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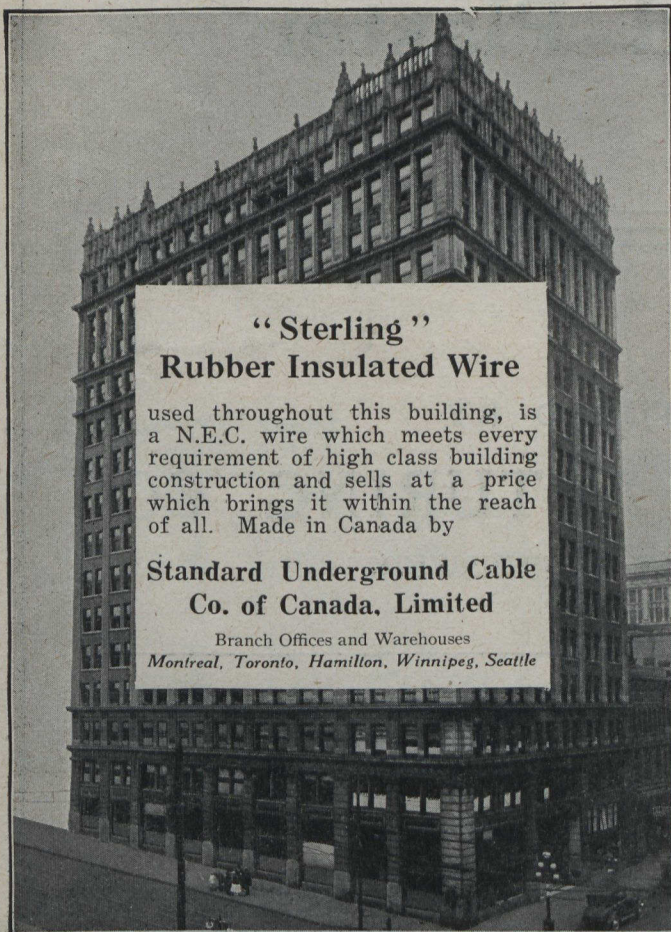
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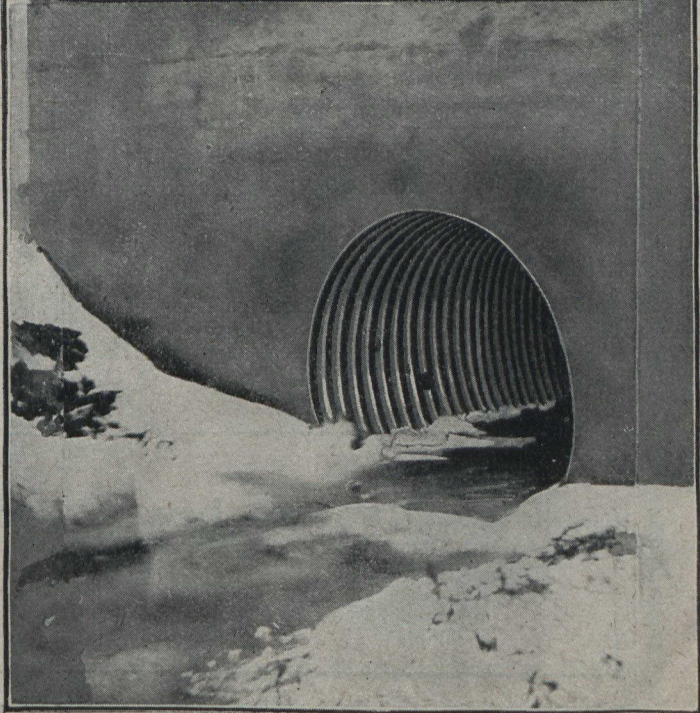
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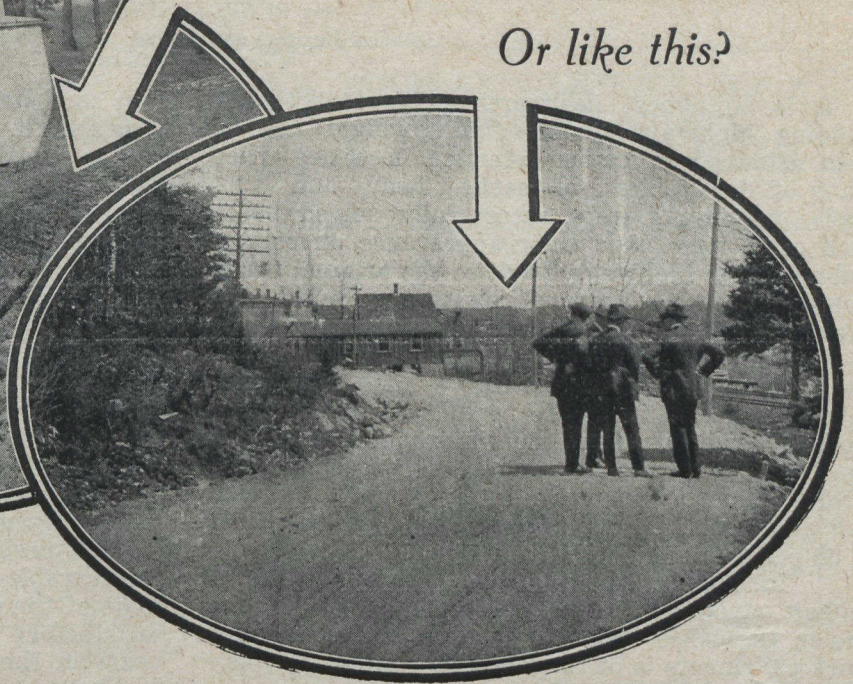
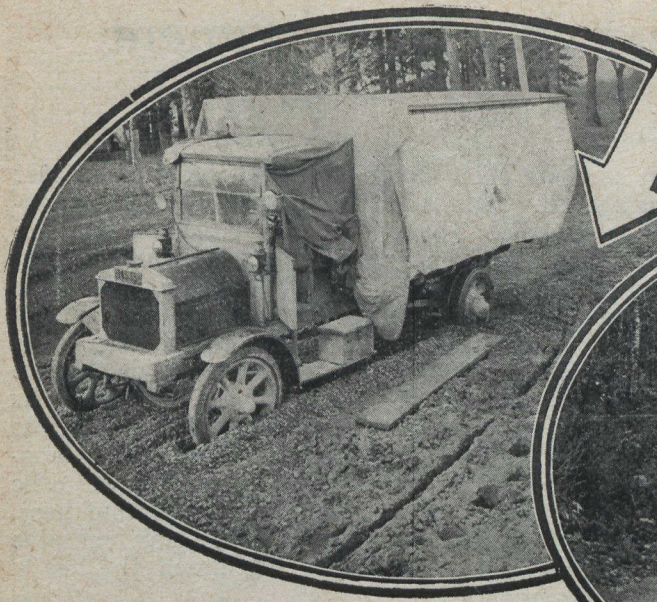
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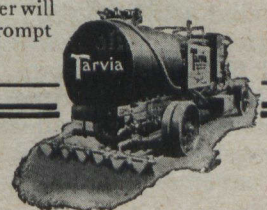
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# The Present Trend of Highway Development

By PREVOST HUBBARD

(Chemical Engineer and Author "Laboratory Manual of Bituminous Materials".)

It is an almost incomprehensible fact that in building highways systems more weight has not been attached to paving practice in Cities where many of the problems of meeting heavy and varied traffic conditions were successfully solved before such conditions made their appearance on country and suburban highways. In cities the original waterbound macadam and gravel roads have for the most part given way to higher types of construction until to-day they constitute an average of only about 26 per cent. of the total yardage. The three most widely used city types are asphalt, brick and stone block. If we eliminate the waterbound pavements we find that of the higher city types asphalt constitutes about 55 per cent., brick about 19 per cent. and stone block about 14 per cent., giving a total of 88 per cent. for these three types.

In connection with the preponderance of asphalt pavements the present trend of paving practice in the construction of modern brick and stone block pavements is of considerable significance, as it recognizes a principle which just now is attracting a great deal of attention on the part of our highway engineers. I refer to the use of a flexible joint-filler for brick and block pavements as against the rigid grout fillers formerly so popular. Such cities as New York and Philadelphia are now using asphalt fillers for heavy traffic streets paved with stone block and the Paving Brick Manufacturers Association are preferentially recommending asphalt as a filler for their type of pavement. The reason for this lies in the fact that absolute rigidity in a pavement structure is not a desirable characteristic. Service results and comprehensive field tests conducted by the U. S. Bureau of Public Roads have demonstrated that the brick or block pavement with a flexible filler is more resistant to traffic than with a rigid filler. A certain degree of flexibility is highly advantageous in meeting the heavy impact of modern traffic. Such flexibility is an inherent characteristic of bituminous pavements and is imparted to brick and block pavements when asphalt is used as a joint filler.

While in certain sections of the country the experience of our cities appears to have been overlooked, it is a fact that the flexible or semi-flexible types of construction predominate in our country roads and if we consider the total mileage of state, county and municipal highways higher than gravel and macadam considerably more than 50 per cent. may be so classed. By reducing all yardage to a basis of 16 feet width, we estimate that at least 45 per cent. of the mileage of the higher types of pavements are of the hot-mixed asphalt types. The latest available information indicates that last year the total area of asphalt pavements constructed approximated 68,000,000 square yards, which was greater than for any other type. Most of the stone block pavements constructed that year were filled with bituminous material and about 60 per cent. of the brick pavements were similarly filled.

There are, it is true, many advocates of the all-rigid monolithic types of construction and in cer-

tain sections such pavements predominated in last year's work. This is not true, however, of the country, as a whole. Those who favor rigid construction have constantly been obliged to increase the massiveness of design of such pavements and also the amount of reinforcement in an endeavor successfully to meet the destructive action of heavy traffic, while those who have favored the semi-flexible or flexible types have, in general, found that the old standards of design have proven satisfactory. The all-flexible types, such as the black base pavements so extensively adopted in the far western states appear to be the most highly resistant per inch of total thickness, and may therefore be considered the least massive and in this respect the most efficient of the heavy traffic pavements.

It is probable that such pavements will be given considerable attention in the 1922 programme of some of the eastern states owing to the remarkably satisfactory results obtained over a long period of years in the West. Many of these pavements are six inches or less in total thickness.

What we have learned in the last few years about the destructive effect of traffic impact and the resistance to impact offered by semi-flexible and flexible highway structures has a peculiar significance in connection with a great economic problem that of conserving our investment in old roads, particularly gravel and macadam, when it becomes necessary to adopt a higher type of wearing surface. Prior to the careful investigation of this important subject there existed a marked and growing tendency to discredit the use of old gravel and macadam roads for foundations for the higher types and this in spite of many remarkable service records of macadam foundations. For example, in the City of New York, a number of the most heavily travelled streets were constructed years ago on macadam foundations and some are still giving satisfactory service. In 1890 Broadway, between 59th and 79th streets, was paved with asphalt over an old macadam base and for 22 years gave good service. Its replacement at the end of this period was largely due to subway excavations. Seventy-second Street, paved in a similar manner, also gave 22 years of service under increasingly severe traffic conditions and the same is true for a 19 year period for Fifth Avenue between 110th and 120 Street. Lenox Avenue between 110th and 124th Streets was surfaced with asphalt over old macadam in 1904 and is still giving good service. The cost of maintaining this section in 1919—14 years after construction—was only 1 per cent., certainly a remarkable record. Many similar cases might be cited from various localities.

A recent investigation of rolled stone bases for brick pavements was conducted by the U. S. Bureau of Public Roads and A. T. Goldbeck of that Bureau has published a very favorable report on this type of brick construction. All in all it appears that the old waterbound base is again coming into its own.

One reason for much of the former dissatisfaction for such bases was undoubtedly due to a fault

(Continued on page 77).

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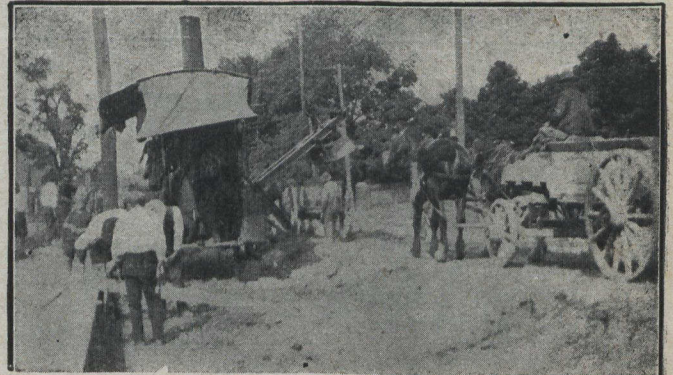
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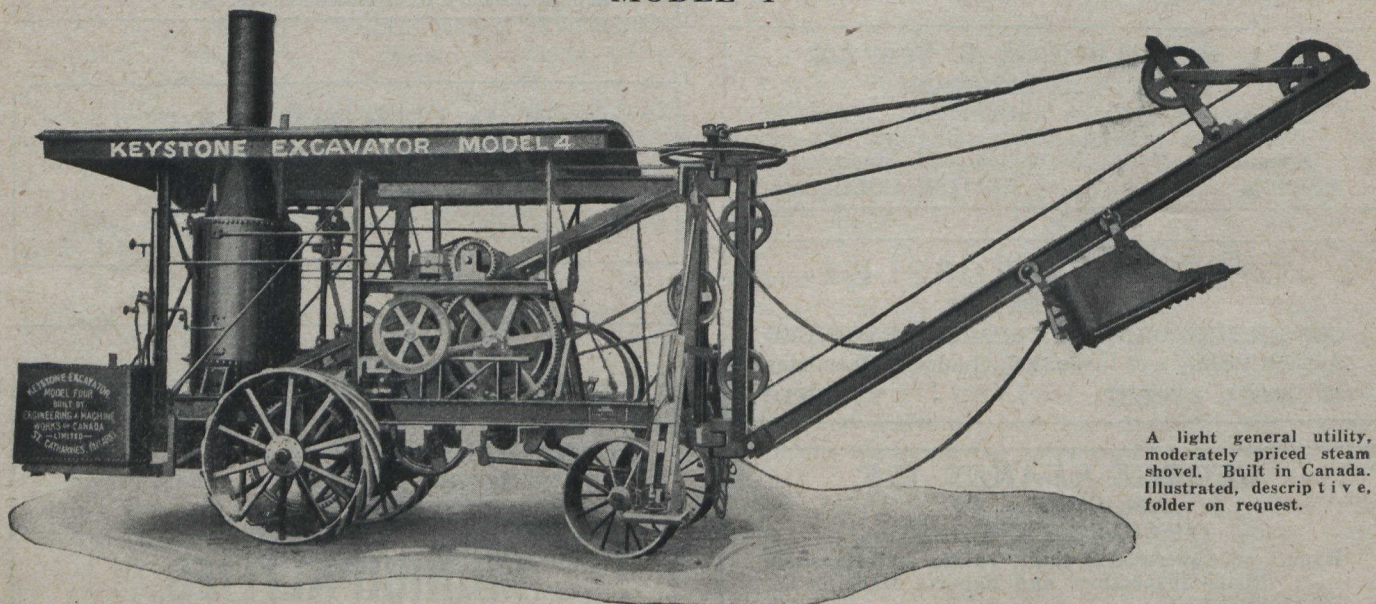
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## Canadian Slums—Why?

The Governor-General during his recent extended stay in Montreal found time to visit some of the slums of the commercial metropolis, and what he saw there must have shocked his sense of decency. Be that as it may in an address that he afterwards delivered to one of the local women's clubs, Lord Byng found occasion to state his experiences, with the hope that he would touch the public conscience. Like that of most metropolitan cities the public conscience of Montreal is an inane thing, in spite of the many efforts of local associations to put some life into it. Unfortunately, the slum life of Montreal is too deep-seated to be largely affected by the charity organizations, though they have been a blessing to many families. It is fundamental, inasmuch it is the result of economic conditions that far too long have been allowed to prevail in Canada, and particularly in Montreal.

Under our immigration system foreigners are allowed to locate in any part of Canada, which in the larger number of cases mean the cities. Most of these foreigners come from parts of Europe where sanitation and hygiene are unknown quantities — they are not known at all to the class of people who emigrate to this continent—consequently filth and uncleanly habits are but natural to them, as can be seen any day by a visit to those quarters of the city in which these foreigners herd together in tenements unfit for human habitation. If it were not for the garlic that is used in most of their dishes whole colonies of them would be wiped out with every epidemic. No foreign immigrant should be allowed to stay in any port of entry for more than a week, which is ample time to get connected with a job that will take him or her into the country places, where they have every chance to become useful citizens. For many years they have been overcrowding the cities at the expense of the community,

and particularly the workers, who have been thrown out of employment by the thousand because of the unfair competition of these foreigners, whose standard of living is so miserably low. And as it is with living so it is with housing. It is a common thing for four or five large foreign families to live together in a tenement that was originally intended for one small family. Unfortunately this, together with the shortage of small cottages, has had the effect of raising rents out of all reason, with the result that for a long time there has been a tendency for working class families to double up, so as to be better able to meet the high rents.

Such a state of affairs cannot help but have an adverse effect on the general health of the community. The wonder is that the health of our eastern cities is as good as it is. The real danger is that the home life—the backbone of any community—of our urban centres is gradually losing itself in this excessive struggle for existence.

There is only one way out, and that is that the problem of housing and living in urban Canada must be treated as an economic question by the authorities and captains of industry. Once the Canadian employers of labor fully realize that the personal and principal equation of their business depends on decent housing and living accommodation for their employees, they will soon get busy. Many of the big leaders of industry in the United States, such as Henry Ford, have already realized the fact that the home life of their employees does effect their efficiency. And wonderful and profitable have been the results.

The strange thing is that the average citizen in Canada, and particularly the workman, has not yet realized the advantage of decent living accommodation for the worker, in the economic development of the community.

## Ex-municipal Men in Parliament

In the retirement of Mr. Robert Forke from the secretaryship of the Manitoba Union of Municipalities, after sixteen years of service, to become a member of Parliament the cause of civic administration in the prairie province has lost a sound leader, though Mr. Forke has a unique opportunity from his seat in the House of Commons to carry on the good work for which he has given so much time and thought.

Municipal government requires all the friends it can get at Ottawa, particularly when bills are introduced that affect municipal rights, and this is more often than the average municipal man thinks, as witness the annual report of Mr. Fred Cook, the Parliamentary Agent of the Union of Canadian Municipalities. Fortunately, this tried servant of the Union lets no public or private bill pass him without the closest scrutiny for any attempt to interfere with civic rights, either locally in a private bill or nationally in a public bill.

In addition to Mr. Forke municipal Canada has another fighter in the House of Commons in the person of ex-Mayor Church of Toronto. Whatever his politics Mr. Church is essentially a municipal man first, and a strong advocate of public ownership of public utilities, so that private interests seeking franchises at the expense of the public will have a real fighting opponent in "Tommy Church."

There are a number of other ex-municipal men in parliament, but strange to say the parliamentary atmosphere seems to have had a baneful effect on these ex-mayors and aldermen so far as looking after civic interests is concerned. It is true there were exceptions in the last parliament, notably Messrs. Nickle of Kingston, and Mouat of Toronto, who fought hard for municipal rights at every opportunity. The municipal men in the new parliament are yet to be tested.

---

## The University and the Community

"If the development of citizenship, community service and character is one of the aims of education, then surely Greek is one of the most practical subjects." In these words Dr. Gordon Laing of McGill University, in a recent convocation address concluded a strong recommendation to the study of the classics through which, he pointed out, the student was brought into contact with the high ideals of the citizens who lived under the old Grecian system of civic government.

"The study of Greek," said Dr. Laing, "involves contact with the record of a people abounding in examples of rare citizenship, of lofty standard of community life, of striking demonstrations of patriotism, of high courage, invincible love of truth and indefatigable striving for moral and religious ideals. I say nothing of that genius for philosophic speculation, that keenness of logical reasoning that have made Plato and Aristotle familiar names in any household where thought tarries even for a little space each day; I pass over the poets, the music of whose rhythms has rolled down the ages, whose golden phrases permeate the best of modern literature and are transferred perhaps into what you, who love your English verse, are wont to think the best lines some favorite poet ever wrote; and I omit even the Attic dramatists whose plays with notable simplicity of thought and structure present with marvellous effectiveness some great problem of ethics or religion."

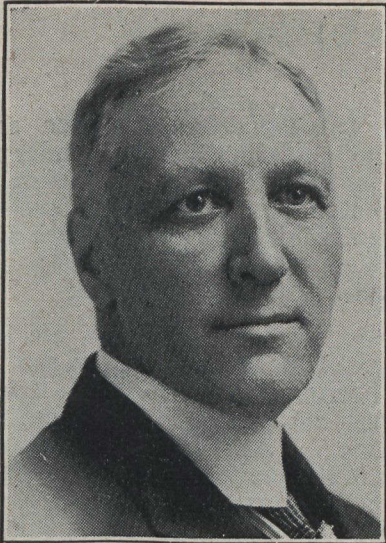
While every word in Dr. Laing's appeal is undoubtedly true, a thought comes into one's mind questioning its application, at least under the present system of teaching the classics. During the last fifty years Canada, like other countries, has turned out many thousands of graduates whose curriculum included the classics. Yet how many of these same graduates, unless professionally and therefore for monetary returns, have actually taken up the responsibility as well as the privilege of citizenship as taught by the old Greek philosophers, who evidently had so great an influence on the citizens of ancient

Greece, and later on the citizens of the great Roman empire. To be a "citizen of no mean city" denoted at once pride and responsibility in the mind of the inhabitant of any of those ancient cities, the ruins of which give so much evidence of that high standard of civilization only possible under a highly developed state, and no state or government is higher than its people.

If a census of the men and women now doing public work in one form or another in Canada were taken, it would be found that a very small proportion were university graduates, and even of that small proportion very few had been actuated by the teachings of the classics. Why? Is it because the great truths so beautifully expressed by Homer, and Plato and Aristotle have become by the present cramming process of teaching so academic and deadened as to become obtruse and consequently a nightmare to the average student whose only object in studying the classics at all is to pass his examinations.

Be that as it may the universities of Canada have not turned out the material out of which true public spirited men and women are made—men who will devote their talents and knowledge to the public weal. For instance it will be found that very few university graduates turn their thoughts to civic government, that very form of government about which the old Greek masters wrote and orated so much about, yet there are 3,500 rural and urban municipalities in Canada waiting to be served by the very best that is within each of the citizens. It may be quite true, as Dr. Laing maintains, that every graduate turned out by a university means a "raising of the standard of civic life;" but unless that knowledge is used unselfishly in the general interest of the community life it is as nought.

The university, in spite of the expressed desire of the leaders that it should become a living part of the community is still too individualistic in so far as its graduates are concerned, and too isolated from the actual activities of the community itself.



**MAYOR THURBER**  
of Longueuil, P.Q., First Vice-President of  
Union of Quebec Municipalities

### A MUNICIPAL FLYCATCHER

The city of Riverside, Calif., will soon be known as "The Flyless City" if its Municipal Flycatcher continues with his scientific fighting of this pest with trap and spray. Last year E. S. Beebe kept 150 traps, well baited with old bananas, melons, milk, and occasionally old meat, at important centres, collecting in his daily tour of inspection millions of flies. This year he is adding to the trap campaign a daily visit to garbage cans, stables, dairies and such gathering places of these obnoxious pests, where with a spraying machine he dispatches countless hordes. His methods should be of interest to every city.

Mr. Beebe, in behalf of Riverside's Board of Health, uses three sizes of traps, the middle-sized one being the most popular. This is simply a wire cage three feet long by one foot square, raised from the ground about one inch. The bottom is made of wire in the form of a V, with holes in the top of the V through which the flies easily crawl into the trap. All food is placed on the ground or on a board outside, but directly under, the trap; thus the traps are always clean. All traps are placed on the ground, for flies prefer to feed on the ground. After eating, they naturally fly upward into the trap. Mr. Beebe, acting on the fact that flies are much like humans in some ways, places the traps in the shade on hot days and in the sun on cold days. Often requests for traps come to him from garage owners, restaurant keepers, butcher-shop or fruit-stand proprietors who willingly take care of them and thus extend the scope of the Municipal Flycatcher.

For spraying he uses an ordinary tree sprayer, and the mixture consists of one part creosote to six parts distillate of coal oil. Flies breathe through their bodies, and this mixture kills them instantly. An illustration shows Mr. Beebe spraying a garbage can in an alley. All alleys are systematically visited during the feeding hours, which are early morning and evening. Boxes of refuse, manure piles, oil stations, are also visited daily. Millions of flies are

thus destroyed every day during the breeding season. Though the Public Health Board began its fight for a flyless city only last summer, there is a most noticeable diminution of flies in the streets, places of business and private homes.—Dr. W. B. Wells, M.D., in American City.

### THE BONUSING OF INDUSTRIES

The evil of bonusing industries, even indirectly, was brought up recently by the Trade Commissioner of the City of Quebec, when he complained that other cities and towns in the province were evading the law which prohibits the granting of tax exemptions or bonuses. As an instance he gave the case of one municipality offering a prospective industry power for \$5 which cost \$15 to produce.

Because of the restrictions in the law the Province of Quebec has undoubtedly suffered from competition from other provinces where there are no restrictions. So much so is this the case that the government is allowing certain modifications so as to allow Quebec cities and towns to compete more favourably for industries. The pity of it is that such modifications were even considered necessary. If all the provinces had the same prohibitory laws regarding the granting of bonuses as the Province of Quebec has, Canadian cities and towns would have to use other methods than bonuses and tax exemptions to attract industries. The practice of giving monetary and tax exemption considerations to attract industries is a vicious one, inasmuch as it provides a weapon for prospective industries to extort all kinds of privileges from over anxious municipalities, a weapon that is too often held over a municipality in which an industry would be located whether privileges were granted or not. Even the best of firms will not refuse tax exemptions for a long period of years, or a free grant of land, if they can get it, though we doubt if the privileges offered were real factors in deciding on a location.

In a questionnaire recently sent out by a large American firm desirous of locating in Canada there was no mention of monetary privileges, either direct or implied. What the firm did want to know were—the local tax—the municipal service and protection—the educational and religious facilities—housing accommodation—means of entertainment—parks and playgrounds. This firm, one of the most progressive and successful in its line realized the fact that living conditions were a factor in assuring the efficiency and contentment of its workers.

While healthy competition between municipalities is an excellent incentive to public efficiency, it should be in those things mentioned in the questionnaire, rather than in giving away privileges and franchises and bonuses. The one stands for real progress. The other means the piling up of municipal debts for the future, which not even the industries that secured the privileges can stand very long—and then they move on to other cities, leaving the community to bear the brunt of increased taxes.

This question of bonusing industries should be taken up at the next convention of the Union of Canadian Municipalities, which will be held in Winnipeg next fall, and every Provincial Union should take it up as well.

# Municipal Men in Canada

(By AJAX)

ALDERMAN C. W. H. RONDEAU.

President of the Union of Canadian Municipalities,  
of Westmount, P.Q.

Municipal men who have attended any of the meetings of the Union of Canadian Municipalities during the last five years could not help but come into contact with a genial little French-Canadian, who always boasted of the fact that he came from the model city of Westmount. . . . This was Dr. C. W. H. Rondeau, the present president of the Union of Canadian Municipalities, his other public positions being Alderman and Chairman of the Financial Committee of his adopted city, and Commissioner of the Protestant Schools of Pointe-aux-Trembles, so that he is well qualified to preside over the affairs of an organization that is essentially municipal in character.

It was, and is now, hoped that the election of Dr. Rondeau to the presidency of the Union would bring the west and the east together, and if personality and a genuine sympathy for the more advanced ideas and ambitions of western municipal men count for anything then Dr. Rondeau will go far in bridging the too widening gulf between the progressiveness of the municipal west and the conservativeness of the municipal east. . . . Dr. Rondeau has within himself the solidity of the English mentality and the vision of the French mentality so that it is quite natural for him to see eye to eye with both civic temperaments. . . . As the next convention of the Union will be held in Winnipeg—the meeting place of east and west—the doctor has a great opportunity of testing his “get together” ideas, and it looks very much like his succeeding.

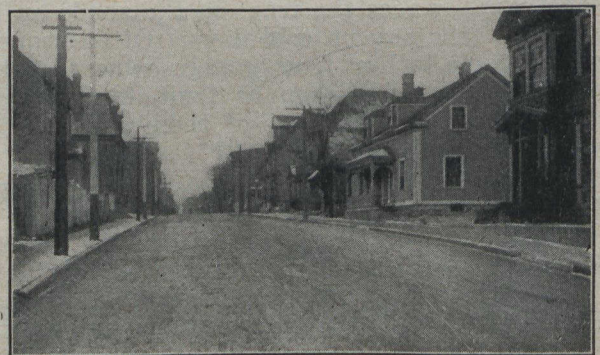
Alderman Rondeau is comparatively new to municipal affairs having first become an alderman a little over five years ago, but from his first council meeting to the present moment he has taken a very active part in everything pertaining to civic affairs. He has been in turn chairman of the Police, Parks and Finance Committees, which latter position he now holds for the second term. He has been acting mayor for four terms, which we trust is but a stepping stone to the mayoralty itself.

In general civic affairs, in addition to his protestant school commissionership, Ald. Rondeau has been for two years a member of the local library commission—and the City of Westmount has one of the best equipped civic libraries in Canada. . . . In the words of the Doctor himself he was born a Presbyterian, and of course he is Presbyterian today, though let it be said that sectarianism is not one of his strong points. He is too broad-minded in his mental make-up. . . . Personally Dr. Rondeau is one of the most likable of men. What is more he likes his fellowmen, and one does not know of any man who would do more, in proportion to his opportunities, to render a service to his neighbour. . . . One does not mean by this professional service but the service of good fellowship. . . .

Dr. Rondeau is a surgeon-dentist by profession, with thirty years experience behind him though he is but forty-eight years of age. . . . He is married of

course, with two daughters and one son to look after him, though fatherlike he is under the impression that he looks after them. . . . Madam Rondeau is one of a trio of sisters who married successful men; or rather men who afterwards became successful in their respective professions,—after their marriage. Strong evidence of wifely influence.

The doctor has his weakness. He is a disciple and an apostle of that Scottish game that makes men drunk with excitement—curling. . . . It is strange to what excesses men will go to in the pursuit of their favourite game. . . . At the last meeting of the Union of Canadian Municipalities, which was recently held in Ottawa, on a Saturday, it was noticed that a curling match was being played—in Ottawa—that same evening between teams to one of which the doctor belonged. Far be it for the writer to suggest for a moment that the President of the Union would have neglected his official duty under any circumstances, but he has his suspicion that friend Rondeau looked forward with special eagerness to the U.C.M. meeting because of that curling match. . . . And who wouldn't, given the same chance? . . . Be that as it may the present President of the U.C.M. is no dry-as-dust manikin of officialdom, but a red blooded Canadian who sees good in his fellowmen, and who believes in municipal government as the best means of solving all the social and economic problems of the nation, and who is determined to give of his best so as to bring about a real solution of those problems.



# City Government Under the Council-Manager Plan

By R. F. ARMSTRONG, Town Manager, Woodstock, N.B.

The process of efficient municipal government involves two considerations. First, a capable representative body should determine the policy to be adopted, and should be available as an advisory board. Secondly, there should be a competent organization to efficiently administer the policies which may be decided upon.

To effectively meet the two above requirements the Council-Manager form of control has been developed. Under this plan there is no excuse for the busy man not taking an active part in the city's affairs, for there are few men who cannot spare a night or two a month for a directors' meeting, while it might be impossible for these men, except at great personal sacrifice, to attempt to supervise administrative details. The plan, therefore, greatly increases the field and talent which can be drawn upon to act on the Council Board. The second consideration is fulfilled in that a competent manager brings all the executive details under one central head. This gives an opportunity of organizing all departments so as to reduce departmental overhead and to prevent overlapping of effort or of administration, so that all departmental endeavors may be united for the general good of the city.

In a city or town operating under the Council-Manager Charter, the Commission or Council is elected by a vote of the rate-payers. This Council then acts as a Board of Directors; appoints a Manager; decides upon the general policies to be adopted; acts as an advisory committee, but leaves the detail to their appointed executive, who is, or should be, especially trained to carry out such work. The organization thus described corresponds in a large degree to that of a business corporation. The ratepayers correspond to the stock-holders of a Company; the Council to the Board of Directors, and the Manager to the Company Manager.

## History of the Movement

In 1908, the Mayor and Council of Staunton, Va., disgusted at the inefficiency of their existing form of control, engaged a trained manager and passed a by-law delegating to him administrative details and responsibilities, and conferring upon him the title of "City Manager". The results were most satisfactory.

The next city to adopt the plan was Sumter, S.C., and several neighboring towns subsequently fell in line, all with good results. Then came Dayton, Ohio, with a population of 152,000. The success obtained in Dayton was of so marked a character that it brought the Council-Manager plan of control into great prominence. From that time on, city after city has been following Dayton's example, until now there are over two hundred cities and towns in the United States operating under the Manager system. In Canada, Westmount, P.Q., Woodstock, N.B., Grand Mere, P.Q., Shawinigan Falls, P.Q., and La Tuque, P.Q., are operating under the plan, and it is being strongly considered in other centres.

## Size of City to Which the Plan is Applicable

Many in New Brunswick who are not familiar with this form of Government, express the opinion that it is all right for a small town, but would not be adaptable for a large city. Our opinion is just the reverse of this.

The more important an enterprise the more essential it is that one central head should be in charge of all detail. Time and again this has been proven. Many minds are needed for counsel, but it leads to confusion, delay and needless expense, if a central head is not responsible for the administrative detail. The most striking example of this was afforded during the great war. For several years it will be recalled, the Allies carried on under a general system, without accomplishing the desired end, and it was not until necessity compelled the appointment of a Commander-in-Chief that real results were obtained. It would seem, therefore, that the larger the city the more applicable is this plan of centralized control.

Akron, Ohio, population 208,000, Grand Rapids, Michigan, population 138,000, Norfolk, Virginia, population 115,000, Dayton, Ohio, population 152,000, and numerous other cities approaching these in population are most successfully operating under the scheme. Cleveland, Ohio, with a population of over 600,000 has decided by vote to adopt the plan. In towns under 3,500 population, where everyone is more or less familiar with the local situation, the form of government is not so important, and in small towns, too, the salary paid to a good man, sometimes looks so large to the average ratepayer that false attempts to economize are taken, and a cheap man employed with unsatisfactory results.

## Democracy of the Plan

Municipal government is often so round about and complex that no one but professional municipal politicians, head clerks, etc., who have held municipal positions for years, seemingly know how to do things. This has, in many cases, allowed the political machine to come into existence. Under the Council-Manager form of government everything is so simple, centralized, clear and direct, that there is no justification for the calling of the professional municipal politician, and red tape disappears. The Council is responsible to the will of the people. The rate-payer knows that this Board is directly responsible for the policies adopted and that the Manager is responsible to this Board for efficient administration of these policies. Can responsibilities be so directly indicated in any other form of control? With a clear understanding as to who is responsible for the work undertaken, with the Manager directly responsible to the Council, and the Council to the electors, is there any other form of government more democratic, or that can more easily and effectively be applied or administered?

W. G. Lee, National President, Brotherhood of Railway Trainmen, says: "I have personally inves-

## CITY GOVERNMENT UNDER CITY MANAGER CONTROL—(Continued from page 75).

tigated how the City Manager plan has worked out in Dayton. I cannot see how any working man can oppose the plan after investigating it."

### The Manager's Duties

The City Manager, as chief executive, appoints, directs, and removes the administrative staff. In this connection the Council usually acts in an advisory capacity. At a meeting of the Council he is in a position to supply them with full details concerning the administration, and his experience, training and recommendations should be of great assistance to the Commission in deciding their general policies. In fact, there should be a mutual confidence and understanding between the Council and the Manager, so that both may function closely together in the interests of the city.

### The Manager's Qualifications

Like the manager of any private business he must be absolutely trustworthy and reliable. He is not usually a local man. In fact, it is much better to get an outside man who will therefore be independent and who is making the work a life's profession. He should have a good business training, should be a good organizer, with experience and training along the particular lines he is to administer.

### Arguments Used Against Plan

The first argument usually advanced is that the plan is not democratic. This argument we have already dealt with in the paragraph "Democracy of the Plan." In fact the boast is made by the supporters of the Council-Manager system that it is really more democratic than any other system. Democracy does not consist of the number of representatives but should consist in the amount of control for efficient results. The second argument is, that if the Manager is responsible to the Council, that such a manager will be appointed who will obey the commands as to detail, and therefore you have no improvement over other forms of control. There is always the isolated chance that such will be the case, but the responsibilities in this system are so directly indicated, that there is not the opportunity of deception as afforded in many other systems. Then, too, the great majority of city managers realize that this is their life's work; are usually members of the City Managers' Association, and of the National Municipal League, which organizations tend to foster honest and efficient government. Another argument is that men of the proper type, with the proper training, cannot be obtained. Over two hundred cities and towns have obtained satisfactory managers, when there was but little opportunity for experience being obtained in this particular line, while now there are men who have made good as assistant managers in large centres, and as managers of smaller towns, etc., so that the ranks to be drawn upon are continually increasing. Great care, however, should be exercised in the choice of this man, especially when the system is being newly organized and before the rate-payers have been shown how feasible the plan is. Another argument is that politics must be played in the executive end of munic-

ipal administration. A proper demonstration of the working of the city management plan will show that when all parties realize that there is no political patronage but a fair treatment to all, then it is that they find that equal treatment at all times is preferable to special consideration only when friends are in command. Another statement put forward is that given good men you will always get good government. This is true so far as honesty is concerned, but just as a good workman can only with difficulty obtain results with poor tools, so is it difficult for good men to obtain good results under a clumsy administrative system. Under the manager plan too, it is much easier to obtain strong men to act on the board.

### The Council's Control

All details under the control of the Manager are open to the inspection of the Council or their representatives. The auditor should therefore be directly employed by the Council, and render his report to that body.

### Effect on Civic Employees

When the plan is first advocated in a community it is usual for civic employees to oppose any change. This opposition is generally made because they feel that their particular position may be in danger, that they will lose their present standing, and become subject to the whims of the new manager. What the manager will be after will be results, and no present employee, who can give such results, should be afraid of his position. The record of manager cities in dealing with labour and service has been particularly good in this respect. True there may at times be need of a complete reorganization, incompetent officials dropped, and others placed so that their efforts will repay the city for money expended. The general idea, however, is not to ruthlessly slaughter old and competent officials, but to use these men along such lines as will give increased service to the city and therefore increased opportunity of promotion. Promotion has been by merit and not by political or private influence. In this way employees and officials have been led to take an added pride in results, and in belonging to an efficient, but square and above board organization.

### Summary

The statements which I have made, founded as they are upon actual facts and upon the experience of towns and cities where the city manager system has been in vogue, demonstrates pretty clearly that it is based upon common sense business principles; that it has passed wholly beyond the experimental stage; that for the most part, wherever it has been used, it has impressed its business value and effectiveness; that its operation is not confined to the small city or town, but is even more capable of application in the larger communities; that men of the proper type of city managers should be easily obtainable; that the system is capable of wonderful possibilities where the community stands loyally behind the manager and that in these days when economic results are the chief consideration, and when economy and efficiency are necessary both in commercial and municipal management, it offers a medium for successful administration that is not possible of attainment by any other system.

**THE PRESENT TREND OF HIGHWAY DEVELOPMENT**

(Continued from page 68).

which has been all too prevalent in the rapid development of our country highway systems. I refer to inadequate preparation and drainage of our sub-grades, fostered by the false idea that the cost for such work would make the total cost prohibitive. Political pressure and popular demand for the rapid construction and the greatest possible mileage of improved roads for a given amount of money has been, to a great extent, responsible for this state of affairs. However, this subject is receiving an increasing amount of attention and is being most carefully investigated by the Government and a number of public service bodies and technical societies, the work of the various organizations being correlated by the Advisory Board on Highway Research of the National Research Council of the United States.

There is one other common fault in the utilization of old roads for foundations which has often resulted disastrously. This is the over-estimation of thickness of the old road. All too frequently we have laid an expensive pavement on an old road, actually 3 inches or less in thickness when it had been estimated as not less than 6 inches or 8 inches thick. Macadam and gravel roads wear away rapidly in comparison with other types and because records show that a large tonnage of road metal has been used in the construction and maintenance of the old road it does not by any means follow that most of such material is still on the road. It is very essential, therefore, accurately to determine the existing thickness of the old road before utilizing it as a foundation.

Wherever possible the old road should be left undisturbed rather than to scarify and re-shape it, which destroys much of the stability that compression under traffic has brought about. It is quite necessary that the old surface be trued up before the wearing course is laid but if the reconstruction bituminous mixture in existing depression will be completed in one operation the placing of a usually prove to be the best practice. If the existing road is not sufficiently thick to serve as a foundation it may conveniently be reinforced with a thin course of black base mixture before the wearing course is laid.

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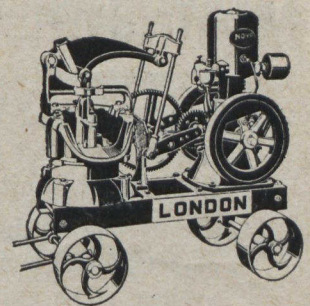
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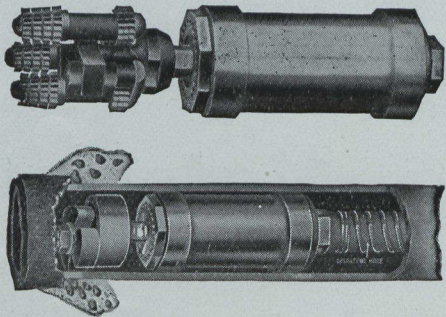
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