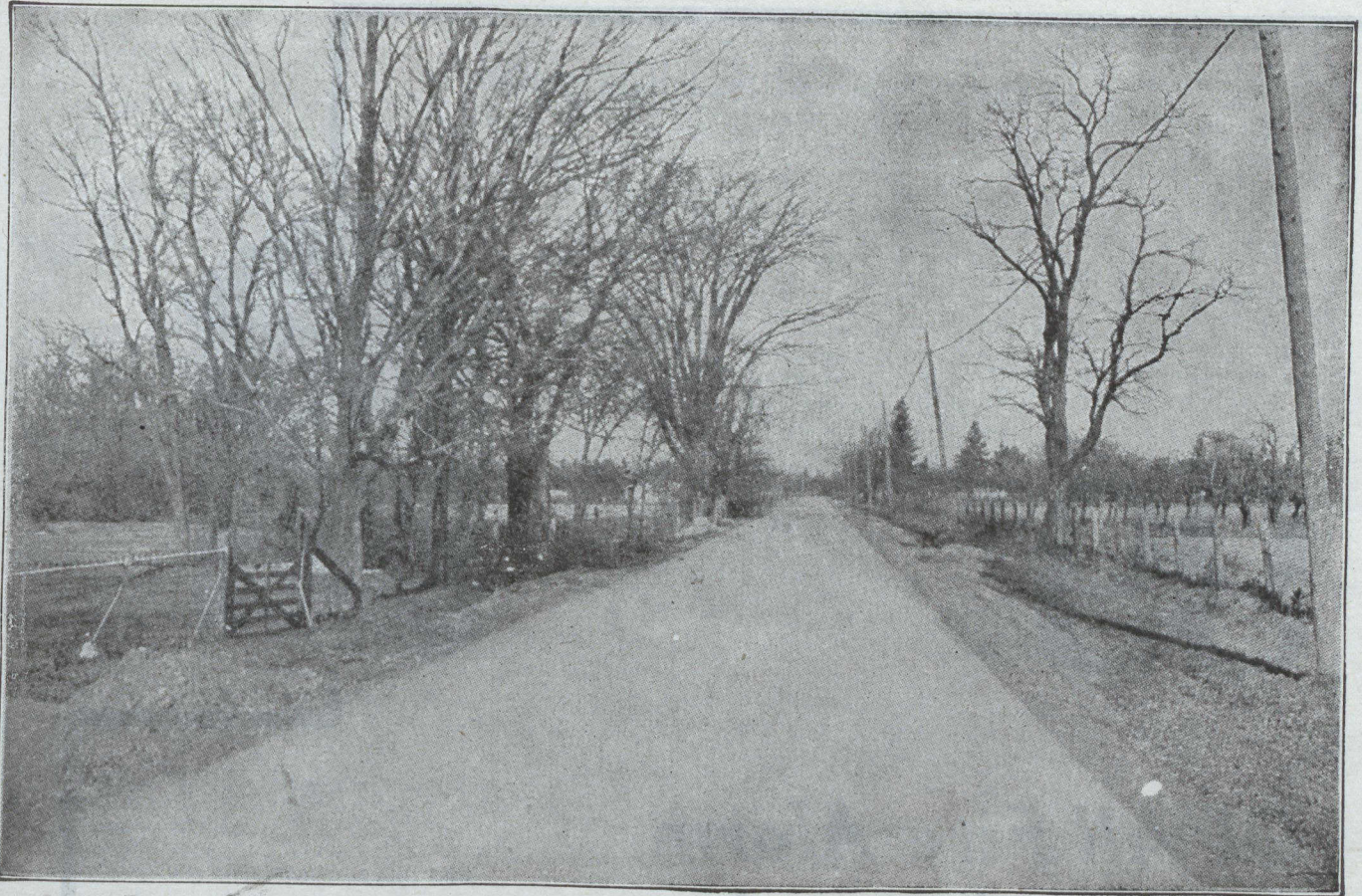


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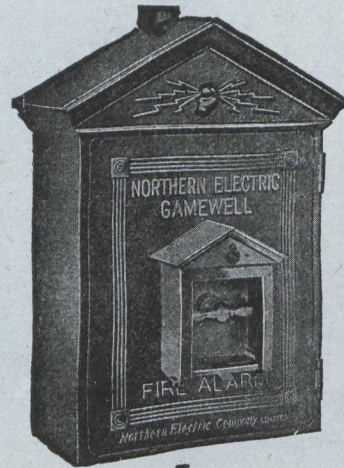
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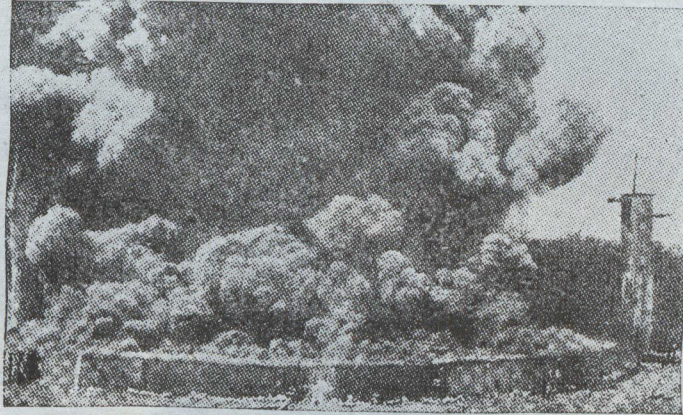
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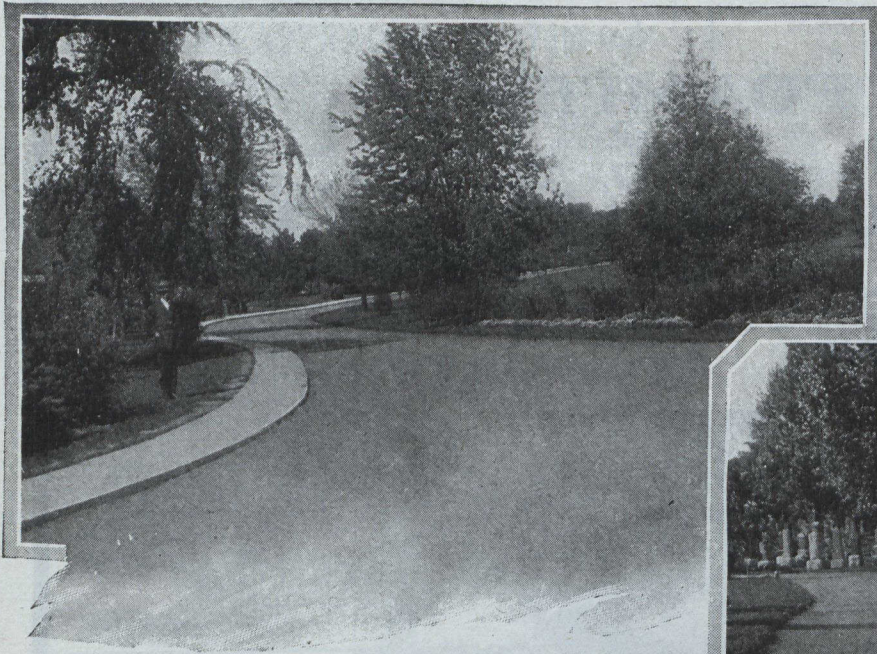
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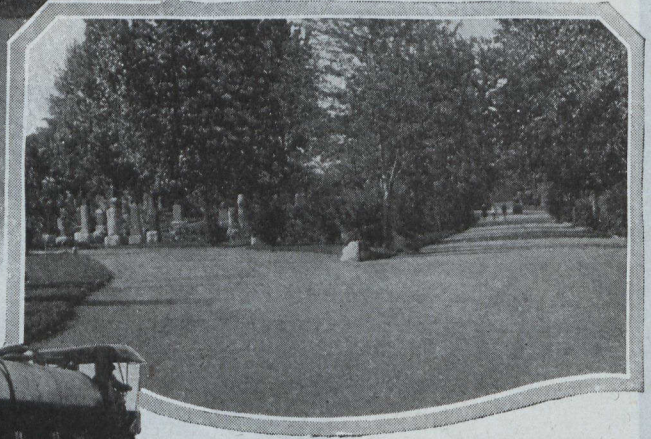
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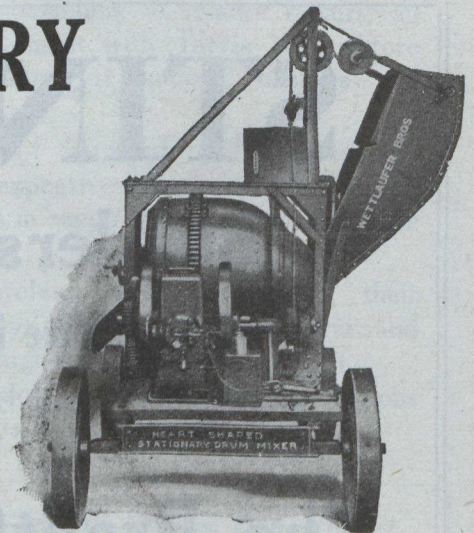
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FREDERICK WRIGHT, Editor.

VOL. XVI.

MONTREAL, JUNE, 1920.

NO. 6.

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## Training Men For Municipal Government

One of the reasons given for the appointment of Sir Arthur Currie to the principalship of McGill University is, which he will be able to re-organize this great educational institution to better serve the needs of today. If such is the case there never was a better opportunity for Sir Arthur to serve the present generation than to work for the establishment of a municipal department through which young men can be specially trained for the government of our cities. In the United States, many of the universities, and the state institutions in particular, have such departments given wholly or in part to the study of municipal government, in which they have been remarkably successful. In Canada on the other hand education in local government has never been taken up seriously with the result that many of the principal executive positions have to be filled by outsiders, because with the growth of our cities such executive positions can only be satisfactorily filled by men with special knowledge. What is more, there is a fast growing feeling throughout the Dominion towards the commission and manager form of municipal government, which means that more trained men will soon be required for the administration of Canada's municipalities. Should the whole of the 891 urban communities adopt commission-manager government, say within a year, the system would fail through lack of qualified men. Even in the United States, where 125 cities and towns have adopted the manager form of government they have difficulty in the personnel and will have until enough men have graduated from the universities.

But municipal government goes farther than mere administration. Since the war thrust greater responsibilities on the councils, municipal students

have come to realize the tremendous opportunities to serve the citizens through local government. They know the very happiness of the community, be it large or small, depends on the broad mindedness of the local governing body. Social service and social welfare, and all that the terms imply, are today recognized as part of the duties of the local authorities; but neither administrative nor social responsibilities can be taken up by the local governing body only so far as it has ability to carry them out. This ability can only be attained by knowledge gained by such means as we suggest that McGill should take up, namely a municipal department. We believe that such an example would soon be followed by other Canadian universities.

### THE FIRST VICE-PRESIDENT OF THE CANADIAN GOOD ROADS ASSOCIATION.

We congratulate Dr. E. M. Desaulniers, M.L.A., on his election to the first vice-presidency of the Canadian Good Roads Association whose annual convention was recently held in Winnipeg. Dr. Desaulniers has since its inception been a strong supporter of the association and his present position will enable him to do still more work in the cause of good roads which he has so much at heart. It is not too much to say that the present splendid road system of the Province of Quebec is due in no small measure to the constant advocacy of the genial doctor, and certain it is that no man in Canada is better versed in road building—its history from the days of Rome to the present systems as carried out in different parts of the world.



## Good Roads and Goods Roads Associations

A decade ago the highways and roads in the Dominion were misnomers. There were none worthy of the name. Neither were there any good road associations in existence ten years ago. Today Canada has excellent road systems in each of her provinces. She has a national and four or five provincial good road associations; the roads the result of the associations, at least to a large extent. Socially good roads have proved a boon to the citizens of Canada. They have opened up the beauties and health giving qualities of the country to the city dweller and reduced the isolation of country life to the price of a Ford. Previous to the good roads boom those living in the country counted their neighbors in a two miles circle; today they count their neighbors in a circle of twenty and thirty and even forty miles. This larger social intercourse, which has been the means of bringing about a broader conception of "our duty to our neighbor" has been made possible by improved roadways. If the good road movement had done nothing more than this it was worth while.

But there is the economic value of good roads, and possibly it was this side that first appealed to our legislators in spending the large sums of money they have, and are doing in improving the highways of the Dominion. The farmer, that most conservative of mortals in the spending of public money, was almost the first to see the value of good roads

in the merchandising of his products and he became one of their strongest advocates. Results have justified his advocacy. Wherever there is a good road system the products of the farm reach the market in better condition and at a cost of at least fifty per cent less than what it did in the old days. This cost is saved in time and lessened wear and tear of horses and vehicles. Wherever there are good roads farm values have increased considerably, and trade in general is helped by tourist traffic to such an extent that in one province it is computed that the new roads built have been repaid by the profits made in catering to the large number of tourists from the United States that are yearly attracted by the excellent highway system.

Canada today can boast of more good road mileage per capita than any other country in the world with the exception of England and France. Even the United States, considering the difference in population is not so well advanced, which is saying much when it is realized that within recent years our neighbors to the south have been doing wonderful work in road building. Such a record is encouraging, but there is much to be done and the good work must go on. As a matter of fact the good road movement is only just beginning to take a real hold on the imagination of the people. It is for the leaders to carry on until every hamlet in the land has its good road system.

## The National Highway Scheme

The National Highway scheme, which was first advocated in the columns of this Journal in 1916, is making headway. The Canadian Good Roads Congress discussed a resolution, which was referred to the executive committee, urging upon the Dominion and Provincial governments to take co-operative action in the matter. When we first advocated a national highway from the Atlantic to the Pacific as a monument of Canada's part in the great war and as a memorial to our fallen soldiers, the executive of the Canadian Good Roads Association did not see eye to eye with us, believing as they did at the time that the scheme was too ambitious. Perhaps it was, and some of the speakers at the recent congress still maintain that the activities of the association should be confined to the building of roads in the various provinces. Such a policy, if adopted would show singular shortsightedness and insularity on the part of the Dominion wide, good roads organization, particularly when it is taken into consideration that practically every province has its own association doing splendid work in the building of provincial roads. It would seem that the time is opportune for the Dominion association to work for the linking up of the provincial systems by a national coast-to-coast highway.

The material value of such a national highway needs no advocacy here. As a public investment well built highways and roads repay for themselves over and over again in the increased business brought to the fortunate municipalities so linked up. And the better the road the better the returns. What the exact monetary returns would be for a

continuous highway of 3,500 miles, from Halifax, N.S., to Nanaimo, B. C., is impossible to say, but this we do say with confidence that it would be not only one of the best but one of the safest investments this country ever made.

But there is something bigger than the mere monetary returns to be considered in such a gigantic scheme as a transcontinental highway. There is a feeling abroad that we should know our own country better. Outside those who travel for purely business purposes the average Canadian knows little about Canada personally. The vast distance scare him, but let him once realize that there is a highway on which he can travel to any point in this huge country, his fears are gone. Such a highway will do more than anything else in bringing home to the citizens of this Dominion that they have a country of which they can be really proud.

We congratulate Alderman Graves, of Woodstock, on the stand he has taken in renting his 25 houses to citizens with six or more children. The slogan "no children" has become too common a term with landlords with tenements to rent. It is bad enough to have to pay excessive rents without such a rotten condition being attached to the lease. Such discrimination should in every municipality be made an offence against the community, and the offender fined. Every child is an asset to the community, and every encouragement should be given to its rearing. It is certainly not conducive to the family life of the nation that such discrimination as "no children" should be pasted on every "to let" sign.



## Outside Control of Municipal Expenditure

Sir Hormisdas Laporte, the Chairman of the Montreal Charter Commission maintains that the new charter of Canada's big city should be so drafted that it will give the citizens increased power in their own government, or in other words Montreal should have more autonomy than what it has under the present charter. In this we are in hearty accord with Sir Hormisdas, who having had a large experience in civic administration, speaks with authority. During recent years a large part of every session of the Provincial Legislature has been given to Montreal legislation, which only benefited the lawyers. But while Montreal, with its three quarters of a million people has a right to home rule, it should not be absolute home rule. There should always be an audit of its finances by the Provincial Municipal Department, which since its establishment three years ago has proved a splendid success in building up municipal Quebec.

In Great Britain, where municipal government is the most efficient in the world there has always

been a controlling body over every municipal council in the country. In the larger cities this control is more or less confined to the overlooking and checking of local expenditures. Nevertheless the fact that there is outside control by a responsible body made up (outside the minister) of highly trained men, is a strong deterrent to extravagant expenditure. It was because this checking or controlling system was omitted when the English principle of local government by mayor and council was adopted on this continent, that municipal government has not been the success it is in England.

In the drafting of the new charter it is hoped that the Commission will remember that there is in existence a municipal department in Quebec that is well qualified to act as auditor over the finances of the city, a check that would in no way interfere with the spirit of self-government and would be free of all the political and legal entanglements usually attached to any petition for increased municipal powers.

## A Conference of Municipal Treasurers of Canada

Like every other public institution municipal government has been effected by the new economic conditions forced upon all nations as a result of the war, and this is particularly true in Canada because of the rapid growth of her urban municipalities and the larger interest taken in local public affairs by the farmers. The citizens to-day are looking for more from the local governing bodies than they did yesterday, and they expect greater efficiency in local administration, particularly from those officials who give advice on municipal finance. In short, the municipal treasurer, or secretary-treasurer, is expected to know more about municipal finance and accounting than what he did; he is also expected to be in a position to convince his council that every dollar collected and spent will not be just collected and spent honestly, but equitably and efficiently. In the United States a commission which recently investigated 125 cities with an aggregate population of twenty-five millions reported that twenty-five per cent of the income was wasted because of inefficiency on the part of those responsible for the finances. If such an investigation was held in Canada it is hardly likely that such a heavy leakage would be found, but there is no doubt that there are leakages that impair the efficiency of our municipal institutions. There is only one way to stop such leakages and that is by more official efficiency, and the only way to bring about official efficiency is by education. And certainly the best way to enlighten our municipal treasurers, accountants and chairmen of finance is to bring them together so that they may get first hand information from experts and at the same time be able to discuss their problems with their fellows from other parts of the Dominion.

In the year 1917 this journal had partially arranged for a three days conference of municipal men to discuss the different phases of municipal financial administration and municipal accounting. It was proposed to hold the meeting in Toronto, because of its central position for all Canada, but because of war conditions it was considered wiser to put the meeting off to a more opportune time. We believe that the time is now opportune to complete the programme, which briefly outlined is that a three-day's meeting of municipal treasurers, secretary-treasurers, accountants and chairmen of Finance be held in a central city—such as Toronto—to discuss the financial problems of municipal Canada. It is suggested that as a result of the meeting an advisory bureau be established (made up of the leading municipal officials and experts in the country) for the purpose of advising those interested in the financial administration of any urban or rural municipality. As yet the scheme is only tentative, for much depends upon the support it will receive from the officials themselves, though we have received reassurances from those who helped us in 1917, which to say the least is encouraging. In our next issue we hope to say something more definite on the subject, in the meantime we would be pleased to receive communications from anyone interested.

"Every municipality should constitute itself a vigilance committee in the matter of legislation affecting the common weal, whether introduced in the Dominion Parliament or the Provincial Legislatures. The Officers of the Union of Canadian Municipalities do their best, but little impression can be made by two or three, no matter how zealous, unless the municipalities heartily co-operate. It is only by constant pressure exercised upon Parliamentary representatives that they can be brought to realise the significance of the principles involved."—Fred. Cook.



### REAL SIGN POSTS

One of the road problems that must be considered today in Canada is that of sign posts. Outside those signs erected by the touring and automobile clubs, who naturally limit the posts to the main highways, there are no means of direction in the rural districts. In the old country the question is considered of sufficient importance to warrant a special enquiry by the new Ministry of Transport. If each county council or other authorities would spend a few hundred dollars for enamelled signs to be erected at all cross roads, it would be money well spent because it would encourage city owners of cars to travel in the country more, which cannot help but be of benefit to local stores and hotels.

### MUNICIPALITIES IN ARREARS.

According to press reports three municipalities in Saskatchewan and four municipalities in Alberta are in arrears with their loan interest or principle, or both, and that steps have been taken to bring the delinquent municipalities to time. Such reports not only make bad reading, but affect the credit of the whole of the municipalities of the two Prairie provinces, even though the report was careful to state that "the position of the great majority of the towns of Saskatchewan and Alberta is thoroughly sound, and this conclusion was reached after careful inquiry."

The difficulty is that in the pre-war time days practically all western municipalities with the confidence begotten of too much optimism and the persuasive powers of some of our bond dealers, bit off more than they could chew in local improvements, with the consequence that when the boom broke they were saddled with splendid improvements, big debts, little credit and less cash. Then the war came on and their position got worse. Fortunately in the nick of time prosperity touched the West as did the East and fortunately almost all the Western municipal councils seized the opportunity to largely reduce their indebtedness, by increased taxes, so that today the credit of municipal Canada in the West stands high, as it rightly deserves after the wonderful effort it made to meet its debts. Those who have had the opportunity of studying the financial statements of any of the Western municipalities for the last six years have seen the records of six years of municipal determination to overcome obstacles that would have staggered private organizations—in fact, would have sent them into bankruptcy. With the exception of seven, the Western municipalities have won out, and given a little time the seven will win out too, so why the special eagerness on the part of some of the bond holders to air their grievances at this time. A little waiting will not hurt them, particularly when they know that their money is safe.

Under normal condition no municipality has any right to delay the payment of its bond indebtedness one hour, and under normal conditions the municipalities of Canada do pay their debts promptly, but the position of the seven delinquent municipalities now under investigation are the results of abnormal conditions, as already pointed out and while it is to be regretted that the bondholders have had an opportunity to protest, we think that a little more toleration on the part of the bondholders concerned would have been better in their own interest.

### CITY OF CAPETOWN, SOUTH AFRICA

We have just received the annual report of the City of Capetown, South Africa. The report, like its predecessors is an excellent epitome of the activities of a council that works under a system similar to the British form of municipal government. As a separate community Capetown is 262 years of age, and fifty-two years old as a city. It has a population of 172,000, the white people only just dominating in numbers with 89,7000. In many respects Capetown is like the city of Montreal, inasmuch there are two dominant races—the Boers and English—living together in harmony and dividing the civic responsibility. Many of Capetown's mayors have reached high office in the State and quite a number have been knighted as a recognition of their useful public service. There are forty members of the Council under a mayor elected by the members. The average number of council and committee meetings called was three each week, with an average attendance of over 90 per cent. There is no salary attached to the office of councillor or mayor, though a small entertaining fund is allowed to the mayor. The members of the council are elected for three years, one third retiring each year. Such a system not only means continuity of policy but continuity of personnel, which goes far in bringing out the best men as candidates for office. The report of each department is very clear and concise and bound together in a way worthy of Capetown.

### MUNICIPALIZED MUSIC

Though by no means the first to expound such a cause Mr. George Bernard Shaw has announced himself as a champion of municipalized music—that is, each municipality should help bear the cost of providing good music for the community—for the reason that good music would save young men and women, boys and girls from seeking the questionable pleasures of the streets. But Mr. Shaw goes further. He argues it is cheaper to provide music to keep young people from the jail than what it is to provision in jail. In this, the English playwright strikes the psychological fact that human impulses must find an outlet either in decency, through the influence of good music, decent dancing, athletics and the best in drama, or degeneracy brought about by the baneful influence of the jazz band, the tango and the wine shop. The old system of controlling the morals of the young by suppression simply drove young people to the lure of the streets, so no longer is it advocated by social welfare leaders, though they find the greatest difficulty in finding means for the proper direction of the vital impulses of those who come under their charge. In our larger industrial centres thousands of young men and women have to spend their evenings on the streets, in the moives or cheap dance halls for they have not the means to go to the better theatres or concerts because of the prohibitive prices, and the downward step is but a short one. Every human being is influenced by music and popular symphony or band concerts, subsidized by the municipality, would do much to raise the moral tone of the community. As such these concerts become a good public investment and should be encouraged.



**MAINTAINING STREETS AND SIDEWALKS**

During the summer season municipal councils will be much exercised as to how much they can afford to spend on their streets and sidewalks. The difficulty of keeping streets in anything like repair on an increased cost of labor and material has been made worse by the increasingly large number of automobiles that have come into use within the last few years. These power driven vehicles wear down everything they run along into dust, and certainly the compensation that the owners give in the form of licenses is anything but adequate to pay for the extra cost of maintenance made necessary by their use of the roads. But the fact remains that the roads and streets have to be properly maintained in the meantime by the community and the money must be forthcoming from somewhere. It is this "somewhere" that is bothering so many councils and we sympathise with them. To borrow is expensive, for money was never so dear as it is to-day, and to increase local taxes is unpopular, particularly in face of the new Federal budget, which calls for heavier taxes, but the street situation has to be squarely faced in each community, for the citizens have the right to demand the proper upkeep of the public thoroughfares, only they must be prepared to pay for it all.

Those municipalities that have local improvement by-laws are best off to-day, for therein the local proprietors pay the bill for those streets and sidewalks facing their respective properties, which in the case of rented buildings is added to the rent, but the citizens of Canada were never so well off as they are to-day and consequently are in a position to pay for the privilege of well maintained thoroughfares.

**AMERICANIZATION vs. CANADIANIZATION.**

There was recently mailed to our office a pamphlet from an organization in the United States that has for its object the Americanization of all people living under the Stars and Stripes. It is evident that the propoganda is to counteract the baneful influence of the I.W.W. (International Workers of the World), the Russian soviets and kindred bodies, and as such it deserves all success. But why should the propoganda be carried on in Canada? Again one of the international trade unions some time back sent out a similar appeal which reached its Canadian members and when a Vancouver local made a strong protest the secretary replied, with all theunction begotten of self-satisfaction, that the said union being open to citizens of North America the executive were justified in using the word "Americanization" in their appeal, even to those domiciled in Canada.

Industrially it might be in the interests of organized labor in this country to co-operate with organized labor in the United States, but politically and socially there can be nothing in common between the two, beyond the common bond of humanity. Canada has her own institutions and has a right to expect her citizens, and those living under the protection of her flag, and her laws, to live up to them, and to say the least is hardly in keeping with the spirit of goodwill that certain public bodies of the United States should attempt any kind of propoganda to Americanize citizens of Canada. It is not in good taste.

**THE HOUSING PROBLEM**

As an inducement to build homes the Kingston (Ont). City Council has decided to exempt houses built this year or next year from taxes for five years. While the idea may not be the most effective method of solving the housing problem it is a real attempt on the part of the City Fathers to do something to relieve the situation, and as such the decision is to be commended. Throughout Canada the housing problem is becoming more serious than ever. Fortunately summer is with us and many families have taken to summer cottages and even tents, but what will happen next winter, with so little building going on, because of the cost, makes serious contemplation. To make matters worse a large immigration is expected this year of families, most of whom will locate in our industrial centres, in spite of the inducements made to settle on the land. From careful inquiries that we have made there is little or no building of cheaper tenements going on by private investors, and practically none, outside Ontario, under government housing schemes, either Federal, Provincial, or Municipal. As a matter of fact, what purely municipal schemes there are, are limited to dwellings costing \$10,000 and upwards. The reason for this is the lower risk attached, and in one case the better class of houses were built to give a better appearance to a particular section of the municipality. This may be good business, but it does not go far to solve the housing problem of the worker which has become so serious that it looks as if the municipal authorities will have to build on a large scale on municipal credit, otherwise there will be such a congestion of humanity in our industrial centres, that new life will be given to their present slums, and new slums created to such an extent that will take years to eradicate even under the best social conditions.

**THE MUNICIPAL MAGAZINE OF SOUTH AFRICA**

Our South African contemporary—the Municipal Magazine—in a kindly reference to our work recommends municipal councils throughout the great Dominion of South Africa to subscribe for the Canadian Municipal Journal. Such a spirit of co-operation is indicative of the free masonry of municipal government in every part of the Empire, and the United States. Whatever differences there may be between the larger governments there are no differences between the thousands of local councils that form part of this vast democracy, other than that of degree in living up to the ideals of local government as set down in the annals of the Old Country, the true mother of small parliaments as well as of larger parliaments. There is no doubt that this spirit of free masonry has been brought about by municipal unions and leagues backed up by municipal organs such as the South African Municipal Magazine which though less than four years old has been a large factor in cementing the municipalities of South Africa. We certainly commend the Municipal Magazine, Johannesburg, S.A., to all Canadian and American students of municipal affairs. The subscription is \$2.00 per year.



### Ancient Roads.

(P. C. COWEN, M.I.C.E.)

Roads have, with a considerable degree of truth, been regarded as a symbol or measure of the civilisation of the country in which they are found. It has been said:—"If the community is stagnant, the condition of the roads will indicate the fact. If they have no roads, they are savages." The most ancient roads of which we have any precise information are those constructed by the Romans, who are said to have learned the art from the Carthaginians. One of the oldest of the Roman roads, and that which is the most celebrated for the grandeur of its works, is the Appian Way, 360 miles long, which was commenced in the year 312 B.C. and is now in constant use. Roman roads are remarkable for preserving a straight course, without regard to obstacles which they might easily have avoided. In solidity of construction they have never been excelled, and many of them now form the foundation of modern roads. The Roman roads were composed of four layers, except when a natural foundation of rock was found. The lower layer was formed by courses of large, flat stones, or, when there were not obtainable, with stones laid in mortar; the second layer was of rubble masonry of smaller stones or a coarse concrete; the third, a layer of fine concrete and the finishing coat, a pavement of Polygonal blocks of hard stone jointed with the greatest exactness—the total thickness of the four layers being in some cases three feet. With a rock foundation, only the third and fourth coats were used. There was one other feature common to the construction of the magnificent Roman public works and that was, that with regard to each there was considerable misappropriation. The general form of construction of the Roman roads was followed for many centuries on the Continent, and notably in France; but the inhabitants of the British Islands appear to have learned nothing from the Romans in this respect.

### ANCIENT GRAFTING.

It may be of interest to know that during the first century the extravagant expenditure of the Roman Cities had increased to such an extent that a number of the city authorities applied for the appointment of an Imperial auditor to put their affairs in order, and that such officers appointed at first to meet a special emergency became permanent officers called Curatores, with immense powers, especially over finance. The remedy, however, was applied too late; men began to flee from the burden of city taxation; membership of the Curia or city authority began to be thought a burden rather than an honour, and the cities gradually declined to the ruin of the 5th century.

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In 1764 a French engineer named Thesaguet, substituted foundation stones on edge in the lower course of the Roman cross section, and made the upper layers thinner, and this modified Roman construction was followed till the influence of Macadam spread to the Continent in the early years of last century. Among the first laws passed in England with respect to roads is one in the year 1285 directing that all bushes and trees should be cut down for a width of 200 feet on each side of the road to prevent robbers lurking therein, and providing that when any highway is worn deep and inconvenient that another should be laid out alongside. In 1346 Edward III, authorized the first tolls to be levied for the repair of the roads, and in 1525 the English Parliament passed the first Act relative to their improvement. Lord Macaulay, with respect to the condition of the English highways about 200 years ago, says, that it was no uncommon thing for the fruits of the earth to rot in one place, when a score of miles away the people were suffering from a scarcity of the very food which was spoiling and almost within their reach. At this time each parish was obliged to build and maintain the roads within its confines, and it not infrequently happened that a poor impoverished community was expected to maintain a highway between two rich and prosperous towns. This peculiar hardship, in a slighter degree, gives ground for complaint in the present day.

So late as 1736 the roads in the neighborhood of London, were so bad that in wet weather a carriage could not be driven from Kensington to St. James' Palace in less than two hours, and sometimes stuck in the mud altogether. In that year Lord Hervey, writing from Kensing-

### Good Roads and Peace.

"The road is so necessary an instrument of social well being, that in every new colony it is one of the first things thought of. . . . . The new country, as well as the old, can only be effectually opened up by roads, and until these roads are made it is virtually closed." . . . . . Roads rule the world—not kings nor courts, not ships nor soldiers. The road is the only royal line in the democracy, the only legislature that never changes, the only court that never sleeps, the only army that never quits, the first aid to the redemption of any nation, the exodus from stagnation in any society, the call from savagery in any tribe, the herald of prosperity. The road is umpire in every war and when the new map is made, it simply pushes on its great campaign of help, hope, brotherhood, efficiency and peace."—Smiles in *Life of the Engineers*.

### PAVEMENT COST DATA.

There are very few pavement cost data of any real value in existence today. In most cases, no attempt whatever has been made to keep them, and in those cases where a sincere effort in this direction has been made, the results are vitiated by one or more causes over which the official keeping the records has in most cases had little or no control.

All records of past performances must be read in the light of present knowledge of altered conditions in the performers and with, a recognition of the merits of the new competitors in the field. All things change. At least some slight improvement in pavement construction is made each year, and traffic conditions are constantly becoming more severe. Even the caliber of city officials and public contractors is improving with the spirit of the times.

The most corrupting influence upon the gathering of past pavement data has been the political situation, for where the city engineer depends upon a politician for his tenure of office, and the politician either is the contractor or is dependent upon the contractor for his campaign funds, the vicious circle is complete and the engineer is in bondage. Add to this the political inspector and the corrupting force of the present competitive system, and the picture is complete. It should not surprise one that many of our pavements are poor.

The future promises better pavement cost data. Today, for the first time, really good pavements are being laid as a rule and not as the exception in many of our cities, and the habit is spreading.

The knowledge that the original construction was properly conducted is the matter of first importance if our cost data are to be of any value. Then we must know the cost of the wearing surface separate from the cost of the concrete foundation, and must be able to deduct the cost of other items that do not enter into the matter of surface economy.

A card index system is probably the best method of keeping pavement cost data. A separate card should be entered for each block of pavement, and a separate card for each intersection. The number of square yards of surface laid and the cost per square yard, with dates and other data, should be entered on these cards, and as repairs are made, the date, yardage and cost of these should be entered also, either on the same card, or on a separate card to be filed with it, preferably locating the repairs with a diagram on such separate cards.—Chas. A. Mullen.

ton, complained that "the road between this place and London is growing so infamously bad that we live here in the same solitude as we would do if cast on a rock in the middle of the ocean, and all the Londoners tell us that there is between them and us an impassable gulf of mud." About ten years earlier, however, the Highlands of Scotland were opened up by roads made for military purposes by General Wade. Mr. Arthur Young, in 1770, describing a road in the North of England, states that on it travellers meet with ruts, which he measured, as much as four feet deep and floating with mud, only from a wet summer, and speculates what its condition must have been after a winter. Even as late as 1809 the English roads are said to have been little better than as Mr. Young described them and no substantial improvement was effected till the advent of Macadam and Telford.



## Prevention of Dust on Roadways

F. W. W. DOANE, C.E.,

The change in character of vehicles, the increase in volume of traffic, the greater speed of road vehicles experienced with a smoother and more permanent road surface and a better understanding of the deleterious effect of dust on the health, have been the means of impressing upon the public more forcibly of late the evils of the dust nuisance. That a road should be free from dust is essential, not only to the comfort, and well being of those using it either on foot or on wheels, but also of those who are obliged to spend a portion of their time in its immediate vicinity, whether as residents or on business. Men upon whom the responsibility for the condition of roads falls are paying more attention to securing dustless roads not only by making new roads as nearly so as possible, but also by applying remedial measures to existing roads.

Perhaps some distinction should be made between dirt and dust. Dirt is simply matter out of place. The oil that on a white pair of kid gloves is "dirt" would be, in the bearings of a machine a saving grace. The physical objections to dirt and dust lie chiefly in an association of ideas between dirt and dust on one hand, and carelessness, laxness and slipshod methods on the other. A dirty man is objectionable because his appearance implies that he is "sloppy" in other things as well. Yet a battle stained hero, fresh from the field of his success, is adored for the very dirt and dust with which he is covered, because the significance of this dirt is the reverse of its ordinary significance.

However there is nothing idyllic about road dust, so there need be little apology for its arraignment. Its entry into the eyes, mouth and nostrils is abominable, and its effect upon the impecunious man's laundry bill is discouraging.

Eminent physicians contend that dust is one of the greatest enemies of advanced age, since it is the frequent cause of colds and respiratory diseases. It is a distinct menace to public health, but does not in itself propagate or even to any great extent transmit the ordinary infectious diseases. Dust can transmit disease only when infected, and infected dust forms only a very small proportion of the total dust in the world.

The hygienic objections to dust are based on the external action of its particles in clogging the mouths of the ducts of excretory glands of the skin, irritating the eyes producing chafing between the skin surfaces in contact etc., and their internal action, varying with the size, shape and material of which these particles are composed, from practically nothing to severe irritation, upon the mucous membrane of the nose, throat and lungs and intestines. Here the mere mechanical irritation may produce severe discomfort. Certain chemical dusts, may by absorption, produce specific poisonings, and in any case, irritation, set up in such ways, probably tends to make more easy the operation of harmful bacteria, if these should reach the irritated membranes.

No atmosphere should be accepted as innocuous unless dustless and when an atmosphere carries not only miasmatic agencies, but putrescent particles, its evil capacity is intolerable. The dust question, therefore, is about as important to raise as it is difficult to solve. But it is at least profitable to investigate causes, especially those in which our existing road system is seriously implicated. An accurate diagnosis of a disease is a big stride towards a cure.

The problem of dust abatement differs for the several kinds of road and pavements. Dust should be removed from hard pavements; but the use of the so called dust preventives and surfaces treatments on pavements subjected to heavy mixed traffic, is entirely wrong in principle, as sanitary conditions require the constant removal of filth from streets, and if this is removed periodically, the effectiveness of these processes is curtailed. On the other hand in the case of broken stone roads without artificial builders, the dust must be retained on the surface, since the life of the road depends upon the binding together of the larger particles of the metal by the cementing action of the fine material and by moisture. This does not mean that it is wise or necessary to leave dust inches deep to bind the metal.

Since the majority of the roads of the country are earth, gravel or water bound macadam, one of the chief phases of the dust problem is the laying of dust on these roads.

It is generally conceded that water sprinkling, at least by the methods commonly employed, is not practicable for the majority of such roads on account of the frequent difficulty of obtaining water near at hand, and the consequent excessive cost. Therefore various artificial dust layers have been produced, many of them acting with water to produce the desired effect.

With the exception of calcium chloride they are bituminous material; and its effectiveness depends upon its property of retaining moisture applied to the road surface and absorbing moisture from the atmosphere. It is applied by either the "wet" or "dry" method. By the first it is dissolved in water and applied from an ordinary sprinkling cart, solution of from 1 lb. to 1½ lbs. to each gallon of water being used.

The second method is especially applicable where water is not easily obtained. By this method the dry material in its granular form is spread directly upon the road allowed to dissolve by the absorption of moisture from the air. One pound being said to attract and retain from 1 lb. to 1¼ lbs. of water from the atmosphere. The manufacturers recommend the use of about 1½ lbs. to the square yard of road surface for the first application, though smaller amounts may be used with satisfactory results. For the second and subsequent applications, less than 1½ lbs. per yard may be used.

Now that the value of good roads has been demonstrated everywhere, people will no longer be contented to live in regions where bad roads are tolerated. The district that still lacks enterprise enough to secure good roads will go down hill steadily—materially, morally, and educationally. The districts where good roads are built and maintained will steadily advance. No longer can there be any middle ground. The good-road region will be marked by progress; the bad-road region, by a steady retrograde movement.

### GREAT ROADMAKERS.

The names best known as those of makers of highways are Telford and Macadam, though Rennie, who began life as a wheelwright, was also a great roadmaker. Telford was a journeyman mason employed on the building of Somerset House, but rose to become the designer of magnificent bridges and the most renowned expert as to the construction of great lines of communication before the days of railways. He began to construct roads in 1803, and Macadam about 1816. The latter recommended that a road should be made without any foundation of large stones, but formed simply with a layer of moderate thickness of evenly broken small stones. Telford appears to have been a man of sounder judgment as he used a strong foundation of stones set on edge in soft ground, but omitted this foundation when he could safely do so. Macadam's views as to the uselessness of a foundation of large stones in all cases cannot be upheld, and he appears to have confounded plasticity with elasticity, and to have been ignorant of the fact that the bending of a road necessarily involves increased draught. At one time Macadam had so large a practice that he had a staff of 300 sub-surveyors. Neither Telford nor Macadam appear to have any clear claim to be the first to use stones broken to small and comparatively uniform size for the upper crust of roads as roads were made in this way in Ireland before 1760, and by a Mr. Abercrombie, in Scotland, about the same time. Mr. Edgeworth, of Edgeworthstown, wrote an essay on Roads and Roadmaking in 1813, and the method he recommended for roadmaking was practically the same as that advocated in 1816 by Macadam. He strongly insisted that the stones should be broken to 1½-inch cubes, and special attention given to drainage. He mentions a mode of stone-breaking by machinery, but objects to it as producing too great a proportion of material reduced to dust. This difficulty is now greatly overcome in modern stone-breaking machinery.

Telford and Macadam, however, appear to have been the first strong men who, in professional labours, carried out clear views as to most of the important points in connection with road construction and maintenance. They were good cooks. Those who preceded them, and many who have followed, proved to be bad cooks.—P. C. Cowen



### Japanese Roads.

Writing in an American contemporary, Prof. T. Takakuwa, of the Kiriu Technical College of Japan, states that at present there are practically no paved roads at all in Japan. Even the city of Tokio, the capital of Japan, has only a few miles of paved streets, and this circumstance is due only to an experiment which was made several years ago. The cities of Osaka and Kobe are in the same condition. All of the highways in Japan, the streets and country roads, generally consist of poorly constructed gravel roads, this gravel being easily obtained from the many rivers running through the country. As a consequence, the roads get very dusty in dry weather and very muddy in wet weather.

"Light and slow-speed vehicles, however, constitute most of the traffic in Japan, the principal means of transportation on the road being the one-horse carriage, which carries about a 1-ton load, and the carriage drawn by men. We have very seldom such heavy traffic as to necessitate the use of two or more horses; moreover, automobiles have been very little in use until recently. So, in spite of the inferiority of our roads, they have been able to bear up under the lighted traffic of the past.

"But in consequence of the development of industries and trades, and the great expansion of our principal cities since the war, there is an ever-increasing demand for heavier vehicles and motor trucks of various kinds. In my opinion, we shall in no distant future have more than 100,000 motor cars in Japan, and such traffic increases will prove destructive in the extreme to our poor road system.

"After much discussion Tokio and Osaka have decided to lay down new road surfaces, provided the central Government grant the necessary subsidy—that is, one-third of the amount required for the construction of the roads. Should the subsidy be granted, the work will commence this spring. Other big cities—as for example, Kobe, Kioto and Yokohama—are also in the process of deciding this all-important question.

"The question as to what kinds of pavement would be most favorable to these cities offers a most interesting and important feature for investigation. The municipal authorities of Tokio and Osaka contemplated adopting the plan of constructing bituminous pavements and wood-block pavements throughout the greater part of the city. However, on account of the constant increase in the price of wood, which apparently will increase still more in the future, even more so than other articles, it will of a necessity follow that the laying out of wood-block pavements will be limited to a certain extent. As a consequence, then, bituminous pavements—i.e., sheet asphalt and bituminous concrete pavements—i.e., sheet asphalt and bituminous use in these cities of Japan.

"Bituminous paving metals, both of the mineral aggregates and the bituminous substances, are produced in Japan to some extent, but the latter is not sufficient in quantity for the ever increasing future demands, and besides, it is at present not fully satisfactory in quality. Hence the importation of such bituminous substances from other countries would be necessary to some degree. Moreover, Japan is ill-equipped with machinery for road construction, and it would be of the utmost importance to bring about the importation of suitable machinery as well.

Prof. Takakuwa adds that there are many Portland cement factories in Japan which produce good cement for road-paving purposes, and even export to foreign countries. Hence, in his view, the cement-concrete road has quite a great future before it in Japan.

### HEAVY MOTOR TRAFFIC AND HIGHWAYS.

A question which I have given some thought to is the present effect of the motor truck traffic on our highways. This is a question which has come to the front and must be taken in serious consideration in the construction of any of the provincial highways. In considering any transportation problem we must consider what is going to go over the roads, whether it be a railway or a highway. A good many years ago locomotives could operate with perfect satisfaction on a 60 pound rail, but today no railway of any magnitude would consider laying down a 60 pound rail; they lay nothing less than 90 to 110 pounds, and the same parallel applies to the construction of main trunk roads, over which three to five ton trucks travel. If the roads have not sufficient surface to withstand the heavy traffic they will be destroyed in a very short time.—J. E. Allen, Belleville.

### "The Give and Take Policy."

"While we have our readjustment difficulties to deal with, our progress through the transition period will be orderly and well-conducted if there is a fair measure of mutual appreciation of surrounding difficulties and reasonable co-operation and good will all along the line in surmounting them. In a word, if the wise and reasonable policy so briefly and clearly condensed in the three simple words "give and take" continues to operate with cordial uninterrupted we shall move with steady and assured step to the great destiny which lies before us through wide-open avenues of peace, progress and prosperity."

In the above words taken from his annual report, General Manager Macarow of the Merchants Bank, states very clearly, not only the economic situation in Canada, but aspirations of the great bulk of her citizens. While there is a real danger in the spirit of unrest that has spread itself throughout urban Canada and unrest not confined to industrial workers only) such a message from one who knows will re-assure those who were beginning to lose faith in the future. Mr. Macarow's address which appears in full on page 182 is well worth the careful study of our readers.

### GOOD ROADS BENEFIT THE FARMER.

"Every mile of good road is a benefit to the farmer. increases his opportunity to expand his farming operations, increases the possibility of profit in farming, enables him to reach out to better markets, to distribute his products direct to the consumer in the shortest possible time, and to have the products of the factory delivered at his gate. There is not an industry in the province that does not have to pay tribute to bad roads, nor is there one that is not benefited by good roads.

"Roads must be classified according to traffic and must be built for the traffic they are to carry. The cost of construction and maintenance is in proportion to the traffic. And the economical system of roads for the province, a county or a township will be the system that has its roads most intelligently classified and constructs the type of road suitable for the traffic. It is no economy to build a cheap road suitable only for light traffic, on a road that has to carry heavy traffic; and on the other hand, it would be extravagance to build the more expensive types of roads for light traffic. Ontario's highway organization provides a complete classification for her roads."—R. W. McKay, President Ontario Good Roads Association.

### ROAD BUILDING IN FRANCE.

I have had the opportunity of going through France from the north to the south. The southern part of France is low country—a damp country and a sandy country; in fact, you can dig a well with your boots at the depth of about two feet—and it is remarkable to see the grand roads that they have in France. How they were first laid is a question, and how they are kept up is another question. I learned sufficient French to take an interest in finding out how they built their roads and how they maintained them, and the answer I got was this: "When we build a road we keep it in repair. We do not build a road and leave it until it goes to pieces." There is something logical in that. The roads are as level as a floor. Heavy automobiles of every description pass over them, and I travelled from the Bay of Biscay to Bordeaux over a piece of road that was chopped up more than any other road. I travelled all through France, and no matter where I went I was delighted with the roads. On the side of the road you will see piles of stone, crumbled down to a very fine size, and whether you went north or south there seems to be the same system in vogue, and that is, that the roads are kept in repair. In every Department of France they say it is necessary to keep the roads in repair, and you will see the old men employed on these roadways, filling up the defects in the road. They are on the road the year round, and they receive a very small stipend for their work.—Capt. Loft.

"Good roads are built with public opinion as much as they are with stone and concrete and asphalt or any other material."—W. A. McLean.



# The Union of Canadian Municipalities

## Annual Convention

HIS WORSHIP THE MAYOR AND COUNCIL.

Dear Sirs,—

By cordial invitation of His Worship Mayor Samson and the City Council, the Annual Convention of the Union of Canadian Municipalities will be held in the City of Quebec, on Tuesday, Wednesday and Thursday, July 27th, 28th and 29th.

Quebec, that famous name among the cities of the world—noted for its hospitality—ranks first among the unique cities of this continent; and delegates to this Convention, who are visiting the Ancient Capital for the first time, will not fail to enjoy the historical and picturesque attractions which have given it its world-wide fame.

You are herewith 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 Officers and Executive of the Union earnestly desire your co-operation and support.

Experienced municipal men have for many years valued and realized the necessity of this Dominion-wide Municipal Union, to aid in the solution of civic problems, and for mutual protection from vicious legislation. If it were fully realized by the Councils of all our municipalities just what the Union of Canadian Municipalities stand for, and what powers we have, and what authority we exert, and have

exercised, there would be no question of support and co-operation.

A new start is now before us. Interprovincial municipal relations to-day have a new, and a greater importance in Dominion-wide affairs than ever before. By the war, every municipality is affected, more or less, in its finances, its labor, its public works—in every phase of its civic and industrial life—and all are now struggling with imperfect methods towards ideals of reconstruction and re-organization. The way out, and a new vision can only be found in the open-hearted counsels of the municipal men of all Canada, in Convention.

Among the matters to be discussed are:—

- Our Municipalities and Labor.
- The Latest Ideas Regarding Public Health.
- Incidence of Municipal and Related Taxation.
- Housing Schemes.
- Municipal Annexations.
- Municipalization of Utilities.
- Recent Progress of Western Municipalities.

A complete Official Programme will be sent to you early in July.

Please send me, at an early date, the names of your delegates.

Montreal Trust Bldg.,  
Montreal, June 4, 1920.

W. D. LIGHTHALL,  
Hon. Sec.-Treas.

## Three of the Speakers at the Annual Convention of the U. C. M. Quebec

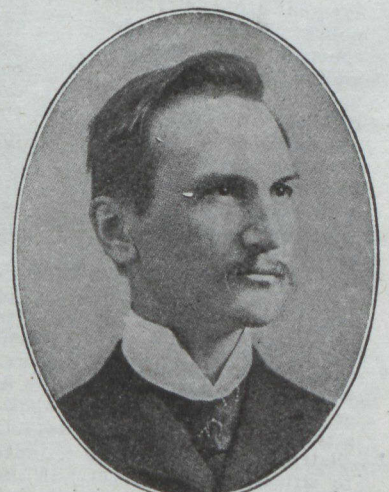
July 27-28-29



MAYOR MARTIN OF MONTREAL



MAYOR CHURCH OF TORONTO



W. D. LIGHTHALL, K.C.,  
Hon. Sec. of Union



## Municipal Affairs & Accounts

(By GORDON W. SCOTT.)

A Municipality is an organization for the self government of a City, Town or District, sanctioned by the laws of the Province or State in which it form an integral part. A Municipality is empowered generally to maintain peace and order and is created for the purpose of managing the local affairs of the people within its own limits. It is responsible to and controlled by the larger body of which it forms a part which could not economically or efficiently administer the entire affairs of its inhabitants from one central organization.

A Municipality to all interests and purposes identical with all other public and private corporation. It operates for specific purposes, it similarly owns assets, receives revenue, assumes liabilities and pays dividends. The only difference being that the shareholders of a private corporation receive their dividends in cash while the citizens of a municipality receive theirs in protection, conveniences and comforts. How identical Municipalities and corporations are can perhaps best be shown by quoting the following extract from a handbook of Municipal Accounts.

Confusion has been caused by statements being made that Public and Private corporations are entirely different.

One cannot think of any activity of a Public Corporation that cannot be undertaken by a Private Corporation.

Taking an extract from the introduction of "Handbook of Municipal Accounts," published by "D. Appleton and Company" to illustrate my point and which to me are convincing and should be published broadcast.

### "The Public Corporation." (or Municipality)

- 1—Powers—determined by the State in charter or general law.
- 2—Beneficiaries — called citizens.
- 3—Board—elected by beneficiaries.
- 4—Officers — elected by beneficiaries or board.
- 5—Electors—voting trust or electorate.
- 6—Capital—raised by borrowing or by involuntary contribution (taxation.)
- 7—Current revenues — by direct charge for specific services to individuals or indirect charge by levy to pay cost of service to community.
- 8—Problem of board management—to determine policy, rates to be charged for service, and distribution of benefits (to citizens.)
- 9—Problem of executive management — to execute policies, direct the work, to use the organization, equipment and funds with greatest economy and efficiency, and to protect the properties, stores, and treasury from loss or impairment.
- 10—Limitations placed on executive management — appropriations and strict account-ability.
- 11—Distribution of benefits to citizens—in the form of services at cost.

### "The Private Corporation"

- 1—Powers—determined by the State in charter or general law.
- 2—Beneficiaries — called shareholders.
- 3—Board—elected by beneficiaries.
- 4—Officers — elected by beneficiaries or board.
- 5—Electors—voting trust or shareholders.
- 6—Capital—raised by borrowing or by voluntary contribution (subscription).
- 7—Current revenues — by direct charge for specific services to individuals sufficient to pay cost, and a profit to the corporation.
- 8—Problem of board management—to determine policy, rates to be charged for service, charged for service, and distribution of benefits (to shareholders.)
- 9—Problem of executive management — to execute policies, direct the work, to use the organization, equipment and funds with greatest economy and efficiency, and to protect the properties, stores, and treasury from loss or impairment.
- 10—Limitations placed on executive management —strict account-ability.
- 11—Distribution of benefits to shareholders—in the form of dividends, i.e.,—the apportionment of the net profits or margin above cost included in prices charged for service.

From the foregoing it will be seen that the chief differences lie in:—

- 1.—The status of the beneficiaries —proprietorship.
- 2.—The method of raising revenue—price-making.
- 3.—The apportionment of benefits—distribution.
- 4.—The limitations placed on executive management of expenditures—appropriation.

The first of these differences determines the personnel for whose information accounts are to be kept, and to whom reports showing results are to be made. The second of the differences above indicated determines the manner of establishing revenue accruals it does not require, however, that there be any difference in method employed for determining the completeness or accuracy of revenue accounts or of collections returned, or in the heed for promptness and accuracy of reports. The third and fourth of the differences indicated would require only that the public corporation keep accounts which would show:

- 1.—Appropriations—or authorization to officers.
- 2.—Assets and Liabilities.
- 3.—Revenues and expenditures.
- 4.—Rarely profits and losses.
- 5.—Surplus or deficit.

On the other hand, the private corporation would keep accounts which would show:—

- 1.—Rarely appropriations—or authorization to officers.
- 2.—Assets and Liabilities.
- 3.—Revenues and expenditures.
- 4.—Profits and losses.
- 5.—Surplus and deficit.

From the above it will be seen that the citizens of a Municipality, if they are to receive their just dividends, must take the same interest in its management and operations as they would as shareholders of a private corporation. They must insist in able and honest management, fair and reasonable revenue, economical operations, and wise expenditure.

They must not tolerate incompetency, Mis-appropriation or fraud and must safeguard their interest by demanding a strict accounting.

It is therefore vital that Financial statements, duly certified to by impartial competent auditors, should be laid before them periodically showing in a clear and comprehensive manner not only the operations of the Municipality but the condition of its Assets and Liabilities.

Most Municipalities produce statements using the cash book as a basis, therefore, such statements show the total cash received irrespective as to whether such cash arises from collection of taxes and revenue from operations or sale of capital assets and securities. The total cash expenses are not as to whether such expenditure is on account of the capital or on the divided current expenditure of the Municipality.

Few of the Municipality accounting officers have considered the need of separating capital and revenue in accounts submitted to rate payers.

The expenses of a Municipality are to a large extent determined by a Council. At certain times of the year the heads of the various municipal departments should be requested to furnish a Finance Committee an estimate of all their probable expenditure for the year differentiating between capital and operations. These estimates should show in detail the money needed for the capital or operation outlay of each department. After these estimates are passed upon by the Municipal Council, they should be exceeded.

From the report of the Finance Committee a budget should be drawn up showing on the one side the revenue necessary and on the other side the estimated expenditures. If there are capital obligations to become due during the period an estimate should be shown of the proposed method or raising the funds to meet the obligation and on the other side should be shown the obligations which are to be paid or the capital outlay proposed.

Estimates so passed should provide the basis for the taxation of the period during which the expenditures are to be made.

Each Municipality, be it large or small would do well to have what is known as an Appropriation Book and if this book were kept in proper form, the Municipality would have knowledge at the beginning of an accounting period as to how far their finances would permit them to go in the way of expenditure rather than know at the end of the financial season that a large deficit had taken

P. S. ROSS & SONS,  
Chartered Accountants, Montreal.



### True Patriotism.

As the city with all its expresses and implies must be the controlling factor in the national life of the future, there is no service more truly patriotic than that of helping to make it a better place to live in. True patriotism, as has been well said, requires "not only that a man shall be ready to make the supreme sacrifice for his country's salvation but that he shall stand ever ready to devote his time and talents to the less conspicuous but equally momentous duty of maintaining public order, protecting private property, and preserving the lives of his fellows against the danger which lurk in foul tenements, in unclean food, and in that whole field of civic administration whose mismanagement leaves a trail of misery through the habitations of the poor."—William Bennett Munro.

### MUNICIPAL ACCOUNTS (Continued.)

place and would know at all times how actual expenditures were comparing with estimates.

I would suggest that every Municipality be compelled to keep accounts on the basis of revenue and expenditure rather than on the basis of receipts and disbursements. (cash accounts.)

The average municipality, however, publishes a statement showing the amount of cash received and the amount of cash disbursed with possibly a few dollars left in the treasury, but may have many unsettled accounts and in some instances obligations on floating debts which the tax-payers have no knowledge of.

If a Revenue and expenditure statement were accompanied by a statement showing the Assets and the Liabilities of the Municipality the information to the tax-payer would be complete. The average taxpayer of a Municipality pays taxes and generally grumbles about it but seems little interested as to how his money is spent.

The election of a Council and Mayor in a Municipality should be treated by every taxpayer in the same way as he would treat an election of a board of directors and president of a limited liability company in which he was a stock holder.

Few taxpayers in Municipalities realize that the bonded debt and floating obligations of a town are a first mortgage on all their immovable property in that particular location. Many of them would give serious consideration before placing a mortgage on their property while without consideration they permit others to mortgage their property without any knowledge as to the amount of the obligation and as to the manner of expending the funds obtained therefrom.

The only way in which the taxpayer can have proper and correct information regarding the affairs of the corporation in which he is interested is by having correct statements of their affairs as already mentioned in a form of revenue and expenditure account with asset and liability statements. These statements or information of this kind can only be obtained from books properly and accurately kept. In every municipality the following records at least will be found.

- 1st.—Municipal Valuation Roll.
- 2nd.—Municipal Tax Collection Roll.
- 3rd.—Cash Book.
- 4th.—Minute Book.

There are many municipalities that conduct their affairs with these books of account only, and never attempt to balance their accounts. In addition every well regulated Municipality should have at least.

A Purchase Journal, and a General Ledger embracing Assets and Liabilities Accounts and Operating Account.

They should also have the subsidiary to these books a proper requisition and order system, stores records, wages book, and records showing detail of the outlay on capital account and an Appropriation Book.

Where a Municipality owns public utilities such as water works, gas or electric plants, a system of accounts similar to that of a privately owned and operated corporation should be instituted.

### Housing Problems in India.

The system of rent control in Bombay consists in the selection of a number of years, the striking of an average of the rents charged during those years and the allowance of a 10 per cent increase on the average rent, the maximum legal rent chargeable being the average rent plus the 10 per cent increment. The assumption on which the foregoing is based is that the landlords were already, before the housing shortage became acute, in receipt of fair profits from their property, the increased allowance being a set-off against additional cost of necessary repairs and maintenance. On its merits, this is a fair solution. Is it, however, fair to attack one class of property-holders simply because they are pursuing the hallowed business policy of buying cheap and selling dear? Why is it more reprehensible for a landlord to exact 20 or 30 per cent return annually on his capital than for the owner of a cotton mill to exact dividends at the rate of a couple of hundred per cent? Both are ordinary commercial transactions. Profits are obviously made in exactly the same way, namely by getting the public to pay for goods as much as possible more than they cost, to produce.—The Times of India.

### GRAVEL ROADS.

(J. E. ALLEN, Belleville.)

Gravel, while not as durable as broken stone, yet has some advantages on account of it being easier to construct, easier to maintain and cheaper. Of course, the length of haul is a big factor in the cost of any kind of road, and where the length of haul brings the cost up to anywhere near the cost of stone it should never be considered.

Gravel varies greatly in quality but is, as a rule, suitable for roads where the traffic is not too heavy.

When you can get the right proportion of stone from pebbles up to two inches with just enough sand to fill the void, you have an excellent material with which to build a road, if the road is well drained and you put on a sufficient depth of gravel, say from 10 to 12 inches and have the road well crowned it will stand up under quite heavy traffic, but it is very rare you will get a pit where the whole body of gravel is as I have described, but in most pits there is some good gravel, and great care should be taken to see that only gravel of good quality is used.

Dirty gravel should be avoided. While gravel with an excess amount of clay will pack quickly and make a good road in dry weather when the rains come in the spring or fall it turns to mud and ruts badly and soon wears out.

A few stones are not objectionable if the gravel is otherwise good as these can be raked forward and placed under the next load. Never leave them in a heap at the end of the load. They prevent the gravel from settling even.

See that an even grade of gravel is taken from the pit. One part of the pit may be very fine, another quite coarse and still another may contain too much clay, and the teamsters all crowd in at the same time and load wherever it is most convenient with the result that every load is a different grade and where the roads are consolidated it will be very uneven and you will be able to tell where every load was dumped from the depressions that will be found. A road of this kind is very objectionable.

Where the gravel has a large amount of stones or boulders it should be run through the crusher. Gravel should be spread on the road at least seven feet wide and from 10 to 12 inches in depth. While the traffic will in time consolidate the gravel and in a year's time there may not be much difference between it and a road that is rolled, the satisfaction of having the road in a finished state from the beginning is well worth the cost of rolling.

I read that in the beginning the world was created by God who made day and night; He made land and sea; He made the heavens and the earth; and then He breathed into man the breath of life, and I believe that with that breath He put into each of us something of the power to know and to appreciate what it means to build and create. It is a God-given instinct, and we should be happy here that we have the opportunity to create good highways in this Ontario of ours, and to know and appreciate ourselves, the joy that will come to us in transforming this country—W. A. McLean, Minister of Highways, Ontario.



## Water Power Development in Canada.

The Dominion Water Power Branch, Department of the Interior, and the Dominion Bureau of Statistics, Department of Trade and Commerce, have through co-operation, just completed an exhaustive census and analysis of the developed water power in Canada. The figures, which are complete to January 1st, 1920, are exceptionally interesting and are indicative of the marked manner in which the water power resources of the Dominion are being put to advantageous use. Practically every great industrial centre in Canada is now served with hydro-electrical energy and has within easy transmission distance ample reserves of water power. Active construction in hydro-electrical enterprise is fast linking up the few centres which are still unserved, and which have water power resources in their vicinity. In those localities where water power is not available, nature has bountifully supplied fuel reserves of coal, gas or oil.

According to a recent computation the water power resources of the British Empire have been placed at from 50 to 70 million horse power. This does not include such territories, formerly under control of the Central Powers, as will fall in future under British influence. To this total Canada distributes in the neighborhood of 20 million horse power. This figure represents the power available at sites at which more or less definite information is to hand. Continued investigation will undoubtedly add to this figure.

According to the statistics just compiled there is installed throughout the Dominion some 2,418,000 turbine or water wheel horse power (Table 1) of which 2,215,000 horse power is actually and regularly employed in useful work. The larger figure includes the total installed capacity at full gate, including reserve units. It does not, however, include hydraulic excited units. A large number of the plants now operating are designed for the addition of further units as the market demands. The ultimate capacity of such plants, together with that of new plants now under construction, total some 3,385,000 horse power.

Of the total power installed, 1,756,791 horse power or 72.7 per cent is installed in central electric stations. By central electric stations are meant stations which are engaged in the development of electrical energy for sale and distribution. Central station power is sold for lighting, mining, electro-chemical and electro-metallurgical industry, milling and general manufacturing. It is apparent therefore that the central station total listed in Column 3 includes a portion of the totals listed in Columns 4 and 5 as used in other industries. In the pulp and paper industry 473,265 horse-power is utilized of which 381,631 horse power is generated directly from water in pulp and paper establishments while 91,634 horse power is purchased from hydro central electric stations.

Hydro power used for other purposes and other industries may be listed as follows:—for lighting purposes 434,613 horse power; in mining industry 177,728 horse power; in flour and frist mills 42,736 horse power; in lumber and saw mills 37,918 horse power; in other manufacturing industries 172,955 horse power. These figures are evidence of the widespread manner in which the Dominion's water power resources are being applied to the furtherance of its industrial development. In further reference to the foregoing total of water power developed in Canada, it might be noted that during the fiscal year ending March 31st, 1919, there were exported from plants included in tabulation, 175,000 horse power years.

Of special interest to engineers is the actual cost of construction of hydro-electric power stations, exclusive of transmission and distribution systems. The figures of 70 representative hydro-electric stations throughout the Dominion with an aggregate turbine installation of 745,797 horse power show a total construction cost of \$51,740,468 (pre-war figures) or an average of \$69.11 per installed horse power. This cost includes the capital invested in construction of dams, flumes, penstocks, and all hydraulic works, and of power stations and equipment. It excludes real estate and transmission and distribution equipment. The figure in brief represents the capital cost of construction at the power site.

With a water power development of 274 horse power per thousand population, Canada stands well in the forefront in respect to availability and utilization of hydro-power resources, being only surpassed in this respect by

## Tar Macadam Roads in India.

### Slipperiness of Tar-Macadam Roads.

At the present moment the public, and also the corporation of Calcutta are greatly exercised about the slipperiness of the tar-macadam roads. This slipperiness has, of course, been cured by the employment of the same means as that adopted for the same trouble elsewhere—namely, by painting the surface with the particular bituminous binder with which the road is constructed, and then binding the surface with crushed stone or fine gravel. There the corporation have let the matter stand, principally owing to the expected rapid development of heavy motor traction. If this comes up to anticipation it will pay havoc with all the Calcutta roads, as they are now constructed, but the march of progress cannot be stopped until the problem of building roads strong enough to withstand the heaviest of traffic has been solved. It should, however, be borne in mind that the problem of road construction in Calcutta is an extremely difficult one, owing to the many adverse conditions which exist, chief among which are the exceptionally soft and wet subsoil on which the whole of Calcutta rests, the heavy cost of stone for making proper foundations, the high temperature in the sun during the hot weather, the long period of drought, and the phenomenal rains, and last the bullock-cart with badly mounted wheels and tyres which cut up the road surface. With the introduction of motor traction these will eventually be abolished, but even then a new destructive agency will merely be substituted for another and more ancient one.

### REDUCING THE HIGH COST OF LIVING.

It is a crucial fact that when enterprising towns wish to secure new factories one of the inducements offered is exemption from taxation for a term of years. But now that they need more houses they appear to be afraid to offer the same inducement. If tax exemption will induce men to build factories in a community, will not the same cause produce a like effect in the case houses?

It is well not to be too hasty in running after new and untried schemes. But this proposal to exempt houses from taxation is neither new nor untried. It has been proven many times in the past.

Nothing is better established in human experience than the fact that taxing houses, food, and other labor products makes them dearer and limits consumption. That was the avowed purpose of the high license on saloons.

But why should we adopt the same policy toward house building? Is there an overabundance of houses, food or clothing? Why, then, tax them. Would it not be the part of wisdom to lay a heavy tax on vacant lots, which we do not need, and exempt the products of labor, which we do need?—Stoughton Cooley.

### CITY MANAGER TERM IN THE UNITED STATES

Muskogee, Oklahoma, recently adopted the city-manager plan by a vote of 2,304 to 1,944. The manager's salary will be \$6,000. The population of Muskogee is 44,218.

Nowata, Oklahoma, population 8,000, adopted the manager form of government.

Pawhuska, Oklahoma, population 6,000, adopted a city manager charter on April 6.

Sturgis, Mich., population 6,500, has elected a charter commission which is committed to the manager idea.

Springfield, Vermont, population 8,000, recently advertised for a town manager, who will be responsible to the board of selectmen under the New England township form of government.

Norway. The enormous water power reserves still untouched form a substantial basis for the progressive exploitation and development of other natural resources, and, if properly co-ordinated with the development and utilization of the enormous fuel resources of the Dominion, are an assurance of continued industrial expansion and prosperity.



**THE NORTHERN ELECTRIC AND ITS EMPLOYEES.**

In the last issue of this Journal we briefly reviewed the Employees Pension and Benefit Fund of the Bell Telephone Company. We have since had the opportunity of reading a little booklet giving particulars of a similar scheme recently established by the Northern Electric Company, Ltd. for the benefit of 4,000 employees. To start the fund the company placed \$150,000 to its credit, and, in the words of the booklet, "it is the intention of the Board (of the company) to credit to the Fund interest at the rate of four per cent per annum on the unexpired balance, and also at the end of each year to make such additional appropriation as is required to restore the Fund to its original amount, provided that such additional appropriation shall in no year exceed two per cent of the Company's payroll.

The provisions of the Plan do not call for any contribution by the employees the whole cost being borne by the Company. The purpose which the Directors have in view is not only to recognize the loyalty and devotion of the employees, but to offer greater protection to them when overtaken by illness, accident or infirmity."

The plan provides for pensions, accident disability benefits, sickness disability benefits and death benefits to the permanent employees. So that those employees who left the company's employ for military service may get the full benefit of the Fund a special clause has been inserted in the plan which tells its own story. It reads as follows:

"Military Service, 1914-1919:—All former employees who left the employ of the company for military service, and who returned to our employ previous to January 1st, 1920, shall receive credit for the total period of their military service when calculating their "Term of Employment"."

The administration of the Fund is in the hands of a committee consisting of the General Superintendent, Secretary, General Sales Manager, Chief Engineer and the Chief Accountant. This committee will decide all questions relating to the functioning of the plan, so that while the whole cost will be borne by the company, the actual control is in the hands of the employees. Such a scheme as briefly outlined above cannot help but establish confidence between the Northern Electric Company and its employees. It eliminates at once the fear of the future, the fear of poverty in sickness or old age which faces the worker today. If every firm had such an "Employees Pension and Benefit Fund" as have the Northern Electric Company and the Bell Telephone Company there would be no unrest in Canada. Instead there would be a spirit of toleration and confidence between capital and labour and the community life of the Dominion would benefit. We take off our hat to the Directors of the Northern Electric Company for setting such a splendid example to the industrial heads of the country.

**A WORD IN SEASON.**

We hear so much of the wonderful and almost inexhaustible natural resources of Western Canada that we are inclined to treat a great deal of what we hear with little consideration. Familiarity breeds contempt. The mineral wealth of the northern portion of the Prairie Provinces is well known—we have known of it for many years. Development of this natural wealth has been retarded for a number of reasons. Spectacular and rich finds in the Yukon attracted expert prospectors and operators for a number of years and diverted from attention from the prairie provinces' deposits. Lack of transportation facilities added to the many hardships which the pioneer prospector has to endure kept all but the most hardy from venturing into the northland. Even after valuable claims were staked and very encouraging reports were received from mining engineers, the task of getting adequate machinery into the mineral area was a tremendous one. In addition to these difficulties and the counter attraction of the Yukon, there was another factor which affected the obtaining of necessary funds for development purposes. Investors and speculators had no need to put their money into mineral development in order to get rich quickly; real estate speculation was much more attractive and more remunerative—for the time being.

Canadians are being urged to concentrate upon greater production. Our war debts have to be paid and the natural resources of the country must be developed. The commercialization of the aeroplane, the extension of railroads, wireless telegraphs and telephones, and improved waterways have all helped to remove the difficulties formerly

**ROAD TRAFFIC IN ENGLAND.****The Powers of County Councils.**

In the House of Commons the Minister of Transport was asked whether county councils acting as the highway authority had any, and, if so, what powers to license vehicles on the country roads; whether they could make any restrictions of the number and weight of motor omnibuses and, if no such powers existed, whether the Government would undertake to introduce into Parliament an Act conferring such powers.

The Parliamentary Secretary, who replied, said motor omnibuses and other road vehicles must comply, so far as weight and construction was concerned, with existing legislation on the subject and with the Orders made thereunder; otherwise, they could not be registered. With regard to the number of motor omnibuses running on their roads, county councils had no power to impose any restrictions, except where their consent to the running on roads was required under sec. 20 of the Local Government Act, 1916, when conditions might be imposed subject to an appeal to the Minister of Transport. Questions connected with the weight construction and speed of motor omnibuses and other road vehicles, would be considered by the Departmental Committee on the Taxation and Regulation of Road Vehicles in due course.—The Survey.

**DUSTLESSNESS OF SURFACES.**

Cleanliness and dustlessness are partners. A clean street is also a dustless street; and therefore there is no excuse for excessive dustiness in our modern cities or on our modern paved highway. Of course, as long as we maintain dirt roadways and unrolled waterbound macadam surfaces on the side streets in our cities, we will have dust in unbearable abundance; and there is room for much more care in the regulation of vehicles that today seem not at all concerned if they spill a part of their loads along the thoroughfares. But the modern pavement surfaces, unless it be those of concrete pavements without bituminous top dressing, will not create any appreciable dust of themselves; and all are susceptible to economical and thorough cleaning by the power fushing process.

The only reason that the bituminous sheet layer surfaces may claim and advantage on the point of dustlessness is that they are easier and cheaper to clean and keep clean than any other modern road or street pavement surface; for when clean, all the modern pavements are practically dustless.—Chas. A. Mullen.

**FIVE MILLION FUND FOR HIGHWAY WORK IN ONTARIO.**

For five years three million dollars is to be set aside annually by the provincial government of Ontario as a highway improvement fund. From this will be drawn all the money spent by the government on highway work. The fund will be made up as far as possible from motor vehicle licenses and other sources of revenue under the motor vehicle act, less an amount sufficient to provide for sinking fund and interest at the current rate on bonds required to raise the annual appropriation of three millions. The first contribution to the fund gives it a good start as the \$1,500,000 received in license revenue for the year ending October 31 goes into the fund. The amounts received from the Dominion government as subsidy payments are also credited. It will be seen that the highway improvements are nearly all out of one fund. The two millions set aside for township loan purposes is of course separate.

encountered in opening up our mineral areas. The time has arrived when real mines will appear where claims formerly existed.

This being so, it would appear that we are about to reap the reward which many years of patient prospecting and development deserve. No false move should be made at this stage of the proceedings. The confidence of the investing public must be secured, and, what is more important, that confidence must be retained. The publication of the facts in connection with these deposits will attract investors. There need be no exaggeration, neither need there be any distortion of facts. It is unwise to build up false hopes in the mind of the investor. We have had a hard struggle to build up confidence. Why destroy that confidence by questionable advertising?—Canadian Finance.



# The Merchants Bank of Canada

## Fifty-Seventh Annual Meeting

The Fifty-seventh Annual Meeting of the shareholders of the Merchant's Bank of Canada was held on Wednesday 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. John Paterson, 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 ANNUAL REPORT.

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

I beg to submit, on behalf of the Directors, the Fifty-seventh Annual Statement of the Merchant's Bank of Canada as at the close of business on the evening of the 30th April, 1920, together with a statement of the Profits covering the relative period.

Despite the fact that operating costs have continued their upward course, the net profits resulting from the year's business were \$1,686,156.15, being an increase over last year of \$302,586.75.

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

In the Director's Report of a year ago, I mentioned that an issue of \$1,400,000 of new stock was being made, and that, owing to the date of allotment, this step would fall for comment more appropriately at the next Annual Meeting. I am now pleased to advise you that the issue was promptly taken up and long since paid for in full by the shareholders. The Paid-up Capital of the Bank, therefore, stands today at \$8,400,000, while the \$700,000 premium received from the new issue and \$700,000 transferred from Profit and loss Account have been added to the Reserve, thus maintaining that Fund upon an equal basis with the Paid-up Capital.

You have already been advised that, in line with the growth of the Bank, and with a view of keeping pace fairly and reasonably with the legitimate requirements of ever-growing clientele, a further issue of \$2,100,000 of new stock, upon the same favorable terms to the shareholders, is now under way. This new issue will appropriately referred to again a year hence.

It may be of interest to mention that the Bank's shareholders now number 2,622, as against 2,406 in 1919, and 2,340 in 1918.

At the commencement of the Bank's fiscal year presently under review, the Directors felt warranted in placing the Dividend on a regular 12 per cent

### STATEMENT OF THE RESULT OF THE BUSINESS OF THE BANK FOR THE YEAR ENDED 30th APRIL, 1920.

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 .. . . . . .	\$1,686,156.15
Premium on New Stock .. . . . . .	700,000.00
The balance brought forward from 30th April, 1919, was .. . . . . .	574,043.32
Making a total of .. . . . . .	\$2,960,199.47

This has been disposed as follows:—

Dividend No. 128, at the rate of 12 per cent per annum	\$238,416.01	
Dividend No. 129, at the rate of 12 per cent per annum	243,726.44	
Dividend No. 130, at the rate of 12 per cent per annum	250,805.76	
Bonus 1 per cent .. . . . . .	83,263.00	
Dividend No. 131, at the rate of 12 per cent per annum	252,074.56	
		\$1,068,285.77
Government War Tax on Note Circulation .. . . . . .		81,138.72
Transferred to Reserve Fund from Premium on New Stock .. . . . . .		700,000.00
Transferred to Reserve Fund out of Profits .. . . . . .		700,000.00
Written off Bank Premises Account .. . . . . .		100,000.00
Contribution to Officers' Pension Fund .. . . . . .		50,000.00
Balance carried forward .. . . . . .		260,774.98
		\$2,960,199.47

### RESERVE FUND ACCOUNT.

Balance, 20th April, 1919 .. . . . . .	\$7,000,000.00
Premium on New Stock .. . . . . .	700,000.00
Transferred from Profits .. . . . . .	700,000.00
	\$8,400,000.00
Average Paid-Up Capital during year .. . . . . .	\$8,230,539.00

H. MONTAGU ALLAN,  
President

D. C. MACAROW,  
General Manager

### STATEMENT OF LIABILITIES AND ASSETS AT 30th APRIL, 1920

#### LIABILITIES.

##### 1.—To the Shareholders:—

	1920	1919
Capital Stock paid in .. . . . . .	\$8,400,000.00	\$7,000,000.00
Rest or Reserve Fund .. . . . . .	8,400,000.00	7,000,000.00
Dividends declared and unpaid .. . . . . .	338,159.22	194,194.00
Balance of Profits as per Profit and Loss Account submitted herewith .. . . . . .	260,774.98	574,043.32
	\$17,398,934.20	\$14,768,237.32

##### 1.—To the Public:—

Notes of the Bank in Circulation .. . . . . .	14,791,027.00	13,316,033.00
Deposits not bearing interest .. . . . . .	45,368,876.69	43,552,214.61
Deposits bearing interest (including interest accrued to date of Statement) .. . . . . .	114,132,175.79	91,904,993.37
Balances due to other Banks in Canada .. . . . . .	2,747,402.86	2,614,696.64
Balances due to Banks and Banking Correspondents in the United Kingdom and foreign countries .. . . . . .	851,097.39	106,076.96
Bills payable .. . . . . .	.. . . . . .	.. . . . . .
Acceptances under Letters of Credit .. . . . . .	2,117,441.21	464,153.05
Liabilities not included in the foregoing .. . . . . .	.. . . . . .	.. . . . . .
	\$197,387,855.14	\$166,725,404.95

#### ASSETS.

Current Coin .. . . . . .	\$4,193,117.50	\$4,946,946.33
Deposit in the Central Gold Reserves .. . . . . .	7,500,000.00	7,000,000.00
Dominion Notes .. . . . . .	8,407,003.25	8,405,602.50
Notes of other Banks .. . . . . .	1,170,482.00	985,044.00
Cheques on other Banks .. . . . . .	11,093,195.77	6,082,616.99
Balances due by other Banks in Canada .. . . . . .	9,400.50	3,215.80
Balances due by Banks and Banking Correspondents in the United Kingdom .. . . . . .	445,034.79	123,496.50
Balances due by Banks and Banking Correspondents elsewhere than in Canada and the United Kingdom .. . . . . .	1,561,157.87	1,903,044.10
Dominion and Provincial Government Securities, not exceeding market value .. . . . . .	7,893,229.90	6,005,573.65
Railway and other Bonds, Debentures and Stocks, not exceeding market value .. . . . . .	4,507,688.10	4,119,705.32
Canadian Municipal Securities and British, Foreign and Colonial Public Securities other than Canadian .. . . . . .	13,239,204.50	15,238,399.32
Call Loans in Canada on Bonds, Debentures and Stocks .. . . . . .	6,471,494.31	5,134,690.71
Call Loans elsewhere than in Canada .. . . . . .	6,206,537.78	2,801,857.72
	\$72,697,546.36	\$62,750,188.94

Current Loans and Discounts in Canada (less Rebate of Interest) .. \$113,198,913.90  
Loans to Cities, Towns, Municipalities and School Districts .. . . . . . 3,587,491.69

Current Loans and Discounts elsewhere than in Canada (less Rebate of Interest) .. . . . . .	1,117,268.51	332,918.12
Liabilities of Customers under Letters of Credit as per contra .. . . . . .	2,117,441.21	464,153.05
Real Estate other than Bank Premises .. . . . . .	604,325.33	782,326.64
Overdue Debts, estimated loss provided for .. . . . . .	352,737.25	386,973.56
Bank Premises at not more than costs (less amounts written off) .. . . . . .	*2,576,630.21	5,258,269.48
Deposit with the Minister for the purposes of the Circulation Fund .. . . . . .	377,000.00	366,000.00
Other Assets not included in the foregoing .. . . . . .	758,500.68	515,149.12
	\$197,387,855.14	\$166,725,404.95

\* After crediting amount received in respect of Premises transferred to The Merchants Realty Corporation, Limited.

H. MONTAGU ALLAN,  
President.

D. C. MACAROW,  
General Manager.



basis, and also later, in distributing a bonus of 1 per cent, making in all 13 per cent received by the shareholders during the twelve month period. No doubt their action in this respect will have your full approval.

During the year we opened 65 Branches, with a number of sub-agencies as feeders, and I may say that results have amply justified our action, as evidenced by the fact that we have only closed 2 Branches during the period.

In December last our office in London, England, was opened for business and already gratifying progress has been made in the building up of a London Connection, while the facilities afforded our clientele on this side have greatly enhanced the value of the services we are enabled to extend to them. It had been apparent for some time that the growth and increasing importance of the institution called for the completion of our organization by the establishment of an office in the Capital of the Empire.

During the year we conceived it to be advisable and expedient, in keeping with modern and approved practice, to liquify to some extent the inactive asset represented by Bank Premises Account, which, as you are aware, must, with the growth of the bank, be an ever-expanding one. We accordingly turned over certain of premises to a subsidiary company called the Merchant's Realty Corporation, who in turn issued Bonds against the respective properties to the amount of \$4,000,000, the proceeds of the sale of which have been appropriately applied. These Bonds are of a serial nature and will be thus automatically amortized as they fall in for payment, control of the property being held by the Bank through the ownership of all the stock of the Company, this being shown upon our books at a nominal figure.

Since the last Meeting, death has removed from our midst Mr. E. F. Hebden, formerly General Manager of the Bank and, for a period, Managing Director. His service in the institution was lifelong and in his demise the financial community lost a distinctive and distinguished personality, and the Bank an able and experienced administrator. His death is regarded with deep regret by all.

The vacancy upon the Board has been filled by the appointment of Mr. E. W. Kneeland, of Winnipeg, a business man of wide experience and influence in the West.

In view of the continued growth of the Bank's business, the Directors are of opinion it would be desirable to enlarge the numerical strength of the Board by adding one more to their number, and an amendment to this effect of the relative by-law will be submitted for your approval. The name of Mr. Gordon M. Mc-McGregor, of Windsor, Vice-President of the Ford Motor Company of Canada, will accordingly be included in the list, which will be submitted to you in due course. He is a man of high standing in the commercial community, and we are sure of your agreement with the Directors that he will prove an acquisition to the Board.

## 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, 1920, 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.

VIVIAN HARCOURT,  
GORDON TANSLEY, Auditors.

Montreal, 25th May, 1920.

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

You may be interested to learn that I made a trip last Autumn through Ontario and the West—accompanied by some of the Directors and the General Manager. We met all the senior officers, and I have pleasure in saying that I found the trip both inspiring and beneficial to a degree.

We have undoubtedly an efficient staff and you will, I am sure, joint with the Directors in extending to its members, one and all, a word of cordial appreciation for their capable and loyal services, to which the measure of progress of the Bank has enjoyed is in no small extent attributable.

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

The Auditors' Certificate is appended.

All of which is respectively submitted.

H. MONTAGU ALLAN  
President.

### THE GENERAL MANAGER'S ADDRESS.

The General Manager Mr. D. C. Macarow, in rising to make his address, was received with much applause from the shareholders. He said:

"In the first place I must say that the personal onslaught made upon myself by the president is as much unexpected as it is kindly. I was deeply touched by the presentation so spontaneously made to myself by the staff throughout the country. I view the presentation with mixed feelings, appreciation of the kindly intent it showed, and doubt as to my own merits. However, I accepted it in the spirit in which it was given, and it will always be one of my most prized possessions.

The President's address forms a comprehensive epitome of all the important phases of the Bank's present position, and has appropriately dealt with or touched upon the several outstanding developments which have taken place during the past fiscal year.

I shall, therefore, but add a brief word of amplification as to some features of the statement which it occurs to me may be enlarged upon without unnecessary repetition.

Another Victory Loan last Autumn was again heavily subscribed to by the Bank's clientele throughout the country, their total subscriptions

reaching the large sum of \$41,770,000, practically all of which (conversions being negligible in amount) was a direct charge against our deposits. Yet the resultant heavy withdrawal was not only overtaken, but deposit totals show an increase, in addition, over last year, of \$24,900,000. This must be considered a satisfactory achievement, I think.

Commercial Discounts have, in natural course, advanced also, and the total now stands at \$113,198,000, being an increase during the year of \$17,324,000. These figures indicate that the Bank is continuing to carry its full share of the load in a period when the support and encouragement of the productive capacity and energies of the country is a matter of paramount importance. If stable conditions are to be reasonably maintained, it is essential that the vital channels of commerce and industry be kept open and, I venture to assert, in functioning as the above figures reflect, the Bank is playing its part to that end.

At last year's Annual Meeting I made reference to our Asset column as representing dollar for dollar of actual value, and I make the same assertion today with equal emphasis.

The record of growth this year leads me to feel that a few figures showing our progress, taking the last five years as a basis of comparison, may be of some interest to you. The totals and percentages are as follows, based on the year-end figures as at 30th April, 1915, and 30th April this present year.

	1915	1920	Gain
Total Deposits	\$64,869,000	\$163,080,000	151%
Current Loans and Discount	47,401,000	113,198,000	138%
Total Assets	86,190,000	197,387,000	129%

a satisfactory and evenly balanced measure of development, you will, I am sure, agree.

If I may be permitted to add a word as to general conditions I will be brief, for the subject has been dealt with from platform, pulpit and press so exhaustively that I cannot say much without wearisome reiteration. I fear it must be admitted however, that the progress of this country, and indeed of the world at large, towards normal peace conditions has not been what we looked



forward to a year ago. Unsettlement continues, labor and other difficulties abound, and the dominant need of the time, Production, is palpably inert and backward. So long as production lags, so long will high prices and general inflation continue. Costs are mounting to ever higher levels and the process of deflation with the necessary changes in ideas, in habits and in outlook to something more approaching those of normal conditions can hardly be said yet to be deal evidence, though sporadic and somewhat spectacular cutting of prices in certain seasonable lines of manufactured goods may perhaps be accepted as a psychological sign showing that the trend, at least, is in the right direction.

The demand for borrowed capital continues to be more or less importunate and it is in the conservation of credit and the equitable rationing of it that Banks can play and, indeed, are playing a sound constructive role. Legitimate productive enterprises are being fostered and encouraged fairly, while at the same time a firmly restraining hand is held upon unproductive, non-essential and speculative undertakings. This policy of selective curtailment, so to put it, operating as it does at the very root of existing evils, and applied with due judgment, discrimination and consistency, cannot but prove a beneficial corrective and an importantly contributing factor to wards restoring with a minimum of dislocation and disturbance, healthy and normal conditions in the body politic.

I might here venture to say that it is a matter of gratification to see our mercantile marine growing apace and to know that the Government will have, it is understood, some 45 merchant vessels in commission by the end of July next. I mentioned last year, and I reaffirm the opinion then expressed, that there is nothing of greater national importance than the establishment of our own lines of ocean transport, and what has been and is being accomplished in this direction, both by the Government and by private enterprise, augurs well for the future safety and stability of the country's trade and commerce.

After what looked like in some respects an ominous start the crop situation throughout the country now seems to justify the belief that good yields will be secured this year. Pre-

dictions, however, are futile and we can only nurse the hope that actual results will fairly measure up to present optimistic estimates. Certainly, on the theory of averages alone, we are entitled to look for some redress in the crop situation this year. Much depends upon it, more especially in view of the disappointing results of the last two years, and if nature is benevolent in the coming harvest this country will benefit to an unmeasured extent, and we shall be reasonably in a position to view the period of deflation, upon the threshold of which we stand, with feelings of confidence as to our immediate future—as to our ultimate future there need be no misgiving, for it must be borne in mind that Canada is a young and verile country of almost limitless possibilities and immense natural resources awaiting development, that its manhood is strong, enterprising, thoughtful and sane.

While we have our readjustment difficulties to deal with, our progress through the transition period will be orderly and well-conducted if there is a fair measure of mutual appreciation of surrounding difficulties and reasonable co-operation and good will all along the line in surmounting them. In a word, if the wise and reasonable policy so briefly and clearly condensed in the three simple words "give and take" continues to operate with cordial uninterrupted we shall move with steady and assured step to the great destiny which lies before us through wide-open avenues of peace, progress and prosperity.

Before closing, I would like to add my attribute of appreciation to the staff of the Bank for their devotion and efficiency. I cannot do so better than by saying that the President's apt and graceful remarks thereanent have my unqualified and unrestricted endorsement. It is true, indeed, that the progress of the Bank is in no small measure due to the co-operative efforts of a loyal, capable and contented staff. That, I know, we have.

Before putting the motion for the adoption of the Report, the Chairman invited questions or discussion. There being none, he put the motion, which was unanimously adopted.

It was moved by Mr. A. Haig Sims, seconded by Mr. David Kinghorn, that Messrs. Vivian Harcourt and Gordon Tansley, of Deloitte, Plendor, Griffiths & Co., be re-appointed Auditors of

the Bank, to hold office until the next Annual Meeting.

On motion of Messrs. K. W. Blackwell and Farquhar Robertson, it was proposed: "That By-law 111, enacted by the shareholders of the Bank, be and is hereby amended by substituting the word "fifteen" for the word "fourteen" in the first line thereof." This was unanimously adopted.

On motion of Messrs. A. Haig Sims and David Kinghorn, 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.  
Sir Frederick Orr Lewis, Bart.  
Hon. C. C. Ballantyne.  
Mr. A. J. Dawes.  
Mr. F. Howard Wilson.  
Mr. Farquhar Robertson.  
Mr. Geo. L. Cains.  
Mr. Alfred B. Evans.  
Mr. T. Ahearn.  
Lt.-Col. Jas R. Moodie.  
Hon. Lodne C. Webster.  
Mr. E. W. Kneeland.  
Mr. George M. McGregor.

The ballot having been cast, the Directors as named were declared to be elected:

Mr. A. Haig Sims—"Before this meeting concludes I wish to move a hearty vote of thanks and appreciation to the President and Directors for their services during the past year, which have made it possible to present the splendid report we have heard today. With this I would like to couple the thanks of the Shareholders to the General Manager and all members of the staff throughout the country for their efficient and loyal services to the Bank, which have contributed in no small degree to enabling the Directors to carry on their work for the advancement of the Bank."

This was seconded by Mr. A. A. MacDougall, and carried with applause, after which a brief address of thanks was made by the President for himself and the Directors, and by the General Manager for himself and the Staff.

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.

#### THE CANADIAN BOND DEALERS ASSOCIATION.

The Canadian Bond Dealers Association, which has just held its annual meeting in Winnipeg, under the presidency of Sir Augustus Nanton, is a remarkable organization inasmuch though it was established primarily for the benefit and interest of its members as a whole, that interest lies principally in stabilizing the bonds in which the members deal. Particularly is this so with municipal bonds, and the association has gone to great trouble and expense in advising some of the smaller municipalities regarding their finances. The new President is Mr. J. H. Gundy of Messrs. Wood, Gundy and Co., who is now in Europe representing the Canadian government at the Allies financial conference. The rest of the officers are as follows:—

Treasurer, A. H. McKenzie, Montreal.  
Secretary, J. A. Kingsmill, Toronto.  
Executive Committees:—

Eastern section—A. J. Nesbitt, Montreal, vice-president; Russell Bell, J. A. Eccles, Gerald Hanson, N. L. C. Mather, of Montreal; J. M. Robinson, St. John; and A. F. Mackintosh, Halifax.

Central section—J. W. Mitchell, vice-president; J. H. Gundy, H. B. Housser, W. L. McKinnon, R. A. Daly, F. J. Coombs, of Toronto.

Western section—A. L. Crossin, vice-president; Sir Augustus Nanton, J. A. Anderson, of Winnipeg; G. H. Sneath, Regina; E. E. Taylor, Calgary, and Stanley Burke, Vancouver.

It was decided to hold the next annual meeting in Toronto.



## A MUNICIPAL REPORT FROM SOUTH AFRICA

E. T. SAMPSON, A.M.I.M.T.

We have to hand a copy of the abstract of the Treasurer's Accounts of the municipality of Bloemfontein, South Africa (Mr. J. P. Logan.)

The book has been very ably compiled and exposes an expert knowledge of Municipal Accountancy of the highest order. Unfortunately and like many other able experts, the compiler assumes a corresponding extent of knowledge to his own on the part of those whose duty or whose pleasure it is to peruse his work. What we would like to have found in the book was a chatty introduction telling us like a benevolent and paternal schoolmaster:

(1) What were the main features of the Administration during the year under review, the causes of increases and decreases of expenditures, and the possible dangers or advantages of pursuing the present policy, with a suggestion. The increase or decrease of expenditures and their causes wherever suitable of an alternative.

(2) The advantages or otherwise of increasing certain taxes on other sources of income.

(3) The peculiar movements in the loan market and consequent effect upon the annual loan charges of the municipality.

(4) Any other incidents which occurred during the fiscal year under review which have had any bearing upon the accounts and finances of the municipality.

As to the actual accounts themselves appearing in the abstract, there is little that can be suggested by way of improvement. I would then strongly recommend a careful perusal by all Canadian municipal treasurers who are able to secure a copy; many valuable principles and ideas can be gained thereby.

**The Aggregate Balance Sheet.**

Appearing in simple form shows in short the extent and scope of the municipal enterprise of this community. It will be seen that the municipal services also embrace the utilities. That the outlays of all capital expenditures are clearly stated and preserved, that the undertakings and services are carefully classified. The loans, however, appear consolidated and not shown against the various assets. This is undoubtedly the most economic and speedy way of dealing with capital finance, always providing that the legislative powers are sufficient and efficient, and that the financial control is satisfactory, otherwise the possibility is imminent and the temptation is often very pressing to utilize capital moneys raised for specific purposes, for other purposes which may also be unauthorised. In this special case, however, a statement is found at the end of the abstract, showing:—

Loans Sanctioned.

Capital Expenditure Incurred.

This seems a far preferable method of procedure in authorizing capital expenditure than the procedure commonly prevailing in this country, viz.:

By Adoption of Loan By Law.  
Approval of Rates Payers.  
Sanction of Provincial Depart.

This latter method may withhold the flotation of unauthorized funding securities, but it does not guarantee any safety from unauthorized capital commitments. Again the prescription within such narrow limits, as usually found in a loan Bylaw, hinder rather than aid the municipalities in their capital financing. The essential as shown in this work is the Official Sanction to borrow for so many years for specific purposes. The actual methods of borrowing redeeming or refunding are entirely apart, and the sanction should not be obscured by this attachment, neither should they in their turn be governed arbitrarily by these sanctions, but rather by a well-defined and broad code of financial regulations, which, while allowing the municipalities to make use of whatever form of borrowing they find most expedient, yet retains such control upon them that will

ensure Provision being regularly made for redemption.

Protection from loses by unobservance of sound financial practice.

Protection from frauds and miappropriation.

## 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

## Wood, Gundy & Company

Head Office:

C. P. R. Building,  
Toronto

Branches:

Montreal  
London

Saskatoon  
New York

## 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.

### DOMINION SECURITIES CORPORATION-LIMITED

26 KING ST. EAST - TORONTO  
MONTREAL LONDON, ENG.



EDWIN HANSON

WILLIAM HANSON

THE OLD AND RELIABLE HOUSE  
OF**HANSON BROS.,****BOND DEALERS****MONTREAL**

Are prepared to consider the purchase of entire issues of bonds made by municipalities large or small

*Correspondence Solicited***HANSON BROS.,**

164 ST. JAMES STREET.

**MONTREAL**

Established 1883

(A Municipal Report From South Africa.—Continued)

**Aggregate Revenue Account.**

This account again classified as the Balance Sheet shows in summary form the annual administrative operations of the municipality, both as to the General Administration, as well as to the Administration of its public utilities. The additional feature showing comparative figures for the previous four years and that of estimates (Budget) for the following fiscal period, renders the account very interesting from many viewpoints.

To be of much service, however, from the point of view of budgetting, the abstract must be prepared immediately at the close of the Financial year, and the establishing of the rate of taxation for the ensuing year can only then be fixed after the year has commenced; this, however, is no hardship, and is, perhaps, the better way by reason of having available the exact results of the expired year. It would be as well for those municipalities who wish to adopt this precise method to remember to provide themselves with a substantial **working cost balance** and to thus avoid many discussions and difficulties with their bankers.

The Revenue Accounts of the Public Utilities show the adoption of the prescribed forms used in Great Britain.

If only we in Canada could get down to this point and also to insist on the observance of this practice by the many Utilities Companies, we should, indeed, have cause to congratulate ourselves. We should have found the way to avoid much discussion, arbitration and litigation.

The South African municipalities, so far as promoting finance goes appear to be under the control and guidance of a Federal Government Board Auditor. Be this good or bad, I leave to the individual reader, but that does not in any way take away from the merits of the Town Clerk and Treasurer of Bloemfontien as exposed in the abstract of accounts here reviewed.

**MUNICIPAL OFFICIALS**

WHEN YOU

**NEED A BOND**

APPLY TO

The Dominion of Canada Guarantee  
and Accident Insurance Company

Head Office, TORONTO

**"THE SECURITY OF A BOND"**

GUARANTEED BY THE "DOMINION."  
A STRONG CANADIAN COMPANY  
WITH LARGE RESERVE FUNDS IS  
SAFER, SANER AND MORE SATIS-  
FACTORY IN EVERY WAY THAN  
TRUSTING TO THE VARIABLE FOR-  
TUNES OF PRIVATE BONDSMEN.

BRANCH OFFICES:

MONTREAL. HALIFAX. ST. JOHN. OTTAWA.  
WINNIPEG. CALGARY. REGINA.  
VANCOUVER.

**J. A. Mackay & Co.**

LIMITED

**Government****Municipal and****Railroad Bonds**

Our services are at the dis-  
posal of Municipal Coun-  
cils contemplating the is-  
sue of Debentures.

160 St. James Street,

**MONTREAL**



## Quebec Savings and Trust Company

Head Office, MONTREAL

J. N. GREENSHIELDS, K.C., President.  
 J. W. PYKE, Vice-President.  
 F. W. TOFIELD, Manager.

This Company Specializes  
 in the  
 Joint Administration  
 of  
 Municipal Sinking Funds

Full Particulars Upon Application.

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

## BANK OF MONTREAL

Established 100 Years (1817-1917)

CAPITAL (PAID UP)	- - - -	\$20,000,000
REST	- - - -	\$20,000,000
UNDIVIDED PROFITS		\$2,090,440
TOTAL ASSETS	- - - -	\$571,150,138

### BOARD OF DIRECTORS

Sir Vincent Meredith, Bart, President.  
 Sir Charles Gordon, G.B.E., Vice-President.  
 R. B. Angus, Esq. Lt.-Col. Molson, M.C.  
 Wm. McMaster, Esq. C. R. Hosmer, Esq.  
 H. R. Drummond, Esq. D. Forbes Angus, Esq.  
 Lord Shaughnessy, K.C.V.O. Harold Kennedy, Esq.  
 H. W. Beauclerk, Esq. G. B. Fraser, Esq.  
 Col. Henry Cockshutt, J. H. Ashdown, Esq.  
 E. W. Beatty, Esq., K.C.

Head Office : MONTREAL

General Manager -- Sir Frederick Williams-Taylor.

### BRANCHES AND AGENCIES :

Throughout Canada and Newfoundland. At London, England, and at Mexico City. In Paris, Bank of Montreal, (France). In the United States—New York, Chicago, Spokane, San Francisco—British American Bank (owned and controlled by the Bank of Montreal). West Indies, British Guiana and West Africa—The Colonial Bank (in which an interest is owned by the Bank of Montreal).

A GENERAL BANKING BUSINESS TRANSACTED

## MUNICIPAL DEBENTURES BOUGHT

MUNICIPALITIES WILL PROFIT BY COMMUNICATING WITH US WHEN CONTEMPLATING THE ISSUE OF DEBENTURES.

C. H. Burgess & Company

Traders Bank Building - Toronto, Can.

## THE ROYAL BANK OF CANADA

Capital Paid Up.....	\$ 17,000,000
Reserve and Undivided Profits.....	18,000,000
Total Assets.....	550,000,000

HEAD OFFICE - MONTREAL

### BOARD OF DIRECTORS:

Sir Herbert S. HOLT, Pres. E. L. PEASE, Vice-Pres.  
 Jas. Redmond Sir Mortimer B. Davis  
 G. R. Crowe G. H. Duggan  
 D. K. Elliott C. C. Blackadar  
 Hon. W. H. Thorne John T. Ross  
 Hugh Paton R. MacD. Paterson  
 A. J. Brown, K.C. W. H. McWilliams  
 W. J. Sheppard Capt. Wm. Robinson  
 C. S. Wilcox A. McTavish Campbell  
 A. E. Dymont Robert Adair  
 C. E. Neill T. Sherman Rogers, K.C.

### OFFICERS:

E. L. Pease, Man. Director, C. E. Neill, Gen. Manager.  
 M. W. Wilson, Supt. of Branches

670 Branches, in every Province of the Dominion of Canada, and in Newfoundland; in Havana and throughout Cuba, Porto Rico, Dominican Republic, Costa Rica, Haiti, Colombia, and Venezuela, Martinique and Gaudeloupe; Antigua, Bahamas, Barbados, Dominica, Grenada, Jamaica, Montserrat, Nevis, St. Kitt's, Trinidad, British Guiana, British Honduras. ARGENTINE—Buenos Aires. BRAZIL—Rio de Janeiro, Santos, Sao Paulo. URUGUAY—Montevideo. SPAIN, Barcelona—Plaza de Cataluna 6. LONDON, England—Princes St., E.C. NEW YORK AGENCY—68 William St.,

### PARIS AUXILIARY:—

THE ROYAL BANK OF CANADA (FRANCE)  
 28 Rue du Quatre-Septembre



# Le Quebec Municipal

(Municipal Quebec)

## Organ of the Union of the Municipalities of the Province of Quebec

is mailed to every one of the 1300 Municipalities in Quebec

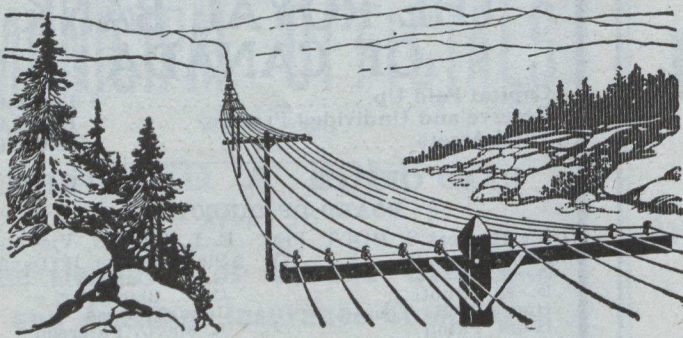
This is a splendid opportunity for manufacturers of municipal requirements to get into direct touch with the municipal authorities of the Province of Quebec.

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Coristine Building  
MONTREAL



## A Far-Reaching Service

Besides serving cities, towns and villages throughout Quebec and Ontario, our lines reach thousands of farmers.

More than 707 independent telephone systems have made satisfactory arrangements for interchange of business with us, and these serve upwards of 98,851 subscribers, mostly farmers.

Hence, Bell service—local, long distance, urban, and rural—is part of the business and social life of the whole community.

*"Every Bell Telephone is a Long Distance Station."*

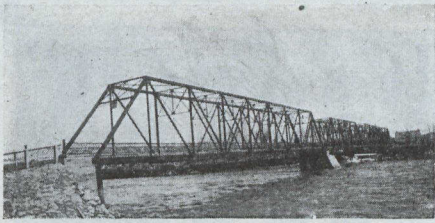
**The Bell Telephone Co. of Canada**





# To Municipal Councils & Engineers

## THE MACKINNON STEEL CO., LIMITED



Having experienced crews to handle erection, and at all times a large stock of steel plates and shapes on hand, the company is prepared to give good service in all its contracts.

Handle all kinds of Structural and Steel Plate Work

**Bridges---Power Houses---Standpipes**

And erect same in any part of Canada.

Let them quote you on your next construction.

Head Office and Works: **SHERBROOKE, QUE.**

## WANTED

Manager wanted for City of Sherbrooke's public utilities Electricity, Gas and Water Departments. Applicants must have experience in Electrical Engineering and possess good business and executive ability. Apply, stating qualifications and salary expected to E. C. Gatién, Secretary-treasurer, Sherbrooke, Que.

LOANS MADE TO:  
BONDS BOUGHT FROM:

## MUNICIPALITIES

**A. P. LESPERANCE, Manager**  
City and District Savings Bank  
MONTREAL

## SERVES TWO PURPOSES—SAVES ONE PRICE

AN "Office Specialty" Counter-Height Section serves two purposes for one price. It serves as a strong, beautiful, compact counter. In addition, it serves the important second purpose of a practical, convenient, filing Cabinet. It saves valuable floor space in many ways. It eliminates the bulky counter everywhere. Batteries of "Office Specialty" Counter-Height Sections make good and economical departmental divisions and counters in the larger office.

### "OFFICE SPECIALTY"

### Counter-Height Sections

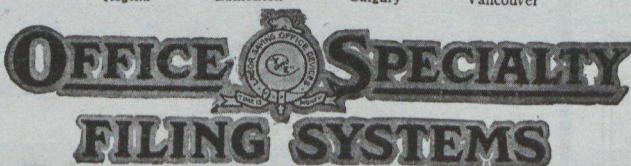
"Office Specialty" Counter-Height Sections are 44" high. The cabinets under counter top are supplied with the right equipment for filing and keeping every record and document.

"Office Specialty" Counter-Height Sections are well and durably made by Canada's leading office equipment manufacturing Company. Ask for interesting folder, "The Conservation of Space".

THE OFFICE SPECIALTY MFG. CO., LIMITED  
Home Office NEWMARKET Canada

Filing Equipment Stores at:

Toronto Montreal Ottawa Halifax Hamilton Winnipeg  
Regina Edmonton Calgary Vancouver



"Office Specialty" Counter-Height Sections

When business is conducted over the top of "Office Specialty" Counter-Height Sections, we drive a deep salient into our old enemy "overhead".



# MILTON HERSEY COMPANY

LIMITED

INDUSTRIAL CHEMISTS &  
CONSULTING ENGINEERS

A Complete Testing Service to all  
Municipalities on

CEMENT

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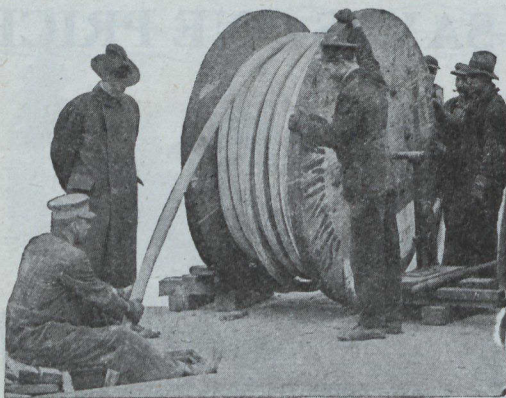
WATER

ALL INDUSTRIAL MATERIAL

A Complete Organization of  
Road Engineers, Experts in the  
Design of Roads and Pavements  
thoroughly Equipped for their  
Inspection and for Supervision  
of their Construction.

MONTREAL

WINNIPEG



## THE INSTALLATION

of electric wires and cables, as well as  
their manufacture, has been our constant  
study for many years.

Whether for aerial or underground ser-  
vice we can meet your every requirement  
of electrical conductors promptly. Our  
experience as installation engineers is at  
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Write our nearest office.

**Standard Underground Cable Co.**

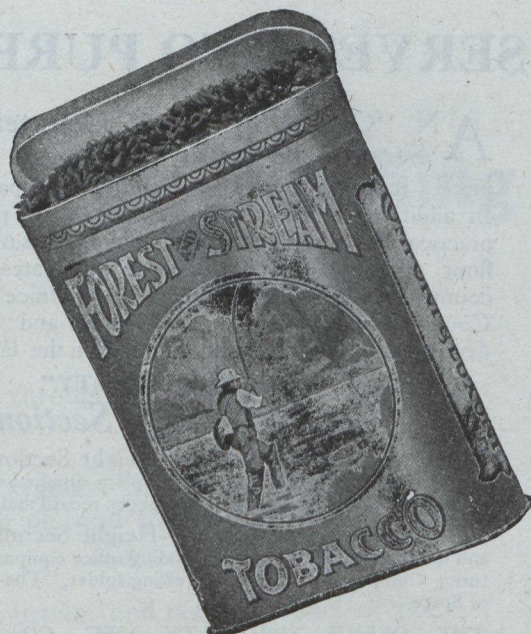
OF CANADA, Limited.

General Offices and Works: HAMILTON, Ont.  
MONTREAL, TORONTO, SEATTLE.

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These words exactly  
describe the quality  
of

# FOREST & STREAM TOBACCO



EVERYWHERE 20c PER TIN



**B** **B**  
**BURLINGTON**

**STEEL CO LTD**

HAMILTON, CANADA.

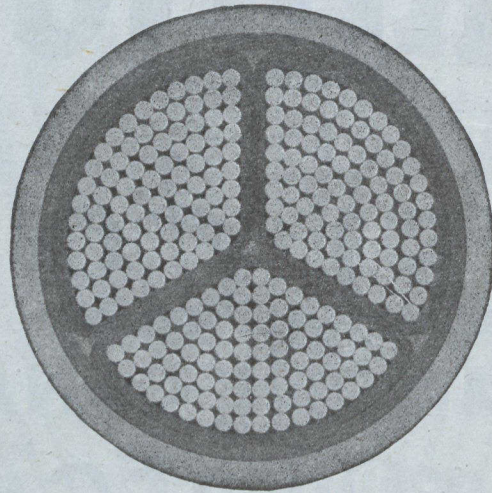
**STEEL BARS FOR RECONSTRUCTION**  
  
**CONCRETE REINFORCING**

Plain Rounds or Squares.  
Twisted Squares.

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**B**





**Three-Conductor 750,000 C.M. Sector, Paper Insulated, Lead Covered Cable, 600 Volts**

Manufactured for The University of Saskatchewan, Saskatoon, Sask.

We manufacture all types of Paper Insulated, Rubber Insulated and Varnished Fabric Insulated Cables.

***Northern Electric Company***

LIMITED

- |          |          |           |        |         |
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|          | LONDON   | WINNIPEG  |        |         |
|          | REGINA   | CALGARY   |        |         |
|          | EDMONTON | VANCOUVER |        |         |