly expressed by the President and I have no hesitation in saying that in point of loyalty and efficiency in staff of this Bank is second to none.

(Continued on Next Page.)

(Continued from Previous Page.)

For a long period prior to the signing of the Armistice and during demobilization thereafter, the staff of the Bank was reduced, indeed, to a veritable "thin red line," but while numerically weak, the spirit was there in full strength, and we were enabled as a result, to conserve and develop our business in the notably satisfactory manner reflected by the comparative figures shown. (Applause).

So much for that section of the staff, who, for one reason or another, were rendered ineligible for military service. Theirs is a record which we recognize with appreciation and view with pride.

As to those who joined the colors, you will be interested in knowing that from a staff of 1,300 odd at the outbreak of war, enlistments numbered no less than 823, or roughly 63 per cent of the whole, which must very nearly represent 100 per cent of the eligibles. (Applause).

Of those splendid young men, 73 made the supreme sacrifice, 37 were wounded, some more than once, and many received high decorations for valor and efficiency.

To the memory of those whose bodies sanctify the soil of France and Flanders, we can but offer the highest tribute of reverential respect.

To those incapacitated through wounds and otherwise, we are gladly endeavoring to render such assistance as lies within our power.

And to those eligible for re-entering the service of the Bank we are finding positions upon a scale of remuneration which provides against their suffering any hardship in a monetary sense by reason of having joined the colors. In other words, we are giving to each and every man the same salary as when he left, plus such increases as would have followed in the ordinary course had he remained.

To put it in a word, Gentlemen, we are proud of our staff, one and all, and I am sure you will agree with me that we have every reason

to be proud of them. (Applause.)

On motion of Mr. D. Kingborn, seconded by Mr. W. B. Blackader, Messrs. Vivian Harcourt and Gordon Tansley, of Deloitte, Plender, Griffiths and Co., were reappointed Auditors of the Bank.

INCREASE IN CAPITAL STOCK.

It was moved by the President, seconded by the Vice-President — "That the Capital Stock of the Bank be, and is hereby increased from ten million dollars (\$10,000,000) to fifteen million dollars (\$15,000,000) by the creation of fifty thousand (50,000) new shares of the par value of one hundred dollars (\$100.00) each."

It was explained by the President that there is no intention of issuing this Capital in the near future, but that it was thought possible to make timely provision well in advance of possible or probable requirements.

The resolution was unanimously adopted.

On motion of Mr. R. Campbell Nelles, seconded by Mr. A. Haig Sims, Messrs. John Patterson and Arthur Browning were, by unanimous vote, appointed scrutineers, and instructed to cast one ballot for the election of the following persons as Directors: Sir H. Montagu Allan, Mr. K. W. Blackwell, Mr. Thomas Long, Mr. F. Orr-Lewis, Hon. C. C. Ballantyne, Mr. A. J. Dawes, Mr. F. Howard Wilson, Mr. Farquhar Robertson, Mr. Geo. L. Cains, Mr. Alfred B. Evans, Mr. E. F. Hebden, Mr. T. Ahearn, Lt.-Col. Jas. R. Moodie, Mr. Lorne C. Webster.

The ballot having been cast, the directors, as named, were declared elected.

The President—"Before we adjourn I would like to say a few words. As you know, I have been overseas four years. During that time there has been a change in the General Managership of the Bank. I have not hitherto had opportunity of saying anything to the Shareholders with regard to our new General Manager.

"I do not wish to say too much about him because the result of his work has been so good that to express my opinion of it might be regarded as unduly flattering, and I may pertinently add that in so far as I can ascertain, he has the full support of a loyal and efficient staff. As President of the Bank I may say that his work has given me and the Directors every satisfaction and confidence for the future of the Bank, and I am sure that you will all agree with me that in Mr. Macarow we have found a very efficient man as General Manager." (Applause.)

On motion of Messrs. John Patterson and S. M. Baylis, a vote of thanks was tendered the General Manager and Staff, which was briefly acknowledged by Mr. Macarow, who said that while he fully appreciated the kind, over-kind, references to himself, it was not affectation on his part to disclaim any measure of special credit for the progress shown; rather was it due to co-operative effort all along the line, extending from the Chairman of the Board to the junior clerk in the smallest office. The benefit of that intensive co-operation was recognized and acknowledged by none more than by himself.

Mr. Campbell Nelles — "Before we adjourn I would like to express the welcome of the Shareholders to the President, Sir H. Montagu Allan, on his return after four years' absence overseas. We all know why he was away, and we know of his splendid services in connection with the war, and we are all delighted to see him back in his old position at the head of this Bank." (Applause.)

This concluded the business of the meeting, which then adjourned.

At a subsequent special meeting of the Directors Sir H. Montagu Allan was re-elected President and Mr. K. W. Blackwell, Vice-President.

DON'T BUILD ORPHANAGES.

An enthusiastic citizen read in the newspaper about a boy who had run away from a farm, claiming that he had been very badly treated. "If I had my way," he said, "I would not send any of these children out to homes, but I would have the country build a dozen large Orphanages and educate the children until they are old enough to go out and work for themselves."

There are many who talk that way, and unfortunately there are some who practice it and encourage the retention of bright, healthy children in public institutions when it would be much better for them and for the community if they could be enjoying the freedom and the pleasures of ordinary family life. Children, like other plants, grow strong and rugged and develop fine, manly qualities when they have to face the common struggle for existence and success. If tenderly reared in an institution they will be exactly like the hothouse plants—beautiful to contemplate and admire, but wilting and dying as soon as they are exposed to the outside air. It is impossible to teach in an institution all those virtues that make for thrift and independence of character, and even the run-away boy from the institution has testified that his most valuable lessons in life were gained when he had to use his intelligence to gain a livelihood and to compete with his fellows.

No, it has been demonstrated many times, and must be self-evident to any reasonable person that the charity school is and should be a thing of the past. More es-

pecially in a young country like Canada, the smaller the institution the better, and the best institutions will always be those that more closely approximate to the small family home.

BROKEN GLASS DANGEROUS.

Many people who live in cities and towns evince about the minimum consideration for other members of the community. They are quite oblivious of community rights unless, at the same time, their own personal comfort or convenience is endangered. A simple concrete illustration of this is the careless manner in which broken glassware is left in city streets. During the winter, many bottles and jars are broken by delivery men. The broken parts are left where they fall and with the disappearance of the snow in the spring, patches of broken glass are left in the winter's accumulation of rubbish and filth, a constant menace to all rubber-tired vehicles. Often, too, such bottles are broken near the entrances of homes, and, instead of being gathered up and removed, are left as they fell. Painful and more or less serious accidents have occurred to many children, who have stepped or fallen on broken milk bottles. Civic authorities might well consider the advisability of making such forms of carelessness punishable offences. By making examples of a few, this class of offenders might be made to realize that sooner or later inconsiderateness of others acts as a boomerang.

BANK OF MONTREAL HALF-YEARLY REPORT.

**Bank Now Has Paid-up Capital and Rest of \$40,000,000.
—Expansion of General Business.**

The position of the Bank of Montreal, after the acquisition of the Bank of British North America, is shown in the half-yearly statement to April 30th, 1919, which is now going forward to shareholders.

The statement shows that the capital stock of the Bank has now been increased to \$20,000,000 from \$16,000,000, and there is a similar increase in the rest fund, which also stands at \$20,000,000, as compared with \$16,000,000 a year ago. With these increases the Bank of Montreal now has a combined capital and rest of \$40,000,000, which compares with \$26,400,000 in 1910, and \$19,000,000 in 1900.

Of the \$4,000,000 added to the capital stock practically the entire amount is accounted for by the capitalization of the Bank of British North America, and the small amount remaining was issued to shareholders in order to bring the capital up to an even \$20,000,000.

In addition to indicating the position of the Bank following the completion of the B.N.A. deal, the half-yearly statement is also of special interest because it is the first report submitted by any of the larger banks since the end of the war. An examination of the accounts shows that many of the large transactions undertaken during the war period are now being adjusted, and that Canadian banks are rapidly getting back to a normal basis. On this account, there is naturally a lowering of special Government accounts, as compared with the high water mark touched last fall at the end of the regular fiscal year.

On the other hand, there is a substantial increase as compared with the end of April a year ago, even after allowance is made for the B.N.A. purchase. For this reason, a comparison of the six months' statement with that issued for a similar period last year becomes of greater interest.

The Profit and Loss account shows net profits for the six months at the end of April of \$1,751,237, as compared with \$1,287,587 in the corresponding period last year. This year the balance of Profit and Loss brought forward amounted to \$1,901,613, and in addition the premiums on new stock amounted to \$3,500,000. This brought the total amount available for distribution at the end of the six months' period up to \$7,152,850. This was applied as follows:—

Two Quarterly Dividends	\$1,172,250
Amount credited to Rest Account ..	4,000,000
War Taxes on Bank Note Circulation to April 30th	90,986
Subscriptions to Patriotic Funds .. .	28,000
Reserves for Bank Premises	200,000

making a total of \$5,491,236, and leaving an amount to be carried forward to Profit and Loss of \$1,661,614.

The principal accounts as of April 30th, 1919, and April 30th, 1918, are as follows:

	1919.	1918.
Deposits not bearing interest. . .	124,736,111	109,851,994
Total Assets	\$489,271,197	\$426,322,096
Liquid Assets.. . . .	293,980,708	291,624,073
Current Loans and Discounts in Canada	157,683,463	100,294,678
Call and Short Loans in Great Great Britain and United States	76,653,440	96,584,365
Dominion Notes	54,107,243	60,457,838
Gold and Silver Coin	24,743,935	20,931,133
Deposits bearing Interest	268,167,111	247,904,855
Profits for the 6 Months	1,751,237	1,287,586
Capital Stock	20,000,000	16,000,000
Rest Account	20,000,000	16,000,000

With liquid assets of close to \$300,000,000 it can readily be appreciated the position of the Bank of Montreal is in to help Canada through the uncertainties of the future.

PAYING CIVIC UTILITIES.

A comparative summary of the net results of operation of the City of Edmonton's Public Utilities, prepared by Comptroller Mitchell, for the first quarter of the present year, shows that a net surplus of \$50,622.99 has been produced on all the Utilities (inclusive of the deficit on the Street Railway), as compared with \$37,999.38 for the corresponding period of last year, after providing for all capital and depreciation charges. The difference of \$12,623.61 represents an increase over the net surplus of last year of 33 per cent.

The gross earnings of the Civic Utilities, including Electric Light, Street Railway, Telephone and Waterworks, amounted to \$503,768.60, against \$459,979.37 for the first quarter of last year, being a 9.5 per cent. increase.

Increases in the net surpluses are reflected in each of the Electric Light, Telephone and Waterworks Departments, the deficit on the Street Railway being \$764.66 more than last year.

Analysing the gross earnings, the Electric Light Departments show an increase of 7.7 per cent.; Street Railway, 11.3 per cent. Telephone, 13.7 per cent., and Waterworks, 9.5 per cent.

In cost of Operation and Maintenance an advance is noted in each of the Departments: Electric Light, 6.2 per cent.; Street Railway, 17 per cent.; Telephone, 29.6 per cent.; Waterworks, 10.7 per cent.; the composite increase being 13.5 per cent.

Comparative Summary of Revenue and Expenditures.
Revenue:—

	Total to date.	Correspond'g Tot. last yr.
Electric Light	\$172,609.88	\$160,192.29
Street Railway	157,097.63	141,216.69
Telephone	78,419.78	68,968.46
Waterworks	95,641.31	89,601.93
Gross Revenue	503,768.60	459,979.37
Expenditure, Operation and Maintenance:		
Electric Light and Power	75,058.37	70,664.00
Street Railway	115,317.38	98,589.13
Telephone	23,799.18	18,363.88
Waterworks	49,499.11	44,700.27
	263,674.04	232,317.28
Surplus on operation	240,094.56	227,662.09
Capital Charges and depreciation	189,471.57	189,662.71
Net Surplus	50,622.99	37,999.38

Recapitulation of Net Results.

Surpluses:—		
Electric Light	51,266.31	43,168.12
Telephone	12,290.51	9,138.97
Waterworks	8,951.14	6,812.60
	72,507.96	59,119.60
Deficit:—		
Street Railway	21,884.97	21,120.31
Net Surplus	50,622.99	37,999.38

Road-making Machinery for Sale

The City of Enderby, B. C. offers for sale twelve-ton Waterous Steam Road Roller, with Rock Crusher, elevator, screen and belt. Purchased in 1911 from Waterous Engine Co. Used about two months only, and now in first-class condition, good as new. Price, \$4,000.00 cash.

Apply—CITY CLERK, ENDERBY, B. C.

Our Services At Your Disposal

Municipalities that are contemplating the issue of Bonds, the investment of Sinking Funds, or any change in financial policy, are cordially invited to avail themselves of our services as specialists in—

Municipal Securities

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Head Office:
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Branches:

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J. N. GREENSHIELDS, K.C., President.
J. W. PYKE, Vice-President.
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Joint Administration
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Municipal Sinking Funds

Full Particulars Upon Application.

206 TRANSPORTATION BUILDING,
Corner St. Francois Xavier and St. James Streets.

Service to Municipalities

THE Statistical Department of this Corporation is at all times prepared to assist Municipal officials in the preparation and sale of their debentures.

Consult us in regard to the—

- (1) Interest rates most suitable for current markets.
- (2) Form in which debentures should be issued to bring the best price.
- (3) Cost of printing bonds.
- (4) Bond Market conditions.

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Head Office and fourteen Branches in Montreal

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Municipal Securities

For thirty-six years we have specialized in the buying and selling of Municipal Securities and in consequence of this our house offers most excellent opportunities to any municipality desirous of obtaining money by the issue of either short or long term debentures.

We are at all times glad to receive enquiries from municipalities which are contemplating issuing securities and to place the services of our organization at their disposal.

We Invite Enquiries

Hanson Bros.

Bond Dealers Established 1883

164 St. James St., Montreal

BANK OF MONTREAL

ESTABLISHED OVER 100 YEARS

Capital Paid up, \$20,000,000

Rest, \$20,000,000

Undivided Profits, \$1,661,614

Total Assets - - \$489,271,197.

BOARD OF DIRECTORS:

Sir Vincent Meredith Bart., President.

Sir Charles Gordon, G.B.E., Vice-President.

R. B. Angus, Esq. Lord Shaughnessy, K.C.V.O. C. R. Hosmer, Esq.

H. R. Drummond, Esq. D. Forbes Angus, Esq. Wm. McMaster, Esq.

Lt.-Col. Herbert Molson, M.C.

Harold Kennedy, Esq.

H. W. Beauclerk, Esq.

G. B. Fraser, Esq.

Colonel Henry Cockshutt.

J. H. Ashdown, Esq.

E. W. Beatty, Esq.

Head Office: MONTREAL

Sir Frederick Williams-Taylor, General Manager.

Branches of the Bank Located in All Important Cities and Towns in the Dominion.

Savings Department connected with each Canadian Branch and Interest allowed at current rates.

Collections at all points throughout the world undertaken at favorable rates.

Travellers' Cheques, Limited Cheques and Travellers' Letters of Credit issued, negotiable in all parts of the world.

This Bank, with its Branches at every important point in Canada, offers exceptional facilities for the transaction of a general banking business.

PRINCIPAL BRANCHES OUTSIDE OF CANADA:

LONDON, Eng., 47 Threadneedle St., E.C.

G. C. CASSELS, Manager.

Sub-Agencies: 9 Waterloo Place

Pall Mall, S.W.

Trafalgar Square, S. W.

CHICAGO: 108 South La Salle Street,

NEWFOUNDLAND: St. John's, Curling, Grand Falls and Greenspond.

NEW-YORK: 64 Wall Street

R. Y. HEBDEN

W. A. BOG

A. T. SMITH

Agents

SPOKANE, Washington.

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Capital Expenditures

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Financing the Work

C. H. BURGESS & COMPANY

Bank of Hamilton Bldg.

TORONTO

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CANADA

The Royal Bank of Canada

INCORPORATED 1869

Capital Authorized	\$25,000,000	Reserve and Undivided Profits	\$15,000,000
Capital Paid Up	14,000,000	Aggregate Assets	425,000,000

Head Office, Montreal

BOARD OF DIRECTORS

Sir HERBERT S. HOLT, President		E. L. PEASE, Vice-President and Man. Director	
JAS. REDMOND	E. F. B. JOHNSTON, K.C., 2nd Vice-President	C. E. NEILL	C. C. BLACKADAR
G. R. CROWE	HUGH PATON	W. J. SHEPPARD	JOHN T. ROSS
D. K. ELLIOTT	WM. ROBERTSON	C. S. WILCOX	SIR MORTIMER B. DAVIS
Hon. W. H. THORNE	A. J. BROWN, K.C.	A. E. DYMENT	G. H. DUGGAN
C. E. NEILL, General Manager	M. W. WILSON, Supt. of Branches	F. J. SHERMAN, Asst. General Manager.	W. H. McWILLIAMS
	E. L. PEASE, Managing Director		

535 BRANCHES:

476 BRANCHES IN CANADA:

194 in Ontario and Quebec;
 78 in Maritime Provinces;
 157 in Central Western Provinces;
 41 in British Columbia

6 BRANCHES IN NEWFOUNDLAND:

47 BRANCHES IN WEST INDIES:

CUBA—Havana, Santiago and 24 other points.
 PORTO RICO—San Juan and 2 other points
 DOMINICAN REPUBLIC—San Domingo and 4 other points
 ANTIGUA—St. John's; BAHAMAS—Nassau; BARBADOS—Bridgetown and Speightstown; DOMINICA—Roseau; GRENADA—St. Georges's; JAMAICA—Kingston; MONTSERRAT—Plymouth; NEVIS—Charlestown; ST. KITTS—Basseterre; TRINIDAD—Port of Spain, San Fernando and Scarborough (Tobago).

9 BRANCHES IN CENTRAL AND SOUTH AMERICA:

BRITISH HONDURAS—Belize
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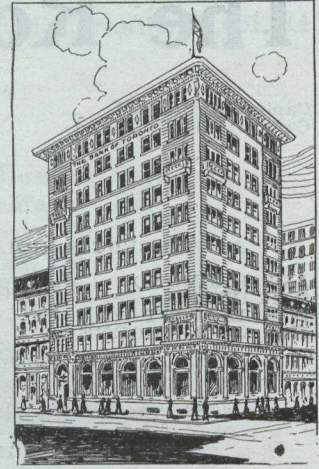
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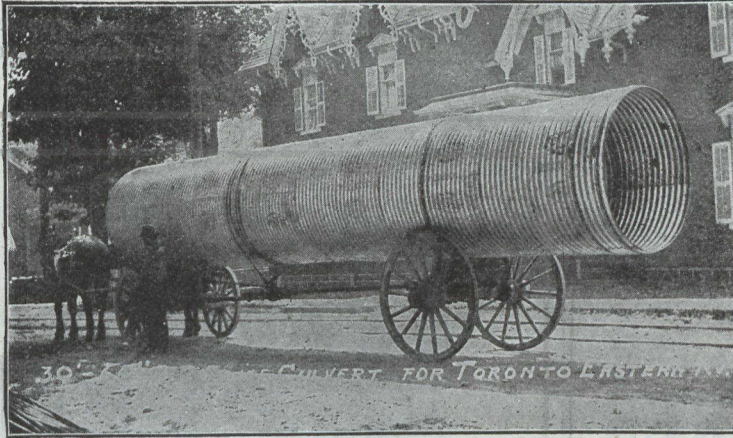
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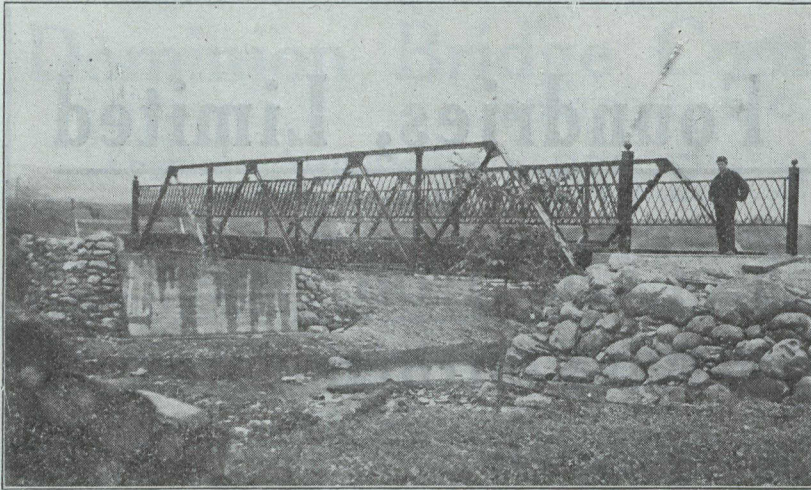
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