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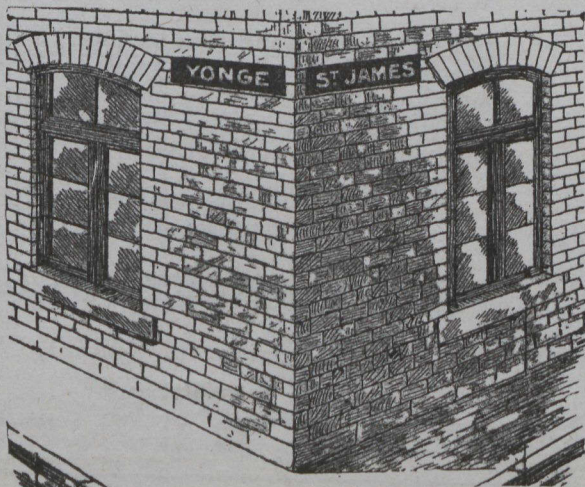
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They are very proud of the result. Tarvia has made their streets smooth as a dancing-floor and so dustless that there's no more use for the watering-cart, and the streets are free from mud as well.

What pleases them most *as taxpayers* is the fact that the use of Tarvia is really an economy, not an expense.

Its use adds years to the life of the road, and it saves so much in maintenance expense that in the long run it reduces road taxes.

The only maintenance required is an occasional coating of Tarvia spread on when the road begins to show wear. Such treatment is very inexpensive.

What Tarvia is

Tarvia is a coal-tar preparation, shipped in barrels or tank-cars. It is made in three grades, to be used according to road conditions, viz., "Tarvia-X," "Tarvia-A," "Tarvia-B." The chief use of Tarvia is for constructing and treating macadam roads to make them durable, smooth, resilient, dustless, mudless, waterproof.

"Tarvia-X"

is always to be used when you are building a new macadam road, both as a binder and surface-coating. With Tarvia-bound macadam in place of water-bound macadam, you have a road resilient enough for rubber tires to grip on without skidding, or for horses to trot on without slipping; without dust in dry weather; without slime in wet weather. You have a road that *lasts*.

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"Tarvia-A"

is practically a thin "Tarvia-X," used for recoating the surface of a macadam road already built. It is applied hot and adds greatly to the life of the road.

"Tarvia-B"

is a much more widely used preservative. It is applied cold. It is thin enough to sink quickly into the road, yet strong enough to bind the surface particles together into a dustless, durable surface.

"Tarvia-B" offers the lowest cost of road maintenance yet invented. Booklets describing the Tarvia treatments free on request.

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Civic Improvement League Resolutions

At the annual convention of the Civic Improvement League of Canada, held in Winnipeg, the following resolutions were passed:—

Land Development.

1. "WHEREAS the present method of planning, dividing and settling land in Canada for agricultural purposes has not met with that measure of success which might be expected, having regard to the great natural advantages possessed by the Dominion, the League again endorses its previous resolution to recommend the Federal and Provincial Governments to make a complete survey and investigation into the problem of rural development; to consider a more scientific method of laying out the land so as to encourage the settlement of lands near to existing means of communication, and secure closer settlement of the population, more co-operation among farmers, and better facilities for transportation, education and social intercourse.

In view of the conditions likely to arise after the war, and in connection with the return of soldiers from the front, the League desires especially to direct attention to the need of this problem being dealt with in the immediate future."

Departments of Municipal Affairs.

2. "THAT the League again directs attention to the want of economy and efficiency in municipal government which in their opinion is not due to any absence of administrative ability or executive skill in the Dominion; but to the lack of proper means of educating and informing public opinion, of co-operation between the provinces and municipalities, and of co-ordinated and skilled provincial departments dealing with municipal affairs and capable of advising and assisting local administration."

REPRESENTATION.

3. "THAT the system of registration of voters and election of representatives in all forms of government needs revision and that the Dominion Council of the League be requested to place the question of proportional representation on the agenda for discussion at the next annual conference."

Teaching of Civics.

4. "THAT the teaching of citizenship in the schools be urged as of vital necessity to secure a better informed and wisely directed public opinion on civic problems."

Municipal Accounting and Reporting.

5. "WHEREAS there is at present no uniform system of Municipal Accounting and Reporting in Canada, and whereas the benefit of such for mutual help, information and guidance are incalculable, therefore be it resolved that this Convention place itself on record as favouring such uniformity and lend its moral support to the Union of Canadian Municipalities, which is already engaged in advancing this principle."

Planning and Development Legislation.

6. "THAT the Provincial Governments be urged to pass planning and development acts in all the provinces so as to secure that land will be laid out for purposes of economic use, health, convenience and amenity.

Regulation of Employment.

7. "WHEREAS in any system dealing with employment, public employment offices, under the direction of government are essential, and whereas the larger the territory organized, and, consequently, the greater the number of occupations concerned, the more easily can problems of employment be dealt with; therefore, be it resolved that:—

It is urgently desirable that every province in Canada immediately organize—if it has not already done so—a nucleus of an employment office system which may be developed as requirements demand;

That these provincial systems should be uniform and that measures be provided for close inter-provincial co-operation; and

That this co-operation be effected through a Federal

Bureau to be established in connection with the Dominion Department of Labor.

Vital and Municipal Statistics.

8. (a) "WHEREAS, there is need for more efficient and uniform legislation and administration relating to vital statistics in Canada, under which each province shall compile its statistics to enable comparisons to be made between the different provinces, as well as internationally, and

WHEREAS, the minimum standard for collecting vital statistics should at least be equal to that adopted by Australia and the United States, and

WHEREAS, public health problems, immigration and knowledge of the man power of the country cannot be studied without the aid of accurate statistical information;

BE IT RESOLVED that the Census and Statistics Office at Ottawa be congratulated on the steps it is taking to improve the methods of collecting vital statistics and that the said office and Provincial Government be memorialized regarding the urgency of further measures being taken to collect more accurate and comprehensive data regarding vital conditions.

(b) WHEREAS, there is no satisfactory system of collecting and tabulating municipal statistics in Canadian provinces, and the municipalities within each province have some

WHEREAS, municipal expansion is proceeding and municipalities radically different standards, and

WHEREAS, municipal expansion is proceeding and municipal expenditure increasing at a rapid rate in Canada, and municipalities are unable to get the advantage of any comparative study of municipal developments and statistics;

BE IT RESOLVED that the Dominion Government be urged to institute a federal system of municipal statistics in co-operation with the municipal departments, bureaux, or branches, of the provincial governments."

Problem of Returned Soldiers.

9. "WHEREAS, the problem of returned soldiers is of pressing national importance, and should be dealt with independently of the problem of land settlement, and

WHEREAS, the organization of effective means of educating ex-service men to the class of industries for which their inclination and ability will suit them, other than those who are disabled and who are therefore being taken care of by the Hospitals Commission, requires the attention of a skilled and non-political federal commission acting in co-operation with the provinces and municipalities, and

WHEREAS, land settlement should not be forced or artificially stimulated in the sole interest of disposing of lands or increasing rural population, and

WHEREAS, the establishment of any colonies or the promotion of any system of land settlement should be carried out on scientific lines, and with due regard to the economic use of the land, so as to secure the facilities necessary for increasing production in all classes of industry, including manufacture and agriculture, and

WHEREAS, there is need for an elaborate survey and inventory of land resources and the preparation of complete topographical maps of land in Canada, the opportunity should be taken to employ those ex-soldiers who have suitable training for this purpose to make a survey of these resources and prepare the necessary maps.

BE IT RESOLVED that the attention of the Dominion and Provincial Governments be drawn to the importance of these matters notwithstanding the work that is already being accomplished by the Dominion Government through the Soldiers' Aid Commission.

Immigration, Etc.

10. "THAT the League records its adherence to its previous resolution in favour of better leagues to control immigration, to improve civil service standards, and to form a Dominion department of public health.

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City of Montreal and United States \$1.25
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Published Monthly by

The Canadian Municipal Journal Co., Limited

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All communications to be made to Canadian Municipal Journal

CORISTINE BUILDING, MONTREAL
Telephone Main 4362.

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VOL. XIII.

JULY, 1917.

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Stopping of Public Works

Our contemporary the Municipal Journal of New York has since the United States entered the war been urging the "carry on" of public works, and we are heartily in accord with the propaganda. Even Canadian municipalities with their comparative limited borrowing powers would have been wiser had they have carried on their public works, at least to the extent of keeping those already built in thorough repair. . . There is no doubt that many of our municipal and provincial authorities were scared into stopping all public works, even when necessary, with the result that many, particularly roads and streets, have deteriorated to an extent almost beyond repair. There are a few exceptions, of course, and one in particular is worth nothing because of the impetus given to trade by discarding the croakers' advice. We refer to the policy of the Quebec government who not only did not stop their great new road campaign started two years previous to the war which meant an outlay of over fifteen million dollars, but this last year secured an additional grant of another million dollars from the provincial legislature for the same purpose, as well as additional sums to keep the roads in repair. Already this great expenditure is getting returns for the province in the great army of American tourists whose money is very welcome to the hotels and trades-people. Surely such a spending of public money even in war times might be termed a wise investment.

One of the arguments used against the carrying on of any public work at this time—especially provincial or municipal—is that it is unpatriotic, that every dollar that can be raised should be used for

direct war purposes. This argument would be unanswerable if Canada was limited in her resources to the extent that other belligerent countries are, but she is almost unlimited in her resources. They only want developing and Canada will have to develop them more to meet her war bills. Now public works are just as necessary to the development of these resources as well paved streets are necessary to the shopping centre of a city, and the first step in the successful development of our vast resources to-day is the proper provision of all that makes for decent living, in the form of waterworks, efficient drainage and good roads, etc. Otherwise, the necessary human material will be a negligible quantity. If instead of loans to raise war funds the Minister of Finance had have levied taxes the necessity of carrying on of public works should have been very patent. That necessity is still with us for taxes will have to be levied sooner or later—war loans don't pay themselves—and to meet these taxes every ounce of human energy must be used, and the better the condition of that energy the better position the people will be in to meet the taxes.

Another argument used against public works at this time is the high cost of labor and material, but even this should not stop the carrying on of those improvements necessary to the health of the people.

In the United States they are in a much better position financially to carry on their public works. They have for three years been piling up the wealth of the country and it would be suicidal to stop their economic machinery now, and that economic machinery means public works as well as private industries.

Jubilee of Confederation

It would seem more than coincidence that the jubilee of Confederation should fall on this year of 1917, when Canada is in the throes of a mighty struggle to preserve that autonomy and freedom secured fifty years ago; a struggle against a foe, who, if victorious, would consider any act that conferred freedom on the people as so much waste paper. The story of confederation is the story of big men sinking their differences for a common cause; of great party leaders influencing, by the intensity of their mission, their lesser colleagues to forget their political and personal jealousies, and combine their energies to win the great struggle against suspicion and selfishness. And out of the labour pains of this great combination—this working together of intellect and determination—the scattered communities of a great continent were confederated together, and the Dominion of Canada was born—a healthy and virile infant, strong enough to withstand all the political nostrums spooned to it in its childhood and youth, and now grown to manhood, is taking a man's part in the fight of free nations against bureaucracy. At least four hundred thousand citizens are taking the part, and it depends on the rest of Canada if that part is to be sustained.

Fifty years is a short space in history, but during that time Canada has made history by great leaps and bounds, so much so that instead of being measured by centuries, or even generations, she must be measured by decades; each decade marking an epoch in achievement. And in no part of her na-

tional life has Canada achieved so much as in the building of her cities and her towns. Not only have her people built a Winnipeg out of the stores of a trading post, a Vancouver out of a few huts, and many handsome cities out of nothing but nerve and confidence, but they have built up a civic life that will compare favourably with that of any other country. It must be remembered that most other countries have been centuries building up their civic life, and all that it means—Canada, but fifty years.

What the next fifty years will bring to Canada depends not so much on her immigration or the material development of her vast resources—both are assured—but rather on the public spirit of her people. In an age of materialism, when success is measured by wealth, and selfishness predominates to a large extent, it was perhaps a wise dispensation of Providence that each nation should be tried, as in the present war, when every man and woman must search his or her conscience as to his or her duty to the state. Fifty years ago the fathers of Confederation gave of their best to the state, but they lived in an age of public duty, and no doubt from out of this mighty struggle, which all the nations are now going through, will come a renewed sense of public responsibility on the part of the individual to the State, and the question that is uppermost in the minds of thinking citizens is how Canada is to prepare to meet this new thought. The story of Confederation will help to solve the problem, if taken to heart.

The Town Planner in France

The Town Planner is to have his opportunity when the war is over. In the rebuilding of Belgium and that part of France devastated by the war the authorities are evidently determined that hygiene, sanitation, etc., shall have their proper place. The French government has already sent out regulations requiring every municipality in France to conform to some scientific readjustment of its city or town, though the new law does not insist on uniformity in the replanning schemes, provided the fundamentals are adhered to, thus leaving full play for that individuality in European, and particularly French, architecture and design which we on this continent so much admire, and often copy—with painful results. Quite a number of books and articles have been written on the subject by French sanitary engineers, architects and artists which no doubt largely influenced the passing of the city planning law. How far the town planner in this work of reconstruction will succeed, remains to be seen. He certainly will have tremendous scope for his imagination in the varied characteristics of the French people, and which are shown so much in their dwellings, their streets and their towns and cities. The word imagination might be taken literally, for, alas, so many of the towns and villages

have been left with hardly a building standing—wiped out—so that there is only the imagination with the aid of photographs to aid the planner in his work of rebuilding.

Mr. Geo. G. Ford, the City Planning expert, who gives his impressions of a visit to France in this issue of the Journal, has returned with the Industrial Commission sent to Europe by the United States to study the rebuilding of the devastating regions, and how best our American Allies can aid in the work.

THE CITY OF WELLAND.

The progressive community of Welland (Ont.), has reached to over the necessary 20,000 mark in population, and consequently becomes a city. Celebrations in honour of the event took place on Dominion Day, when the Lieut.-Governor participated. Possibly no other community in Canada has progressed along saner lines than the new city of Welland. Centrally situated, industry after industry has been created, all indigenous to the district, and the local authorities have kept in line with the industrial growth in the adequate building of public works, so that to-day the city has every attraction for the workers, and prosperity reigns.

BRITISH INSTITUTE OF MUNICIPAL TREASURERS AND ACCOUNTANTS.

Some little time ago the Institute of Municipal Treasurers of England, desiring to bring about a real *esprit de corps* between civic officials of the Old Country and Canada extended to Treasurers of the principal municipalities of this country an invitation to join the English Society. So that civic officials might have a better idea of the significance of the invitation we might say that the Institute is one of the hardest into which to secure membership, which to English officials is by examination—and a strict examination at that. . . . When a man joins the municipal service he at once begins to fit himself for membership, which takes from three to six years of close study. It is this same society which has raised the efficiency of the permanent municipal officials of Great Britain to such a high standard, and now that Canadian officials have the opportunity to become members without examination they should lose no time. It will mean to them an education in municipal work that would be invaluable not only to themselves but to their respective communities. Practically Canada, so far as municipal officials are concerned has never had any particular standard of efficiency, and though the English system might be a little different the fundamentals of municipal government are the same as in this country, so there is every reason why those municipal treasurers, etc., who have been invited to do so, should join the Institute.

OUR PREPAREDNESS NUMBER.

Our contemporary, the Calgary News-Telegram, takes us to task for the contribution on Alberta in our CIVIC AND NATIONAL PREPAREDNESS number; the special complaint being the supposed out-of-datedness of the figures. We would point out, in answer, that though we tried we were not successful in getting the information from the Provincial authorities, and had to depend largely on statistics published by the Federal Government in 1916. Most of the other provinces supplied their own figures, which enabled our statisticians to more accurately group them to the different zones. Our main purpose, of course, was to so show the statistics to the Municipal Councils and Boards of Trade in the different zones, as to better enable them to grasp the opportunities for expansion lying at their door, so that the mere figures in themselves would have no bearing on the object to be attained. In this we have been signally successful, as shown in the correspondence, since the Preparedness number was published, but we would suggest to our contemporary that it urges the provincial authorities to prepare up-to-date statistics of Alberta's progress, so that there will be no repetition of the figures that we were forced to publish for want of better. We know of more than one other national publication, requiring statistics of Alberta, in the same difficulty as we were, and no doubt unless the provincial authorities can give later figures, they will use the same source of information.

PRELIMINARY OUTLINE OF "WIN-THE-WAR," AND "AFTER-THE-WAR" PROGRAMME OF CONVENTION, 1917.

Monday, August 27th, 11.00 a.m.

Business Session.
Official Welcome.
President's Address.
Report of Hon. Secretary.
Report of Assistant Secretary—Finances.
Report of Parliamentary Agent.
Reports of the several Provincial Municipal Unions.

Monday, 2.30 p.m.

Win the War—Municipal Councils' Session.
Formal Opening of Convention.
Short Addresses:—
How Municipal Councils can help to Win the War.—Discussion and Resolution.
Short Address:—
Should the Federal Government seek the Co-operation of the Municipal Councils to help to put into practice all War Measures directly affecting the people?—Discussion and Resolution.
Short Addresses:—
High Cost of Living, and the Remedy.
(a)—Trusts and Combines—an influence.
(b)—Municipal Trading—as a remedy.
(c)—Food Controller—as a remedy.
(d)—Cost of Living Tribunal.
(e)—Fuel Questions.

Monday, 8.00 p.m.

Banquet—Tendered to the Delegates by the Mayor, City Council and Citizens of London.

Tuesday, 10.00 a.m.

Win the War—Preparation Session.
The Responsibility of Municipal Councils to prepare for the new economic conditions that will arise after the war, and how they can best be met.—Discussion and Resolution.
Report of progress on: Uniform Municipal Accounting and Statistics.—Discussion and Resolution.
The balance of this session open for the reception of any new business, or resolutions from municipalities.

Tuesday, 2.30 p.m.

After the War—Industrial Session.
Short Addresses:—
The Readjustment Period.
(a)—Municipal Revenue Difficulties.
(b)—The Munition Worker Problem.
(c)—The Returned Soldier Problem.
(d)—Federal Labor Bureaus.—Discussion and Resolutions.
Address:—Public owned Hydro-Electric Power as a factor in the material building up of a community.—Discussion and Resolution.
Address:—Hydro-Electric Radial Railways, and Municipally owned Street Railways.—Discussion and Resolution.

Tuesday, 8.00 p.m.

After the War—Patriotic Session. Public meeting and demonstration in some large hall, or in the open air.
Short Addresses:—
(a)—The Responsibility of Citizens in this War.
(b)—A National Highway Across Canada, to serve as a Monument of the fiftieth year of Confederation.
(c)—Memorials to our Fallen Soldiers and Sailors.
(d)—Provision of Work for Returned Soldiers.—Resolutions.

Wednesday, 10 a.m.

After the War—Educational Session.
Address:—A Canadian Bureau of Information.—Discussion and Resolution.
Address:—The Teaching of Citizenship in Schools.—Discussion and Resolution.
Election of Officers.

McGill University, Montreal, has recommended the founding of a Department of Social Service to the university governors. One argument was that the war had turned people's minds more than ever to the urgency of social and industrial problems. It was also pointed out that while the number of trained social workers in Montreal has greatly increased in the last few years, most, if not all, of these have received their training in the United States.

Municipal France in War Time

By GEORGE B. FORD.*

In Europe, aviation has raised a whole series of new problems, in the planning of cities, many of which demand immediate solution. When we were in France this fall, we were taken out to one of the great aeroplane camps used in the defense of Paris. There within the high enclosing wall, a field stretched away unbroken by building or trees for several miles, while far down each side ran a continuous row of aeroplane sheds. They told us that there were more aeroplanes then in that one station than there were in all of France at the beginning of the war; more than there were to-day in the United States. And yet, that was only one of a large number of aeroplane or balloon fields throughout France. These fields for training, manoeuvres and storage require acres of continuous open space almost level in character and well-drained. Around most cities such space is difficult to find and it is only by planning well ahead that adequate reservations can be made.

The remarkable increase in the common use of aeroplane and dirigible balloons in Europe to-day makes it obvious that their use for commercial and pleasure purposes after the war is going to be perhaps as rapid in its growth as was that of the automobile.

Still more important in city planning is the problem of providing convenient landing places for aeroplanes. When Ruth Law flew across from Chicago to New York she had to change her plans entirely on account of the difficulty in finding a safe landing place. In New York City about the only place that has been considered desirable for landing is Governors' Island. With the thousands of aeroplanes that will be flying in this country within a few years, whether there is war or not, the problem of providing landing spaces, will become rapidly more urgent. In fact, the Post Office Department is now, in conjunction with the Aero Club of America, planning to select appropriate fields for landing in or near every important centre. In France, most of the aeroplanes, from a standing start, go only some 100 or 150 yards before leaving the ground and then shoot up in the air at a surprisingly sharp angle. They land easily in a 30 acre field. There are any number of places in most American and Canadian cities and towns, which would make ideal landing places if they were leveled off, and trees, bushes, wires and other obstructions removed. The problem of landing at night, is perhaps the most difficult, and dangerous of all. In France, we found the landing places specially lighted by searchlights or by a peculiar formation of the surrounding lamps, so that seen from above, they are readily recognized. Then, too, by day all sorts of special indications were used—whitewash or colored diagrams drawn on the ground, so that an aeroplane from a mile or two in the air could recognize the significance of the marks.

One of the most important problems for the city in time of peace, is the moving of crowds of people quickly from one place to another. Its importance is increased tenfold in time of war. In France, we saw everywhere parts of a great network of national military roads. They often go straight up and down over hills and valleys as did our old turnpikes, but always with the grades cut down to the minimum and with ample width and excellent surface. The roadways are never too narrow for two great motor trucks to pass each other at high speed; far different from our niggardly custom. Though these national roads go through the towns and cities, even in the larger cities, they continue to belong to the national government and are paid for and maintained by it. They are the backbone of efficiency in the handling of people and goods about the country. Without them, France would have had the greatest difficulty in meeting the situation with which she had been confronted.

As for the railroads in France, here again we found men could be mobilized or handled in masses from one town to another with the greatest ease and speed. The special characteristics were ample approaches to the railway stations and extensive yards. Many of the railroad lines have been laid out with the war needs particularly in view, despite the fact that under peace conditions these lines are not profitable. However, they have more than proved their value since the beginning of the war. With regard to tram-

ways, not only are the regular systems laid out strategically, but all over the country, through districts where a standard gauge railway could not be provided, we found little narrow gauge railroads with trains of three to eight cars that were in constant use.

Motor busses have played an exceptional role in France since the beginning of the war. It was the motor busses and taxicabs which saved Paris because they were available and because they were a mobile means of transit. Entirely apart from the usefulness of motor busses in time of peace, it is a great asset to have large numbers of them immediately available in case a sudden need arises for transportation of large bodies of troops.

Handling of Foodstuffs and War Supplies.

In the transportation and handling of supplies, we found that great changes have been made in France since the beginning of the war. Things had to be handled in much greater quantities and with as little loss of time as possible. In many parts of the country, particularly near the war zone, we saw new railroads being built and old ones considerably extended. In almost all of the freight yards that we saw, extensions were being made, new terminal tracks being put in, huge new warehouses being built, all with a view to handling war supplies quickly and without waste. At Marseilles, we saw a great new classification yard along the new docks that the city is now building, rendered necessary by the trade that has come to the port on account of the war.

We went over the ports of Marseilles, Bordeaux, Rouen and to some extent Havre, but we hardly recognized them, so much had they been changed; building going on on an enormous scale everywhere, the ports being doubled, trebled, and even quadrupled in size and even at that, ships waiting at anchor for days and weeks outside the port for a chance to unload. It was a condition of things that troubled us a great deal, for we realized that hardly a city on the North American Continent was prepared to meet emergency conditions in like fashion. If nothing else, a comprehensive plan should be worked out now, so that it can be carried out as speedily as possible when the time comes.

Rivers and canals were being deepened and broadened on every hand, and new ones were being built, new boat services were being started all because the cheaper handling of freight was becoming an increasingly serious problem in France, since it also means a saving of coal and of men, both of which are at a premium.

However, the thing that probably impressed us most in the handling of goods both along the waterfront, and in the local terminals, was the extensive use of handling machinery. Even in the small villages, the freight yards were equipped with cranes and other handling devices, while in the larger yards and along the docks almost nothing was done by hand. Any mechanical device that would save labor was more than paying in its way, as it released men for services at the front.

The handling of foodstuffs and war supplies in particular, has become a most important problem, with the bringing together and the storage of great quantities of supplies and the provision of efficient means for their distribution. Along the railways or waterways around the cities and larger towns, we saw acres of new sheds that have been erected since the war, just for the handling of war supplies. Often they were inconveniently located due to the lack of planning beforehand. The nearer we came to the front, the greater the number of these storage fields. In every case, it was necessary to find large, level, well drained fields.

Municipal Retail Markets.

The handling of foodstuffs for the civilian population, is a problem to which France has given careful thought for a good many years. Every city, town and village has its municipal retail markets in big halls open at the sides, where stalls are rented to the little dealers at the minimum economic rental. This gives the city a chance to control not only the healthfulness and quality of foodstuffs, but also the maximum prices, all of which has proven a most effective means of keeping down the high cost of living during the war. More than that, however, there has been a very strong tendency of late years in France, as well as in other European countries, to develop public

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wholesale auction markets, and a number of big retail markets have recently been changed for the most part from retail to wholesale use, all of which tends to keep down costs. The raising of foodstuffs is a most urgent problem in all of the countries at war. In France, it has long been the rule to cultivate every acre of ground, including all of the vacant lots in cities. Workingmens' Gardens Societies lease all available vacant lots and rent them to wage earners families, in plots of 2,500 to 5,000 square feet for a nominal rent. Every member of the family works in the garden. A plot will often keep a family of eight or ten in vegetables the year round.

One of the most serious problems of all, is the locating and laying out of the mobilization camps, the barracks for soldiers or prisoners and the hospital blocks. We know only too well what trouble we had here in America, when we tried to mobilize our troops quickly in the spring of 1916. In France, before the war such mobilization places had been provided within easy reach of the railroads, and with special sidings arranged to take care of the troop trains effectively. More than that, the fields were thoroughly drained and provided with water and sewage disposal and other necessities. Every city, too, has large areas devoted to barracks especially designed for living purposes. The prison camps and hospital blocks that we saw were very similar in character to the mobilization and training camps. They had the same type of long, low wooden sheds, clean, sanitary, with plenty of ventilation and good heating, excellent drainage, and with water and sewer connections so that the health of the prisoners could be preserved.

City Improvements in War Times.

In housing, we were astonished at the striking development which has taken place since the war began. We found in Limoges for example, that some six acres of four and five story tenements in the heart of the city had been razed to the ground. At a cost of a great many millions, the city was going ahead in the midst of war times to lay out new and broader streets and rebuild the district along modern city planning lines. In Marseilles, we found fourteen and a half acres of old six and seven story tenements in the centre of the city already torn down. At a cost of something like forty million francs, the city was laying out new broad streets and open spaces, erecting new buildings of a modern character, all as a matter of "Preparedness for Peace." It has been borne in on them very strongly that with the loss of a million or more of their best men, they were bound to do everything they can to preserve and build up the next generation; that they cannot afford to let it grow up in unsanitary and disagreeable surroundings.

These old quarters were a serious conflagration menace and centre for the spread of disease. It was especially dangerous to leave them in war time. In America, some of our largest cities, have old sections with narrow streets, where if a fire or explosion were to be started, the whole district could go. It is our duty to seriously consider opening up these districts now before it is too late. We can do it far easier to-day than we could at any time in the past or in the future. We have a wonderful opportunity to-day to open up the cramped old sections of our cities. If we are big enough to seize it, we will bestow the greatest benefit on the city not only now, but for all time to come.

Preparations for After the War.

In the munition plants, we found the barracks and houses, the dining halls and hospitals, that have been built to take care of the thousands of employees, models of healthfulness. They were rarely attractive, because they had not had time to think out attractive forms at the price, but they were business-like. In England, we saw the plans of a single munition plant nearly as large as the Island of Manhattan, where they were to house nearly 100,000 workers. The whole area was being planned with all the care and foresight possible. The general buildings were permanent and would be the nucleus of a city later. The typical houses and barracks were being built so that they could be taken down after the war and shipped over to Belgium, or France, and used in place of buildings destroyed by war. This brings up the great problem of reconstruction work to be done after the war, of which we saw a great many plans, and, in fact, much actual work then in progress. But that is a whole story in itself.

Heretofore, France has never known recreation in the sense that we know it. Recreation has usually been "sport," and even at that, largely borrowed from England.

THE MUNICIPALITY AND THE PROVINCE.

Of all Legislative and executive bodies the Municipal Council is the nearest to and therefore in closest touch with the elector.

Although, by fiction of law, the Municipality as a corporate body, if the creation of the Legislature of the Province in which it is situated, and subject to its authority, it is in reality rather the first and most important cog in the machinery of representative government.

While the Municipality may, theoretically, derive its powers from the Legislature, as a matter of fact both have been created in the same manner and by the same power—the will of the elector, expressed by his vote. The elector delegates to the Legislature certain powers for the government and administration of the Province as a whole, and, through his representatives in the Legislature, takes back a portion of these powers for local purposes.

These powers just as surely vest in the municipality as though they had received directly from the people, instead of being first passed to the Legislature. It is in effect the position of a family, which for purposes of convenience has a common purse in which the earnings of each member is placed, and from which each member may draw under fixed conditions. The electorate places with the Legislature certain powers and takes out again such as may be necessary for the proper and efficient government and administration of local business.—A. E. Woodsworth.

But partly as a result of the outdoor life at the front and partly as a matter of reasoning, the Frenchman has come to realize the necessity of providing recreation places in his cities and towns. The movement is very recent, but the new recreation parks and playgrounds designed for Rheims, Clermonten, Argonne, and Bordeaux, gave us a suggestion of the importance that the new movement is taking in France. As success in war or peace depends so largely on keeping both men and women in the best physical conditions, the provision of play space becomes doubly imperative.

War shows up very clearly the need and lack of general city planning. All of the various matters that are touched upon here and many others must be woven together into a unified comprehensive plan. We found in Paris that the city government had since the beginning of the war organized a city planning bureau with broad powers which was planning comprehensively the whole metropolitan area, not only within the city, but through all the surrounding district. In Lyons, we found similar plans being worked out. In London, the architects, engineers and city officials have come together and are working out most extraordinarily comprehensive plans especially for traffic routes for an area of nearly two thousand square miles around London.

But more striking still, were the plans which they showed us for the replanning of Rheims and some of the other destroyed towns. In France, they have come to realize that they must make a virtue of their necessity and rebuild the destroyed cities along modern, scientific lines, always preserving as far as possible the charm of the past. They have gone further still, and not appreciate the vital need of general scientific planning. They have actually framed a law which has already passed the Senate—the Loi Cornudet—according to which every city, town or village in France, regardless of whether it is in the destroyed area or not, will be forced to lay out all its future developments according to modern city planning commission, over which there will be a general commission in each of the 86 departments, and over these in turn, there will be a federal commission, so that all may work along similar lines one great comprehensive plan.

They are doing these things because they find that they have got to do the most to meet the economic competition with other countries which is coming after the war. There must be no waste, and they are providing to eliminate every possibility of it. France is doing all these things at enormous cost, despite the superhuman work of carrying on the war. She is doing it because she finds it necessary to make up for the mistakes of unpreparedness. We in America, are remarkably fortunate in having the example of their experience before us. It is comparatively easy for us to plan for these emergencies; be they in aviation, in the transportation of men or supplies, in housing or recreation, or in the working out of general all including plans. In peace times, it is sheer common-sense to give our best thought to the planning of our cities. It is imperative to do so now to meet the demands of war.

Civic Affairs in Manitoba

H. E. MORTON.

Winnipeg's civic debt has been reduced by no less than \$4,782,845.73 since April 30, 1915. This was the outstanding feature of the annual report of the sinking fund trustees presented to the city council recently.

The total monies available for investment during the year 1917, was \$3,133,640.17, being made up of receipts for the year and balance carried forward. The assets of the trustees now amount to \$8,142,694.33, an increase for the year of \$1,186,790.45. Excess earnings for the year from investments amounted to \$148,461.33, and this, added to the surplus existing at the commencement of the fiscal year—\$46,352.74—made a total of \$149,814.07.

In 1915 Winnipeg's city council decided that no capital expenditure should be incurred that could possibly be avoided, and this policy has apparently been continued to date. In some of the cities the policy has been to issue debentures to cover expenditure, patriotic grants and other expenses, but all these Winnipeg has paid out of general taxes.

The surplus on investments is, according to the report of the trustees, growing rapidly, and while it is deemed advisable to take a reasonable amount from the yearly profits and add to the investment reserve account, it is considered right and proper that the ratepayers of to-day should benefit to some extent in the excess earnings of the sinking fund. In this connection it has been decided to take out of this year's surplus \$51,258 and place to the credit of one of the money by-laws, thus saving the taxpayer a yearly contribution of about \$25,000.

The general taxpayers during the coming year will also be relieved of an annual payment of \$83,000 hitherto paid into a sinking fund by the city at large but which, owing to the successful workings of the city water works, will now be taken care of by that department, which for the fiscal year, 1916-17, showed a surplus of \$93,000.

The gross debt of the city at April 30 last, stood at \$40,553,679.82.

Tax Mills Higher But Call Lighter.

Winnipeg's tax rate for the fiscal year 1917-1918, will be seventeen mills. In other words, for every \$1,000 assessment the levy will be seventeen dollars. The increase from \$15.70 mills, which was last year's tax, is accounted for by the fact that since 1916 realty assessment has been placed on a more equitable basis and reduced by over \$25,000,000, almost entirely on land.

This showing has created an excellent impression on ratepayers generally, who are aware that the city fathers have had to provide in their new estimates for increases in civic salaries averaging ten per cent. Larger calls have also come in from the municipal hospitals, street commissioner's department, fire service, water works, and health department. The provincial patriotic levy over which the city has no control has also been increased by half a mill, while the public school board estimated expenditure, also beyond the control of the city, shows an increase of \$121,000—or from \$1,118,000 in 1916, to \$1,239,000 for 1917.

In face of all this, and notwithstanding that the mill rate is higher, a smaller cash call will, however, be made, this being rendered possible by the strict economy practised during the year 1916-1917. For this period departments have, generally speaking, kept well within their estimates, with the result that balances in this respect total approximately \$180,000. In miscellaneous revenue also the city has been fortunate, this amounting to about \$500,000. Credit on the bond conversion from London to New York, also had its effect, with the result that taking things altogether the increase in mills is only a matter of book-keeping and the consequent demand on the taxpayer generally will be about the same.

Gas Will Cost More.

According to Theo. Hunt, K.C., city solicitor, Winnipeg city, has been placed in an awkward position as a result of the attitude of Public Utilities Commissioner Macdonald in connection with an application made to that official by the Winnipeg Electric Street Railway to get the price increased from \$1.50 per thousand cubic to \$1.80 per thousand.

According to letter to the board of control last week, the decision of the commissioner recently expressed means that if the city is to contest the proposed increase, it must forthwith engage experts to ascertain if the company's application is well founded. This, Mr. Hunt, thinks places the city in an awkward position. "If a private individual,

who was a consumer of gas, had gone to the commissioner," says Mr. Hunt in a communication to the board. "I do not think the commissioner would have saddled this consumer with the expense of ascertaining whether the application of the company was true or false. However, it being the city who, by the way, is not a consumer of gas, he has cast the burden on the city, to meet the conditions of the company." The increase asked for by the company has had the effect locally of reviving the agitation for municipal owned utilities, the city's hydro-electric undertaking which supplies light at three cents a kilowatt and power at half a cent, besides earning a surplus of approximately \$70,000 a year, being held up as an example.

One of the city's new comfort stations is now figuring in a claim for compensation. The question is: "Has the city the right to erect overground stations on sidewalks without paying compensation to owners of adjacent property?" Although differences have arisen in Toronto as to the city's powers in this direction, this is the first case of its kind in Winnipeg, and is considered in the light of a test case on the several recently erected.

Another matter of public interest in the effort which is to be made by the city to obtain a complete census of all the feeble-minded children and feeble-minded adults in Winnipeg, with a view to their complete segregation. A report of the Social Welfare Commission, a body recently formed for the administration of all city relief, stated that its relief list included many feeble minded persons. These, several members of the commission thought, should be placed in institutions and taken care of by the province. More especially, it was held should this apply to children who in many ways, it was contended, were a menace to other children and later on to the community.

At the same meeting also, it was alleged by Alderman Fowler, that the Winnipeg School Board ever since its inception had neglected the very fundamentals of home teaching. Howard T. Falk, secretary of the commission, a man well known in social service work, claimed that many of the desertions by husbands was due to young wives not being fitted for home duties. Many of the girls in factories and working in other industries, said Mr. Falk, were quite untrained in, and consequently unsuited for married life. Some of these frequently married well, but their husbands finding the home neglected, often left them, with the result that the family sooner or later became chargeable to the city. It was a matter, said Mr. Falk, that every city might take well to heart.

Portage La Prairie.

Portage la Prairie is anxious to secure light and power by the extension of the Winnipeg transmission lines to that prairie city. For several years the growth of Portage la Prairie, as an industrial centre, has been somewhat handicapped by the need of cheaper electrical power, and the city council recently decided to make every effort to secure a generous supply of that commodity. Several aldermen of Portage recently visited Winnipeg and conferred with members of the board of control and officials of the hydro-electric system advancing a proposal to extend the Winnipeg lines to Portage, the local plant having been found unequal for the steadily-increasing demands. At this conference the Winnipeg officials considered that the project would be feasible under normal conditions, but felt that owing to the prevailing high cost of materials it might not be practical at the present time to make the fifty-six miles extension asked for. The matter was, however, been laid over for further consideration.

St. Boniface.

All civic employees of the city of St. Boniface, the French suburb of Winnipeg, will be granted a wage increase of twenty per cent. This decision was recently arrived at by the city council after a heated debate behind closed doors, at which Alderman W. H. Leck suggested that the present was no time to put an extra burden on the taxpayers and that the proper thing to do would be to file the application. In place of this twenty per cent., members of the police and fire department have had reinstated their former wage schedule, which provides for an increase of five dollars every six months until the maximum pay is reached.

Good Roads in Quebec

T. B. MICHAUD.

There is a remarkable fact connected with the development of the good roads policy in the Province of Quebec, and that is the complete accord between the ratepayers and the Government. One might say: It is obvious that the people approve your policy, since they have maintained in power the men who devised it. But this is not the question, and, if I refer to such community of opinions, it is because it appears in numerous manifestations which while they have no affinity at all with politics, throw an interesting light on the mentality of those with whom we have come in touch in carrying out our plans for better roads.

Matters, of course, did not take that favorable turn at once. At the very beginning, a trial had been made with some county councils by giving them aid to buy stone crushers; then, we made another attempt with local municipalities, helping them to purchase road graders. The crusher was left idle in the neighboring field, and, in one instance, the road grader was the subject of a most boisterous meeting at which a resolution was passed prohibiting the use of the implement. That was really strange, but not supernatural, nor by any means unnatural.

We set our mind to work to find out what was the matter and why, since we were not Greeks, our presents were refused with such disdainful indignation. We soon realized the truth of the old French saying, which is not easily translated into English, but which means that you cannot get anything unless you put up the money for it. We granted certain subsidies and obtained good results; but again, we saw that it would be a rather slow affair if we did not do more.

However, the trend of opinion showed a general desire of getting good roads; on the other hand, the Government was also anxious to give to the province a much needed improvement. The only question remaining to be settled was that of the necessary funds. That was up to the Government, and the latter decided to borrow millions and to furnish the ratepayer all the money required to pay the cost of construction. I might mention that the trend of opinion had been carefully framed by a very extensive and intense campaign organized, as it were, on commercial principles, that is from the standpoint of advertising, which was carried out by means of circulars, posters, meetings, newspaper reports, and so forth, so as to maintain the spirits at the boiling point. We were at that time impressed by the fact that public opinion as regards good roads was not mere fiction that it actually existed, but that it was slumbering and needed only to be awakened. Besides, another slumbering idea was awakened; the idea that the construction of good roads is just as important, if not more so, than the construction of all kinds of public works, without excepting railroads, the idea that, if the energies of the nation had been in due time directed towards the normal development of nearly all the national services, the time had come to put good roads on the same footing, and to invest in their construction all the money available, provided it would not interfere with sound administration.

Now, here is where appears the accord to which I have referred: With a view of building provincial roads, the Quebec Government asked from the municipalities a contribution of one thousand dollars per mile; the contribution was readily granted; as regards local roads, the Government offered to pay 50 per cent of the amount expended for macadam or gravelled roads; without hesitating, those who don't believe in long term payments accepted the offer; the Government offered money at two, and then at three per cent, without sinking fund; the demands have not ceased to pour in, and with such a continuity that, in five years, the joint action of the people, and of the Government, has given to the province over 300 miles of trunk roads, nearly 2,000 miles of improved roads, has done away to a large extent with statute labor, and moreover has created a new spirit which will no longer suffer trails to be called good roads.

The foregoing is a very simple story, so simple a story that one might even have expected it to begin with the words of the nursery tales: Once there was a man . . . who did such and such a thing. But simple as it is, however, and this does not involve return to simple life — all of us are fond of stories, especially when the conclusions to be inferred therefrom have a practical and far-reaching importance, and I don't think anybody could deny the im-

portance of an object lesson taken from the life of one of the largest provinces of the Dominion. If, as says Monsieur Manotaux, laws are the synthesis of social experiments, is it not a great point to be able to frame laws which, based on experience and knowledge of popular aims, bring the people and the Government to go on and work side by side for the welfare of the country? Further, my excuse for giving details which may seem, in some way, of rather local interest, is that such an experience might be good food for the mind of the practical man who would broaden his knowledge of what remains to be done in the country, and consequently, of what has already been done.

"CONTAGIOUS" AND "INFECTIOUS."

These are popular terms which are not scientific or precise, and we are often asked by intelligent people as to the difference between them.

A "contagious" disease is one that is readily communicable or "catching." The word is derived from 'contingere,' meaning to touch, and was at one time confined to diseases which were supposed to be "caught" from one having the disease by personal contact.

An "infectious" disease is usually considered to be one not conveyed directly and obviously as in the case of conveyed directly and obviously as in the case of contagious diseases, but indirectly through some other medium. Typhoid fever was often taken as a type of infectious disease.

These distinctions are entirely artificial, and serve no useful purpose. Infectious disease may be contagious, and contagious disease infectious; and both terms leave out a large class of communicable diseases conveyed by insects. The word "communicable" is therefore much better and broader in every way, and should be used in preference to either of the above terms.

A "communicable" disease is one caused by a specific 'virus' transferred in a great many ways. Thus the virus in Diphtheria is the diphtheria bacillus; in Typhoid fever, Typhoid bacilli; in Malaria, the Malaria parasite carried by mosquitos. The term "communicable" ignores the method by which the virus is conveyed. There is a great difference in the ease with which different diseases are conveyed. Some diseases such as measles and smallpox, are conveyed readily from one person to another, while others are communicated only with difficulty. Tuberculosis is a disease which is communicable, and yet a very long time may occur between the time when an individual became infected and the time he developed symptoms of the disease.

We can control our environment to a great extent, and can for instance destroy insects like mosquitos which carry malaria and yellow fever, or destroy lice, which convey typhus fever. But it is very difficult to control man himself, because it requires his own consent. It is therefore easier to stamp out Yellow fever through a campaign against the disease-carrying mosquito, than it is to stamp out typhoid fever which is carried and spread from one human being to another.—Health Bulletin.

THE SPLIT LOG DRAG.

Good Roads conventions are excellent. Much information and many helpful suggestions are to be obtained from attending them. Unfortunately very few country pathmasters attend them. We all hope that, eventually, good roads, with proper surface and under-drainage and foundation will become general. Meanwhile it would be well for us to exercise the proper care that should be given to many existing arth roads.

While traveling through Dundas county the middle of April, it was distinctly noticeable that the road upon which the split log drag had been used were in decidedly better condition than the undragged roads. Do not wait until the road is to be reconstructed. Do something to keep it in good shape. If the split log drag is used in the spring, or, after rains, earth roads can be very much improved. Instead of having a road full of holes and ruts an earth road can be kept smooth and in much better condition than many of the undragged roads of the present day. The cost is small but the improvement is great.—F.C.N.

GARBAGE REGULATIONS.

The police of the City of Philadelphia have very definite instructions in regard to waste paper, garbage, etc., which might be profitably followed by some Canadian cities. To help in the regulations being carried out, the Bureau of Municipal Research of Philadelphia published the instructions in its weekly bulletin, so that the citizens might read them.

Explanation of Symbols.

A means arrest the offender.

N means notify the station house by signal box at once (not at the next pulling time).

R means record in notebook and report in writing at the end of the tour.

S means stop proceedings at once.

W means warn and watch the offender.

Waste Paper, Garbage, Filth.

405. To throw waste paper, sweepings, ashes, household waste, glass, nails or rubbish of any kind into the street, is prohibited. W, A, if necessary.

406. To throw any filth, garbage or refuse matter of any kind into any lane, alley, market-house, wharf or sewer inlet is prohibited. W S R.

407. To throw out of any cart, wagon or other vehicle any rubbish, oyster shells, dirt or earth in any highway of the city is prohibited. W S R.

408. To throw on the sidewalks or public footings any fruit or the peeling thereof is prohibited. W S R.

409. Immediately remove or cause to be removed from the sidewalks on the beat any fruit, banana peels or other dangerous litter.

410. To saw or cut any wood, or pile or place any wood, bricks, stones, lumber, or any shavings, ashes, kitchen offal, or filth upon any footway, in any public street within the city is prohibited. W S R.

411. To cast, or place in the street of the city, or into the vestibules or yards, or upon the porch of any dwelling or other building within the limits of the city any paper, advertisements, hand bills, circulars or waste paper, except newspapers and addressed envelopes is prohibited. W S R.

412. To deposit, throw or place any package, parcel or sample of medicine or candy in or upon any house, building, porch, veranda, or any other part of any building or in or upon any lawn, yard or public highway is prohibited. W A if necessary.

413. To distribute any sample of dyeing ink, coloring or polishing compounds upon the ground, sidewalk, into yards or into or under doors or windows, where children may get them is prohibited. W R.

414. To put or expose in any public place or highway or on lands outside of buildings any poison with the intent that it should be taken or swallowed by any bird, fowl or wild animal is prohibited. W R.

415. To discharge into the streets of the city any foul or nauseous liquid from any establishment in the built-up portions of the city is prohibited. R.

416. To cast any dead animal or privy dirt on highways or lots or any carcass into the Delaware or Schuylkill Rivers is prohibited. W S N R.

417. To place, or throw any broken glass, crockery, china, cuttings of tin or sheet-iron, tacks, nails, or other articles calculated to wound, bruise or maim man or beast on or into any public streets or highways is prohibited. W S R.

418. To interfere with, scatter or disturb the contents of any receptacle containing ashes, garbage, household waste, or rubbish which shall be placed upon any paved street or sidewalk for collection, is a misdemeanor of which a magistrate has summary jurisdiction. W S A if necessary.

To place any sweepings or other dirt or rubbish from any store or other building upon the streets of the city or the footways thereof, except in proper receptacles, is prohibited. W S A if necessary. . . .

Waste paper and cardboard cannot be placed in receptacles containing ashes, sweeping or other refuse.

419. To collect or remove garbage or offal or convey the same through the streets within the built-up portions of the city, except in water-tight, metal-bodied covered wagons or other vehicles so that none shall leak or spill or be exposed to view is prohibited. While in motion their tops must be entirely covered, and while being loaded, covered not less than one-half. The name and address of the owners must be placed on both sides and wagons must be kept clean and legible (such letters to be not less than three inches). W S R. . . .

PURIFICATION OF WAR SUPPLY.

Progress in water purification constitutes one of the brightest pages in the history of sanitary engineering in America during the past 25 years, but much remains to be done both as regards its general adoption and its application where local conditions call for special treatment. Apparently, progress in water filtration has been somewhat retarded through efforts to make chlorination serve as a substitute under conditions where it is not entirely adequate. Chlorination has done much to improve public water supplies. But it is not a cure-all, and its limitations are far more clearly appreciated with the practical proofs now existing than when academically recited six or eight years ago.

Under certain conditions chlorination secures public water supplies of good quality without filtration. The great difficulty lies in gauging the proper amount to be introduced. For many water supplies subject to chlorination without filtration, real difficulties are encountered in so adjusting the dose of chlorine as to guard against objectionable taste and odors on the one hand, and inadequate destruction of objectionable bacteria on the other.

Present day consideration of sewage disposal as related to water supplies assumes that the primary source of supply is not grossly polluted and that any sewage, affecting its purity has been treated in order that its filtration for domestic use may not be rendered ineffective through the overloading of the filters. The methods adopted must be the recognized principle that any water filtration process must begin by the treatment of the sewage before it is allowed to contaminate the source of water supply.—L. G. D. in Conservation.

ALBERTA MUNICIPALITIES.

A source of assistance to our (Alberta) municipalities in adjusting their finances during last year has been the wonderful prosperity in many of our rural communities. The large yield of grain, more particularly in the southern part of the province, and the unusual high prices, while it has had a more direct effect on our rural municipalities, has brought prosperity to many of our urban centres by the increase of trade. The result of this and of consistent action in collection of taxes has been that many of our municipalities have been able to realize on their outstanding taxes and bring their tax rolls well up to date. The advantage of such a condition of affairs has been clearly brought home by the experience of the past few years, and it is to be hoped that arrears of taxes will soon cease to be one of the worries of our municipal councils, and that they will be in a position to devote their time and energy to real municipal work, rather than to the questions of collecting taxes and making arrangements to meet their liabilities. As an example of what has been done in the way of disposing of the tax-collecting problem, it might be pointed out that one of our towns at the beginning of the year 1917 had only 7 pieces of land in arrears for taxes, and another town had only some 8 pieces of land that qualified for the tax enforcement return. When we consider that we have in this province some 6 cities, 49 towns, 105 villages and 87 rural municipalities, making a total of some 247 municipal organizations carrying on business, and that only two of these had any serious financial trouble during the past year, it indicates that our municipal institutions are weathering the storm bravely. The two municipalities referred to, while in trouble for the time being, will no doubt be able to adjust matters through time, and it is expected that they will soon be on a firm financial footing. — John H. Perrie, Deputy Minister, Alberta.

Patrolmen must promptly arrest any person seen rooting or digging in ash-boxes or rubbish receptacles on the sidewalk.

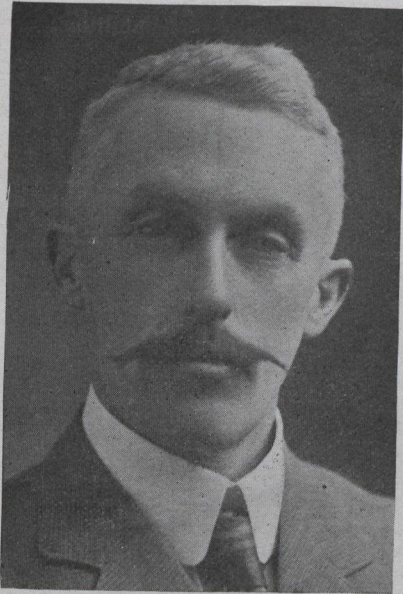
421. Prevent wagon drivers from allowing earth and other materials to fall from wagons. Report name of driver and name and address of contractor or owner of vehicle so offending. Notify driver at the time. W R A if necessary.

Arrest persons dumping waste material on highway.

422. Patrolmen must enforce orders given by the Bureau of Street Cleaning to Street Cleaning Contractors that fire hydrants are not to be used by them to flush streets unless a section or more of hose with nozzle attached is used in flushing (so that the flow of water can be controlled and used to the best advantage).

BIG MUNICIPAL MEN.

BY AJAX.

DR. H. A. STEVENSON, MAYOR OF LONDON.

Three essentials are necessary in the make-up of the good municipal man — common sense, a knowledge of human nature, and how to apply to both the sense and knowledge. To these might be added a sticking to the job. Many men who have been elected to municipal honors in Canada have given up the job at the end of the first term — they have found the work more onerous than honorary. And those who held on have not always been rewarded, the average citizen not realizing and consequently not appreciating their work or worth to the community, so that it is well to record the opposite when such becomes a fact. In Dr. Stevenson, the Mayor of London, and President of the Union of Canadian Municipalities,

is recorded a notable fact, for not only has he served as an alderman of his native city, but has served his fellow citizens as a member of the local Utilities Commission, a member of the Port Stanley Railway Commission and vice-president of the Hydro-Electric Association of Ontario. Surely such a record should be sufficient apprenticeship to the mayoralty. At least this is what the ratepayers of London, thought when they elected Dr. Stevenson mayor last year and re-elected him for a second term, this year. That the people's confidence has not been misplaced is illustrated in the mayor's splendid war work. A situation was created in London by the war, the same as in other municipalities, that required special attention and initiative. And Mayor Stevenson rose to the situation, and made London a leader in war work — another record that he may well be proud of.

Mayor Stevenson is a medical man — he took his M.D. degree in Toronto University, though he was partially educated in Montreal. As a military doctor he ranks as senior major. He is unmarried, probably being the only bachelor mayor in Canada; though a fine fellow like Dr. Stevenson ought to have been married long ago. But there is plenty of time for the mayor is but in his early fifties, and good men are too scarce to-day to remain in single life.

This year Mayor Stevenson succeeded as President of the parent municipal union Ald. Boyd, of Montreal, who had been appointed to the chairmanship of the Grain Commission of Canada. This year, too, the Union will hold its annual convention in London, so that Dr. Stevenson, as Mayor of this city and President of the Union of Canadian Municipalities has a heavy task before him, for, it is expected that this year's convention will be the most important in the Union's history. The subjects to be discussed are eminently national in character, and much depends on the conclusions as to whether or no the municipalities will take up the larger questions brought about by the war.

WINNIPEG PARKS.

According to the annual report of the Public Parks Board, Winnipeg has park properties to the extent of 67½ acres, which cost for the land \$534,154. This area is divided into twenty-one parks and a large square of four acres. Included in one of the parks is a zoo, which must be paradise for the kiddies. The Park's Board also control the cemetery, which shows a surplus.

THE MUNICIPALITY AND VENEREAL DISEASE.

The first essential in the control of the venereal diseases, Syphilis and Gonorrhoea, is the inclusion of these in the list of reportable diseases. As stated in our last bulletin, it was not feasible to make any attempt to control these diseases until we had some solution in sight. Now we know that they are curable in the early stages in the large majority of cases, and sufficient work has been done elsewhere to point out the obvious mistakes and pitfalls incurred in any campaign on propaganda having to do with the control of these diseases. We are therefore in a position to make progress if we had the first essential, making these diseases reportable ones just like Diphtheria or Scarlet Fever. If it is to the interest of the community to have measles reported, why not in the case of these other diseases that have been undermining the manhood and womanhood of the nation.

People are appalled at the tens of thousands of cases occurring among soldiers. It is doubtful, except in the case of Canadians, whether there has been any material increase in the number of cases in the army over that in civil life. The difference is this, that every case in the army is reported and therefore known, while in civil life the cases are not reported, and remain unknown. In the army because the cases are known they are treated early, and a large proportion cured, or arrested, whereas in civil life a large number of cases are never cured. The war has presented an opportunity for throwing a bright light on an area which had always remained in darkness; the amount of actual disease was approximately the same before as it is now. In the case of our own soldiers there has been undoubtedly a larger number of cases of venereal disease than among a similar number of men in civil life. More than ever, therefore will we need to know the cases of this disease occurring in order to insist that they become cured, where possible, and cease to be centres for the infection of others.

There are twelve states and one territory in the United States now demanding the reporting of Venereal diseases.

Though Venereal disease claims as many deaths and causes probably an infinitely greater amount of misery than Tuberculosis, nothing like the amount of money is being spent in trying to control the disease as is spent in stamping out Tuberculosis.

Thus, four years ago in the fifteen states where statistics of expenditure were available, \$5,859,000 was spent in the prevention of Tuberculosis, and \$11,000 in the prevention of Venereal disease. This, of course, is perfectly illogical. Persons with Venereal disease, whether innocent or guilty under the social law, are a menace to the public health. By the Department of Public Health no discrimination can be made. Such people are unfortunate, and from our standpoint must, if possible, be cured. If cases were reported we could insist that many of them accepting treatment at the Venereal disease clinics completed their treatment instead of stopping when half done. With this an accomplished fact, and with free diagnosis and treatment, we would have some of the essentials necessary to carry on a useful campaign to improve present conditions. — Health Bulletin of Toronto.

PROTECTION OF CHILD LIFE.

The importance of infant welfare work at this stage in the nation's crisis is daily becoming more generally recognized by all classes of the community. For many years our public health authorities have been sowing on what seemed very barren ground, but the outpouring of the nation's blood, the willing sacrifice of thousands of the best and most virile of the race, has caused the apparently lost seed to germinate, and there are now prospects of an abundant harvest. Had we looked after our infant life during the last forty years there ought to have been to-day between the ages of 18 and 40 another 1,300,000 men available for the fighting forces. In other words, we have allowed, through our blindness, thousands of men to die in their infancy, male babies born often healthy and in all respects capable in due time, if proper attention had been given them, or if their home conditions had been better, of growing up and doing their full duty to the nation as our splendid sons to-day are doing in the battlefields of the world. Because of ignorance which is curable, because of improper conditions around them which are removable, thousands of these fellow citizens of ours whom we shall 'too late' wished we had saved, now die within twelve months of their arrival in the world. — W. H. Edmunds, in Journal of the Royal Sanitary Institute.

Municipal Accounting

E. T. SAMPSON.

Secretary-Treasurer of Outremont, Que., and Member of the Society of Municipal Treasurers and Accountants (Eng.)

(FIFTH INSTALMENT.)

Investment of Sinking Fund.

Investments of sinking funds are prescribed in:

1. General law.
2. Special charters.
3. Municipal by-laws.

Classes of Securities Suitable as Sinking Fund

Investments.

1. Government securities.
2. Other municipal securities.
3. Municipality's own securities.

Note.—If extinguished, care must be taken that until maturity, interest, which would have been payable, on same, is duly credited to sinking fund.

4. Mortgages on land and buildings within the municipality — to the extent of one-half of valuation — per current valuation roll.

5. Further Local Improvement Works, in respect of which special taxes for loan charges will be a privilege upon the benefitting property.

Remarks on Sinking Fund Investments.

Bond dealers and financial houses generally approve the first four classes of investments, but often adversely criticize the fifth class, viz.:

Further Local Improvement Works.

This class of investment, however, when made under proper safeguards, should prove the most profitable to the municipality.

Errors have often been made by municipal administrators by providing interest only on the investment of the accumulated sinking fund in further local improvements, and thus neglecting to make the extra provision for the refunding of the loan to the sinking fund at the expiration of the loan period. When the period of the special tax expired, the sinking fund had received interest only for that period, but the principal invested had not been refunded.

Due precaution should therefore be taken that an annual amount (apart from interest) should be set aside out of the special tax sufficient to redeem the loan at the end of the period of such tax (thus establishing a sinking fund within a sinking fund).

Precedent to this in Old Country practice may here be cited. (See County and General Stock Regulations Amendment Orders, 1902).

Statement of Sinking Fund Accounts.

Whether these accounts form part of general accounts of the municipality or not, there should be published the following annual statements:

1.—Revenue Account. Showing:—

- Instalments received.
- Interest earned.
- Uninvested balance—brought forward.

Expenditure.

- Being application of income.
- Balance uninvested—carried forward.

2.—Balance Sheet.

Liabilities.

- Amount of accumulated Fund.
- Balance (if any) being amount owing to other funds.

Assets.

- Details of all investments.
- Balance (if any) uninvested, and lying on deposits at bankers.

Auditors certificate appended.

Preparation of Annual Financial Statement.

We have now reviewed the principal accounts and financial operations of a municipality. It would be incomplete without referring to the preparation of the annual financial statement. It is here where the ability of the financial administrator of a municipality can best be displayed. It is here where that simplicity already referred to, is required more than elsewhere.

The order of accounts appearing in such financial statement might reasonably be as follows:

Treasurers report.

Revenue account and Detailed cost accounts. (In certain cases).

Capital accounts. Detailed cost accounts. (In certain cases).

Sinking funds.

Miscellaneous Accounts.

Reserve and suspense accounts.
Balance sheets. (Statement of assets and liabilities).
Annual financial returns of all sorts.
Miscellaneous and statistical.
Loan debts, inventories, etc.

Internal Audit or Check.

In the larger municipalities it is now absolutely essential for the purpose of insuring the efficiency and integrity of the administration, that a system of internal audit—or continuous check—be instituted. (This department, or rather sub-department—can be entirely distinct from the expert auditors appointed under the general law, who will audit the accounts yearly or half yearly.)

The audit staff should be under the direct control of the Municipal Treasurer, and full powers to enquire into all books and records of every department of the Municipality, should be given them.

Mr. Arthur Collins, in his valuable work on Organization and audit of local authorities accounts (Gee & Co.) aptly describes the objects of a Municipal audit, viz.:

- 1 Detection of errors; of fact (accidental or wilful); of principle.
- 2 Prevention of errors.
- 3 To create a thorough system of account keeping.
- 4 Ensure that such accounts be correctly and honestly kept.
- 5 To ensure the fulfilment of all the statutory duties, obligations and regulations of each local authority.

To attempt to describe the detailed functions of a municipal internal auditor is beyond the scope of this paper, but a few remarks on the manner of dealing with the result of his investigations will not be inappropriate.

The auditor will probably record the details of all his investigations in note books (preferably loose leaf) keeping in this manner a separate, continuous record of his work in each of the Departments of the municipality. He will render periodical reports to his chief (if working under supervision of treasurer, who will take up all minor matters with the chiefs of the departments concerned, viz.:

- (1) Incomplete and inaccurate recording—due to carelessness or incompetence.
- (2) Delays, etc., due to similar and other causes.

A summarized audit report should be submitted half yearly, or oftener to the finance committee, together with any recommendation and other suggestions to improve the working of the administration in any particular. Criticism of the prices paid for all sorts of materials should be noted, and officials purchasing same should be asked to offer their explanations.

Emergency Report.

Should be made to the finance committee where any serious irregularity of any sort is discovered, who will then assume the responsibility and order what further steps shall be taken.

The auditor, in the course of his duties, will require to use a great deal of discretion; while becoming too friendly with other officials is not conducive to good work, he should at all times be courteous and considerate to them. The duties of an auditor should never be compared with those of a detective, and he is not called upon to go beyond the official records and other sources of information generally available to test the integrity of any one, but at the same time, he must exercise great care not to allow his work to descend to an ordinary mechanical check, which would fail to discover anything.

He should make all his investigations of the subjects he has under review from their first sources, viz.:

(Concluded on page 327).

BUILDING UP CHARACTER.

C. J. YORATH.

While it is important to plan for the future growth of the villages, towns and cities, it is infinitely more important to plan the future of our citizens.

Lloyd George in a recent speech said that a nation may be rich in minerals, may be rich in its soil, may be rich in natural beauties, it may be rich in its commerce, but unless it is rich in great men there is an essential ingredient to national wealth which is missing.

"The great men of any nation are like mountains. They attract and assemble the vitalizing elements in the heavens and distribute and direct them in the valleys and the plains so as to irrigate the land with their fertilizing qualities and the world without them would be either a desert or a morass."

What would the British Empire be to-day with no Shakespeare, no Cromwell, no Elizabeth, no Pitt, no Nelson, no Wellington, no Gladstone, no Kitchener, and many others and where would the Dominion be without its great men and loyal and sturdy pioneers.

What has this to do with your work in the rural municipalities? It has all to do with it, for upon your ideas of citizenship will depend the bringing up of the child.

As a house, a ship or the like ought to have the lowest parts firmest so in human conduct the principle and foundation should be just and true.

How then are we to ensure that our country, not only has its proper proportion of its great men compared with other countries, but an even greater proportion.

The Number of Great Men Will Depend Upon Our Education.

It will depend upon how our children are educated, how their characters are moulded, the environment in which they are brought up, as to whether we shall produce the great men which the proper development of the country will require.

Ruskin said, speaking of the child, "Better that it be ignorant of a thousand truths than have consecrated in its heart a single lie."

Are you satisfied with our system of education? Is it producing men of high moral character, whose veracity is unquestionable, whose code of ethics in business is of the highest?

Are you satisfied with the system of education which allows in some cases less than 50 per cent of the roll in attendance at schools.

Are you satisfied with the system which allows children to attend school under complete German control where the education is of the crudest and the English language is never heard.

Are you satisfied with the system of education which results in very few if any pupils being taught in the upper grades and where the teachers in such cases are all Ruthenians.

Are you satisfied with the system which produces citizens who have lived in the country twenty years and upwards — were born here — and who when brought into a District Court required an interpreter as they could not speak a word of English.

Are you satisfied with a system which allows children to be taught when they do happen to go to school in any other language than the English language.

Are you satisfied with the system which has produced areas in this Province in which you cannot make yourself understood in the English language and you might just as well be in a foreign land.

Are you satisfied with the system which produces School Trustees who refuse to endorse a resolution calling for uniform text books in all the schools to be printed in the English language?

Satisfied — as true citizens of the greatest Dominion of the greatest Empire the world has ever seen you cannot be satisfied with such a system.

What kind of citizen is that system going to produce — what national ideals are those citizens going to have what opportunity can they have of taking an enlightened view of subjects which affect the welfare of the Empire. What opinion can they form now or in the future of our just cause in this war? I tell you if we allow such a system to continue the spirits of those who have fallen for the highest ideals of citizenship will haunt us to our graves.

ENCOURAGE INDUSTRIES INDIGENEOUS TO DISTRICT.

R. O. WYNNE ROBERTS.

It is entertaining to observe how many towns and cities aspire to be a Pittsburg, Chicago, Detroit, etc. Such aspirations are commendable if rightly directed. No great city or town has attained its importance, without there being good reasons for it. The raw materials must be available for the industries or other conditions must be countervailing. It is probable that Great Britain is the greatest importer of raw materials — Lancashire imports cotton, Yorkshire, wool, Belfast, flax, and so on, because special facilities exist which enable the factories to successfully compete. Chicago and Kansas City imports cattle because they have huge stockyards and packing houses and are centres of great collecting and distributing areas. Minneapolis is an important milling centre for similar reasons. Canada may be made more self-dependent if industries are located at centres where the conditions are favorable, and are organized to give the public adequate value for their money. Town planning must to a large extent be the fundamental principle on which to develop industries in each centre of population. That is, men with visions and discernment should formulate schemes best suited to the local conditions, having regard to the raw materials available, labor, power, accommodation, transport and the demand for the finished product. It is easy to introduce an exotic industry by offering concessions and inducements, but to make it prosper is another matter. The creation of new industries for the utilization of the raw materials that are available is of greater importance than the introduction of extraneous industries which have to import the necessary materials, although in some instances the compensator of conditions might be sufficient to change this. The conversion of Canada's materials into gold means increasing the nation's wealth, whereas exotic industries are often equivalent to enriching people outside the Dominion without proportionately increasing Canada's wealth. If the industrial life of a community is developed on town planning principles, there is more ground for anticipating that factories and institutions will be established according to the potential needs and available resources and facilities of the district. This has actually been the reason why certain cities have prospered so well in the past and will, doubtless, constitute the true method by which history may be repeated in this respect. The readers can name cities which have grown mighty because the citizens thereof have made the utmost of the local resources and conditions, whilst other cities have lagged behind because of the absence of such enterprise. How many factories have been introduced into localities and have since ceased to be operated, because the economic foundations were unsound.

This not only brings disappointment and loss to the investors and to the municipalities which made sacrifices on their behalf, but it also brings discredit and tends to deter other bona fide manufacturers from embarking in industrial businesses in that district. Probably none regret the closing down of factories more than the people of the district, for hopes of great things are disturbed, employment is less, pay rolls are diminished and monetary circulation and bank clearances are reduced. These facts soon become known despite all care to conceal them. On the other hand one success begets another, hence why certain cities appear to secure many industries. Canada's self-dependence on her own resources is therefore a matter of enterprise and discrimination by the leaders of thought and action. It cannot be denied that Canada possesses vast resources, both immediately available and potentially developable under scientific direction. The desirable progress on permanent basis may be made to combining ordinary discretion with business acumen and scientific knowledge.

THE U. C. M.

The Union of Canadian Municipalities is as ever continuing its good work, and its never-ceasing vigilance in jealously guarding the rights and privileges of all municipal organizations throughout the Dominion cannot be too highly valued. The results from the efforts of this organization, as well as the indirect benefits which the municipalities derive from this Union because of its very existence preventing attacks on the liberties of our municipalities, is difficult to estimate; therefore it is needless to say that this organization is well worthy of the best support of our municipalities.—John Perrie.

Influence of Town Planning on the Social Life of the Community

THOMAS ADAMS.

What we mean by town planning is the preparation of comprehensive plans and schemes of development for all kinds of land in both urban and rural territory. The term "town planning" is therefore somewhat of a misnomer, and is especially so at the present moment in this country, when we find it necessary to lay the emphasis on rural development.

To plan a town or a piece of rural territory will avail us little as a means of improving social and public health conditions unless we have a definite scheme of development in view to follow the plan, and unless there is behind both the plan and the scheme sufficient legislative power to make them effective. In Canada we have had so-called paper planning of all our territory, but it has been worse than useless because it has artificially forced development along lines which ignore both natural conditions and economic use of the land. In that respect our stereotyped rectangular plans are a step backward and not forward in comparison with the irregular growth of the cities and rural districts in the older countries.

What has the planning and development of land to do with the subject of public health? We will consider that question briefly in relation to both rural and urban problems.

Rural Development.

There has been too great a tendency to separate rural and urban questions, and to assume an independence, or lack of relation, between town and country which does not exist. All our questions of development of land and of public health must be studied in both classes of territory if we are going to find a solution for our present difficulties. Land speculation in the country leads to land speculation in the city, and land speculation in building lots in the city causes productive farm land in the suburbs to be lying unused. The chief defect in connection with our system of rural development in Canada in the past has been that we have planned the rural territory for purposes of speculation instead of for purposes of economic use. Fertile land nearest to the market is destroyed for productive purposes from 20 to 50 years before it is wanted for building purposes. Bad sanitary conditions are created by this forced sale of land in scattered lots because it is impossible to get satisfactory sanitation with scattered development. As speculation is injurious to production it is marvellous that we have waited so long to hear the cry of "dear food," and that our living conditions are as healthy and satisfactory as they are.

You cannot solve public health questions without regard to economic conditions. The fact that 70 per cent of the wells in rural Canada are contaminated may be a direct cause of disease, but the first causes arise from the want of education, social intercourse and the proper situation of the farm buildings to make rural sanitation possible. The importance of revising our system of planning and developing rural territory may be judged from the fact that our present method has resulted in scattering our population over at least twice the area that is necessary and has thereby caused the isolation which has increased the cost of distributing food and prevented proper facilities being given for co-operation, education, etc. But this has also produced serious physical and moral deterioration.

Investigation made by the Commission of Conservation show that the poverty and degeneracy in the slums of our largest cities is no worse than that which exists in some of our scattered rural territory. Owing to the land in some parts of Canada being unsuitable for agriculture and yet having been settled under our speculative system of homesteading, large numbers of farms have either been abandoned or a degenerated population remain in some districts, unable to get more than mere subsistence. In February, 1916, Sir Wm. Mulock, Presiding Judge at the assizes held in the city of Peterborough, is reported to have said: "Attention was drawn to the degenerate conditions of people in the back districts of this and the township of Hastings. These people were in poverty, living on unproductive land and the children brought up in an immoral atmosphere." In a report which was made at the request of the Judge, astounding revelations were made.

I am not able to do more than merely touch upon this matter and ask the question whether there is any use trying to educate people to appreciate the value of our social institutions and to look after their personal health when they grow up under such an atmosphere and amidst such poverty and isolation. There is no way of dealing with

that problem except by beginning at the root. We must both classify and re-plan all land which is not maintaining a healthy population under present conditions, and properly plan and develop all new territory before it is occupied. While there has been a satisfactory increase of population, production and wealth in Canada, there has been an inadequate appreciation of the importance of conserving and developing human resources; to conserve and develop these resources we must have a sound economic foundation, and if this were secured many of our expensive palliatives, which we have to introduce at later stages of development, would be entirely unnecessary.

We have absentee ownership in Canada of the worst kind. In the western provinces over 30,000,000 acres of good land has been granted to persons for residence and cultivation, and is now in the hands of speculators and almost entirely unused. This land is not only idle itself, but it forms a buffer area between the producer and the consumer, as most of it lies nearest to the railways, but as Mr. Albert B. Hart wrote in the Quarterly Journal of Economics, "The land grabber is in most cases simply taking advantage of the chances which a defective system has cast in the way of shrewd and forehanded or unscrupulous men." It is futile to go on blaming the speculator, or to grumble at individual defects in matters of public health, or to promote systems of education, co-operation, or rural credit so long as we have the present system of land development at the foundation of our social structure. We have worse sanitary problems in our fishing and mining villages than in our big cities. Many of these are merely problem of land development.

Dr. A. C. Jost, Medical Adviser for Guysboro', N.S., refers to a lack of co-operation of a kind that is altogether too common in rural communities. In his own municipality there is a considerable area of land along the waterfront owned by a corporation. Above this land are numerous rows of building lots, the owners of which are prevented from draining their land through or on the corporation owned land. All the lowest properties on the hillside are liable to contamination from all the properties higher up, and the accumulation of refuse of the whole is washed down the hill during a rainstorm or a spring freshet. Dr. Jost very naturally expressed concern regarding the water supply derived from shallow wells under such conditions.

The only effective way in which we can secure sanitary improvement in our rural districts is by having better standards of public health accompanied by increased municipal responsibility, more co-operation and better educational facilities, but not one of these is practicable to a satisfactory extent under present conditions of land development, and we want to begin to deal with at least all the land that is not yet taken up for settlement.

To organize the placing of returned soldiers on the land under present conditions will be a fatal policy. We hear that they don't want to go on the land. This is probably not because they object to farming, but because under present conditions farming does not pay and most areas available for settlement are too remote from the market. We must make the rural conditions right for a sound economic and social organization to be built up, and then the problem of the returned soldier taking up land — as well as the problem of other forms of land settlement — will be easily solved.

The three things of vital importance to public health in rural areas are: (1) proper planning of land for health, efficiency, and convenience; (2) education, and (3) co-operation; but the second and third of these things cannot be secured without the firsts.

Urban Problems.

There are three classes of urban problems with which we are concerned in connection with planning and development legislation and schemes. These are:

- 1.—Vacant land and land in course of development within our cities and towns.
- 2.—Suburban land within the urban zone of the city or town, but lying in rural territory.
- 3.—Sites of new towns and villages being developed or likely to be developed in the future.

In connection with land that is already fully occupied by buildings little can be done by preventive methods of development schemes. It is true that this leaves some of our worst problems untouched. For instance, the crowded slum and the narrow congested street in the old parts of

INFLUENCE OF TOWN PLANNING—(Cont.).

the large cities has to be dealt with by other means. For these problems we require drastic housing and public health legislation and very expensive methods. The cost of getting a satisfactory remedy of these established conditions is so great as to be almost prohibitive, but that in itself is an argument in favor of so planning the future development that similar conditions and evils will not be repeated in future. Moreover, we will never educate our people to face the cost of applying proper remedies to existing evils in our cities and country districts until we demonstrate more widely the social and financial advantages of more scientific development.

There is hardly one problem of public health that can be satisfactorily solved under our existing haphazard and expensive system of developing land and with our present legal standards of building construction and sanitation. Medical officers have not shown enthusiasm in accepting that view, and have been too prone to deal with effects and neglect causes of bad conditions. Yet most of their proposals to improve the sanitary conditions of homes is met with the answer that the people cannot afford to pay for a satisfactory standard of equipment and the prevailing reason for this is that too much has been spent on other things that are less necessary and on the cost of acquiring land, owing to building speculation. The money spent on extravagant street systems and on scattered development means so much withdrawn from improving water supplies and sanitary conditions.

Development Schemes.

Development schemes must be prepared to secure

- (a)—Efficiency and convenience;
- (b)—Health and proper sanitary conditions;
- (c)—Amenity or agreeableness.

All these relate:

- 1.—To the city, town, village or rural municipality as organized communities.
- 2.—To the industry or industries which are the *raison d'être* of every community, and
- 3.—To the family which is the unit of the social life of the community.

Health and proper sanitary conditions are the most vital of these problems because they touch every one of the objects of schemes at some point and affect every aspect of social life. The efficiency of the human factor in industry is becoming of increased importance as more skilled work is required for productive purposes. Measured by natural resources Canada is a wealthy country, but measured by the human energy and skill it has to apply to these resources it is very poor. Yet we are just as wasteful of our human as of our natural resources. It is impracticable to obtain proper sanitary conditions and health unless there is convenient means of transportation and distribution and ample facilities for recreation. All of these form part of a plan of development. Healthy development also requires separation of factories from residences both from standpoints of economy and healthy.

Development schemes include in their contents everything that is connected with the growth and development of the urban and rural district. I have only time to refer to one or two of these contents. Such schemes would result in roads being made of economic width in relation to the value and character of the buildings erected on them. At present much congestion on lots takes place as a result of the unscientific development of our street system.

Air space should be secured by the scientific fixing of distances between buildings and the amount of each lot that could be built upon instead of by creating wide streets. The latter directly cause crowded conditions, by encouraging lot congestion to pay for the wide streets.

The angle of sunlight should be determined in relation to the height of all buildings and the width of streets so as to secure ample light as well as plenty of air.

Residences should not be permitted to be erected on swampy areas or mixed up in an indiscriminate way with factories.

Standards prescribed for height, character, sanitary arrangements and situation of buildings should vary according to the character of development and would naturally differ in rural and urban areas.

The number of dwellings to be erected on any one area or the proportion of a lot to be occupied by a dwelling should be limited so as to secure the prevention of overcrowding. No lot should be covered by more than 50 per cent of its area by a residence or 75 per cent by a business block.

Land should be classified for use for residential purposes, factories, agriculture, etc., and the system of taxation and of planning, and of constructing local improvements should be adjusted to suit different classes of development, instead of being applied under a hard and fast rule without regard to conditions.

One of the purposes of such a scheme should be to transfer large portions of the burden of making local improvements to those who benefit directly from these improvements. We will never get healthy development until we require that sewers and water mains shall be connected with every dwelling in an urban area before it is occupied. Indirectly this would stop injurious land speculation and scattered development.

Schemes must be flexible to permit of change from time to time. We must fit in with natural conditions and injure no legitimate private interest.

As for the method of carrying out schemes, that must be left to be considered by those who are interested in the study of the planning and development legislation proposed by the Commission of Conservation. No such legislation will be of value unless it takes into account that all questions of efficiency, convenience and amenity must be tested finally by the extent to which they promote public health and conserve and develop human life.

Aesthetic results will be secured, but only incidentally. They must never form the main object of schemes.

Finally no schemes can be promoted on economic lines which have not the safeguard provided by the following section of the draft Act of the Commission of Conservation:

"Property shall not be deemed to be injuriously affected by reason of the making of any provisions inserted in by-laws or a scheme, which, with a view to securing the amenity of the area affected by the by-laws or the scheme, or any part thereof, or proper hygienic conditions in connection with the buildings to be erected thereon, prescribe the space about buildings, or the percentage of any lot which may be covered with buildings, or limit the number of buildings to be erected, or prescribe the height, character or use of buildings, and which the Department, having regard to the nature and situation of the land affected by the by-laws or provisions, consider reasonable for the purpose of amenity and proper hygienic conditions."

This means that under the proposed Act no one can claim compensation on the ground that his property was injured by reason of any restriction necessary for a purpose of health. We need legislation to do this, and without it much of your efforts to promote human welfare will be wasted. You can devote yourselves to no more urgent or patriotic cause than this. It means that you get the law to place the value of human life higher than the value of property—and it is time we made a beginning in that direction. Why not begin now—when men are dying for our liberties? Which of these liberties is most precious to us, if it is not that of being permitted to enjoy free air and sunshine and the fullest opportunities for healthy physical and moral development.

CITY PLANNING PROGRESS IN THE UNITED STATES.

In its publication of "City Planning Progress in the United States, 1917," the Institute has brought to completion a monumental work. The book is edited by George B. Ford, assisted by Ralph F. Warner, Mr. Ford being the Chairman of the Town Planning Committee. Though he is himself one of the most prominent of American city planners, with many notable achievements to his credit, he has done perhaps nothing of greater importance to the profession than the preparation of this remarkable book.

The book's compilation of data from the towns and cities is supplemented by an introductory discussion on How to Get Started in City Planning, and by a Summary. The latter includes among its sub-heads, the Leading Accomplishments of the Year, Acts and Ordinances, State, Inter-urban and Metropolitan Conferences, County Planning, Instruction in City Planning, City Planning Abroad, and the Effect of the War on City Planning. Then comes a brief, but admirable List of References on City Planning, compiled by Theodora Kimball of the Harvard School of Landscape Architecture; and finally, a very complete topical index.

Road Organization

GEO. S. HENRY, M.P.P.

Organization is an essential in the successful carrying out of any large undertaking, and efficient organization in road work produces results just as surely as in railroad work or commercial enterprises.

Before outlining the organization which I consider suitable for road work, I would like to interject that much as one admires good organization, I am of the opinion that men of the proper type for the work they are undertaking are more essential than organization. Good men, men who know their work, although weak in organization but anxious to build roads, will accomplish better results than inexperienced unambitious men, no matter how thorough their organization. My conclusion therefore is, that in the organization which we will outline, good men must fill the positions to secure any real benefit from the organization.

Legislation.

Although dealing with legislation first, it is readily understood that there must be a demand from the community for the legislation before the best results will be obtained.

Preparatory to legislation, public discussion throughout the community will emphasize the advantages accruing from the construction of good roads. The expressions of opinion at such meetings will indicate to the legislature public feelings, and be a guide as to how far in advance of public opinion legislation can be introduced that will lead the community to support the movement rather than be antagonistic.

It is advisable that legislation should be uniform over large areas, so that there will not be the possibility of sectional jealousies and insinuations that certain areas are favored in the legislation. The first essential in a road organization is an attitude of mind of the community which indicates their belief that the laws they are operating under and equitable, and that they distribute fairly the reasonable costs of the undertaking.

Having secured legislation that provides the machinery for the construction of the roads and the assessing of the costs, we come to the more direct question of Road Organization.

The legislation being provided, we are of the opinion that the detail work should be under a commission answering directly to the minister in charge of the Department of Highways.

The Highways Commission might be charged with the oversight of all the highway schemes within the province to which the province contributes, and might act in an advisory capacity to smaller schemes.

Their first duty would be to gather and assimilate information in reference to the various types of pavement now being used. Having acquired the information, they should then arrange such information as to be available for those road builders without the opportunity and experience necessary to digest such information. They could direct and advise the road builders in the smaller centres, and eliminate many of the expensive experiments in road building which have been and are now being carried out in too many localities.

This Commission could provide for the inspection of Provincial aided work during construction and at completion, and undertake the road routine work of the department.

If provincial highways become a part of the Good Roads problem within any province, this Commission reporting to the minister should be given charge of the location, construction, and maintenance of these provincial roads. Such a commission, composed of men familiar with large construction undertakings, would be in a position to consider not only the engineering features of the problem, but the commercial and economic advantages.

Such a Commission would, of course, be provided with suitable staff of engineers, inspectors and auditors, but it is not with this large organization that I am particularly interested to-day, but rather with one of the units which would naturally answer to such a Commission.

County Organizations.

In Ontario our chief organization for Good Road construction work so far has been the County, although at the present time a number of suburban areas are in contemplation, areas including urban and rural communities.

Again I favor the Commission idea, a Commission answerable to the City and County Councils which appoint them. We favor a small commission of not more than five members, and preferably men who have had municipal experience, familiar with the deliberate methods obtaining in municipal organizations. This Commission should be

appointed for a term of years, good conduct always being pre-supposed, for in this way alone can a definite policy be laid down and maintained, unless the officials rather than the Commission become the dominant force. Commissioners appointed for a term of years will make a special study of the problem they are handling, and their experience obtained year by year makes for efficient work and organization. It is true that in a number of our counties Good Roads Committees are appointed annually from among the representatives in the County Councils, but the ever changing personnel of the County Councillors, and the annual appeal of the County Councillors for re-election, tend toward a very unsettled policy in connection with the road work, for it has been found impossible to satisfy every area of the county in any one year.

The Commission having been formed and given control of the construction and maintenance of the roads, the providing of the money still remaining in the hands of the Legislative body, whether Legislature, County Council or City Council, the Commission must proceed to organize its departments.

A **secretary** should be secured to receive the communications, record the minutes of the meetings and forward such communications as the Commission may direct.

A **Treasurer** should be appointed and bonded, whose duty it will be to collect the money authorized for expenditure, and make all disbursements authorized by the Board.

The selection of a **Chief Engineer** is perhaps one of the most important appointments which such a Commission would have to undertake.

The Engineer acting under the direction of the Commission should be held responsible for the design, construction and maintenance of every road or structure, of which the Commission has charge, together with control of all their employees excepting those already mentioned.

If the work is large enough, the Chief Engineer may be able to form separate departments with experienced men as heads of each department, but as a rule the work is not of that character, and it is in this situation that the larger Provincial Commission can give expert service to the road builder who is not expert in the three departments which have been mentioned.

Designing Engineer.

Taking it for granted, however, that the work is large, and a designing engineer can be employed who can take charge of the office work and the design of bridges, roads, culverts, etc., it will be found that such a man will be best employed giving his full time to office work. The designs thus prepared under the direction of the Chief Engineer will then be turned over to the Constructing Engineer.

Constructing Engineer.

The Constructing Engineer should, under the Chief Engineer, have full control of all construction work, whether done by day labor or under contract.

Maintenance Engineer.

The Maintenance Engineer should have charge of all roads and structures as soon as the Construction Department is relieved of them by the Chief Engineer.

Maintenance work is not so spectacular, nor does it appeal so effectively to the community as construction work, and it is therefore frequently overlooked, but it is nevertheless one of the most important departments of road work.

The patrol system under a **Maintenance Engineer** is without doubt, the most efficient and finally the most inexpensive method that can be adopted. The length of the patrol will vary with local conditions, and the expenditure per mile will demand upon construction costs and traffic carried. One of our most efficient patrol gangs handles some thirty miles of road, but they live at the intersection of two main highways, and are provided with a light motor truck, so that the extreme end of their beat is only some twenty minutes from their homes. By making the beats large and working two or three men together, it is found that the men take greater interest in the work and thereby accomplish more in a given time. One man working alone soon develops a very slow gait, and is without incentive to quicken his work. Where conditions are not suited to such a large organization, two men working in the centre of a **seven mile beat** with one horse and a wagon can patrol the section, and in addition do a certain amount of construction work.

Foremen.

Because road work is new in Canada, foremen suitable

PUBLIC UTILITY RATES.

This book is a discussion of the principles and practice underlying charges for water, gas, electricity, communication and transportation services and has been in course of preparation during the past eight years.

The author felt that a comprehensive discussion of: (1) Such corporation and municipalities as affect service and rates; (2) The trend of public opinion and court and commission decisions, and (3) The most important engineering and economic problems involved, would be useful to many who have to deal first-hand with one phase or another of public service.

There are brief reviews of the history and technology of the subjects treated.

The author does not believe "in any inherent iniquity" of corporations, but recognizes in the magnitude and complexity of modern organization schemes opportunities for hiding grave abuses and he feels that any man who has the requisite ability and energy to cultivate or exploit public service should not be allowed to do so solely for private profit without some effective oversight and chance for restraint. He thinks that "with the absolute disappearance of the men who organize corporations solely for the sake of large and speculative promotion profits, and not for the more moderate and certain returns of daily service, there will come a better day, for both the public and the corporation."

Appendix A gives diagrams and tables showing probable approximate cost of brick buildings; B gives tables for sinking fund present-value computations, and C gives tables showing typical life expectation for public utility property.

"Valuation As An Engineering Task; Appraisal of Land "Valuation As An Engineering Task; Appraisal of Land and Water Rights," would be of value to any commission attempting to place a value upon a public utility property. In the last mentioned chapter the author refers to the struggle in England for public control and points out that now increases of dividends depend on reduction of rates for service.

In the chapter on "Rate Problems of Street Railways," the author quotes the City-Control Ordinance of Cleveland passed in 1909 to "secure to the owners of property invested in street railroads security as to their property, and a fair and fixed rate of return thereon, at the same time securing to the public the largest powers of regulation in the interest of public service, and the best street-railroad transportation at cost consistent with the security of the property, and the certainty of a fixed return and no more."—H. S. R.

"Public Utility Rates." by Hary Barket, B.S., Associate Editor of Engineering News, has just been published by McGraw-Hill Book Company, Inc., 239 West 39th Street, New York, and by the Hill Publishing Co., Ltd., 6 and 8 Wowerie St., London, E.C. \$4.00.

ROAD ORGANIZATION—(Continued).

for rural or even interurban road work are difficult to secure.

We have a large body of men trained for work in cities where there is every convenience of tools, machinery and special equipment, but a foreman for road work, such as we are interested in should be of a different type. He should be not only able to handle men and do ordinary road building, but in addition should be able to make use of every natural condition that surrounds his work. A cross between the "buck beaver" of the lumber camp and the "walking boss" of the railroad gang.

Commence the work with few outfits and train your men, and the next year you will be able to double your gangs by using these trained men. If there is much concrete work, organize a special crew for this work, making sure you have one man who can build and place forms.

The organization outlined may not be ideal, but it lends itself more readily to ordinary conditions, and will make for efficiency in construction and management with often the most ordinary engineers or road superintendents, and while it is quite clear that good roads have been built cheaply with an organization much simpler than the one outlined, it is also evident that their work has been in the nature of costly experiments, and the Good Roads movement has suffered accordingly.

MUNICIPAL ACCOUNTING—(Cont. from p. 322.)

Minutes of Council.
Special reports and explanations of chief officers.
Previous balance sheets.
Original documents of all sorts.

He should further bring to bear upon his work all his knowledge obtained from outside sources and whatever other experience he has had of the customary manner of performing the transactions to be audited. Here will be noted the great help to be derived from the note books, which he should carry with him at all times.

He must never fail to carry his investigations to their finish, viz.:

Through all subsidiary books to treasurer's cash book and bank deposit.

To legal acquittances of all sorts, viz.:

Bank cheques.
Signed receipts.
Legal documents.

To inclusion of outstanding of all sorts in balance sheet or schedules thereof.

Conclusion.

In laying down my pen upon the completion of this series, I feel all too conscious of its many imperfections and omissions, and I must crave the reader's indulgence for those matters and details which are incomplete or absent herein. The reader will appreciate the infinite scope of the subject which necessitates certain points and phases being only dealt with in an elementary manner.

Again such details of routine common to special accountancy, although very important indeed, need no full description here. One has only to peruse "Dicksee, or any other text book on Accounting," upon these special details, and he will there find all the information he requires.

Pitman's "Municipal Office Organization," etc. (Bateson) although written for English authorities, provides many valuable precedents. In his introduction to this work, Mr. Bateson says:

"The growth and influence of Municipal control are of a cumulative character, and will no doubt continue. Not a year goes by but additional duties and obligations are cast by parliament upon Municipalities. These duties have to be largely administered by the permanent officials and Municipal Councils are justified in seeking the services of the best qualified officers to carry on the work."

I think that the time is now opportune for the:—

Municipalities Clerks and Treasurers,
Municipalities Engineers,
Municipalities Health Officers,

to form national or district associations for the purpose of:

1. Improving Their Efficiency:—

By Conferences,
" Periodical Circulars.
" Other means of communication, and
" Discussion of problems mutually interesting.

2. Improve the Efficiency of their Assistants by:

Insisting on a certain standard of education before appointing.

Constitution of examining board by the holding of qualifying examinations.

Granting of diplomas to successful students.

The Municipal officials would thus, while greatly improving their own status, further become an important factor in uplifting the whole field of Canadian Municipal Administration to even a far higher plane than it has yet attained; and perhaps, by this means, those Public Utilities now so generally supplied by private corporations, viz.: Lighting, heating, tramways, water supply, may be economically taken over and successfully administered by the Municipalities for the greater benefit of the public generally.

In any event the close study and application to the affairs of the Municipalities by the permanent officials, which is to be obtained by the establishment of such institutions as are here outlined, will surely result in creating a class of experts, whose activities cannot fail to be for the public good.

This instalment concludes the letter press of Mr. Sampson's articles. In the August issue will be published the examples of balance sheets, rulings, etc., mentioned in the series.

Straw a Basis for Paper

Year after year Canada destroys many million tons of straw which in European countries is utilized in some way or other. Now that the Federal Government and the C. P. R. have appointed scientific research commissions, the one by the government being largely of an educational nature, and the survey appointed by the big railroad dealing essentially with the utilization of by-products—Canadian farmers and paper makers will be able to get a line on how this wastage can be stopped and the straw in the form of something else become a useful article. Mr. E. B. Biggar, late editor of the Pulp and Paper Magazine deals with this subject in the Toronto Globe in a very instructive article, from which we take the following excerpts:

To seek and to save that which was lost is as true redemptive work in the economic sphere as in the spiritual world, and the need of such saving was never more urgent in Canada since the factory system was established. If one could gather with a visible aggregate the value of the products which annually go to waste in our industrial processes as now carried on, the total would be amazing.

A scientific authority in the United States has calculated that the wood now wasted in the yellow pine lumbering industry in that country would, if distilled by the steam process into turpentine, equal all the turpentine now produced from pine gum. Tanning extracts are now largely produced from chestnut trees, and specially for that purpose, and yet the waste limbs and slabs of the chestnut would make all the tanning extract now realized from the destruction of all this timber by present processes. If all the waste of Canadian wood now adapted to the chemical pulp industry were now utilized it would sustain a chemical pulp industry from three to five times the present output. These illustrations, taken from the wood industries, might be multiplied in dozens of other fields of work.

Example of Straw Waste.

The recovery of waste is not alone a problem of raw material, but of bringing science and skill and mechanical power and transportation to bear on that raw material. These factors must be united to bring success. Given a unity of these elements, what a field is open to utilizing some of the waste of our Prairie Provinces. Take for example, straw. More of the grain straw should be returned to the soil as manure, but the native fertility of the prairies tempts the farmer to ignore this, and much wheat and oat straw is burned for fuel in the thrashers, while flax straw which is not so readily rotted, is burned in the field "to get rid of it." Yet it is from flax fibre that linen fabrics and real linen paper are made, so that a raw material of incalculable value is here lost.

There are difficulties of a rather obstinate nature in the utilization of the flax straw of the Canadian prairies for linen fabrics. Flax in the Canadian west is grown primarily for flaxseed, which is sold for linseed oil and for the making of oil-cake and other forms of animal food. For the greatest production of seed flax is sown thinly so that the stalks branch out and produce a greater quantity of seed. The fibre, therefore, is short and of comparatively little use for the textiles. In growing flax for linen trade the seed is grown thickly, and the main stalk grows long and straight and with unbroken joints, but there is little yield of seed. Then to get the best results flax is pulled by hand, and not cut by a machine. Hand pulling is out of the question in the west owing to scarcity and dearness of labor, and no successful mechanical flax-puller has yet been devised, although many thousands of dollars have been spent in experiments in the western States to this end. A linen textile industry is not yet in sight in the Canadian west, except in the use of the short fibres in mixed goods and for special purposes such as linen for medical dressings, etc.

Flax as Basis for Paper.

The flax as produced in the west may be used in the paper industry, and here, without question, is a flourishing field for a new Canadian industry. The flax crop of the United States in 1915, grown on 2,200,000 acres, yielded twenty million bushels of seed and 1,600,000 tons of straw. The flax crop of Manitoba, Saskatchewan and Alberta in 1915, grown on 801,000 acres, yielded 10,559,000 bushels of seed and about a ton per acre of straw—say 800,000 tons. Of the flax crop of the United States, only about 200,000 tons a year are put to any profitable use, so that 1,400,000

tons a year are wasted. Such a tonnage would, it is estimated, make all the wrapping paper used in the country and double the amount of writing paper used in normal trade, and it would give to the farmers of the United States an annual revenue of \$5,000,000 from the raw material now wasted.

Worth Three Extra Millions to Farmers.

The progress in Canada for a new branch of our paper industry are more favorable than in the United States—first, because the paper industry of Canada, relative to population and wealth, is much greater, and second, because the growth of yield and flax in Canada is greater in proportion to the total tilled area while at present practically no use is made of flax straw except in Ontario which is not now under consideration. The present product of flax straw in the Prairie Provinces, now amounting to 800,000 tons a year, will soon be increased to a million tons, and on the basis of the present output the raw material would bring to the western farmers a new-found revenue of \$3,000,000 a year. If all this were turned into linen paper the finished product would be worth from \$7,000,000 to \$15,000,000 a year, according to the class of paper made. The first and most easily made variety of paper would be wrapping, and this would be a class of paper not inferior to the average Graft paper, now in such demand for wrapping purposes. The second class of flax paper would be fibre board, for which it is eminently suited, and the third which would involve bleaching, would produce a more expensive, but more valuable class, real linen, bond and writing. Then there is another important use for the raw material which would be a by-product of the preparatory processes, that is flax tow and so-called flax waste, which would be a valuable contribution to the textile industries, and for twine, also packing, medical dressings, insulating material and many other uses. In Ontario there are a number of flax cutting mills, chiefly in the counties of Waterloo and Wellington, producing tow and fibre, for twine, but in the west nothing of this kind exists, outside of the household flax and linen-making in some of the foreign settlements.

New Branch of Paper Industry.

Now that paper and paper making materials have reached such unprecedented prices that there is a general hunt for new fibres, the question of using Canadian flax straw for paper becomes important. The remarkable expansion of the paper industry of Canada in the last twenty years is well known, but this industry is based exclusively on wood as the raw material. To add a new branch based on flax fibre would round out the business as one of the great basic industries of Canada, and would open up a new field for the export trade which could not be developed upon wood pulp and paper alone.

LAND VALUES AND MARKETS.

In connection with the establishing of land values and credits, the matter of markets is, of course, very important. Land values should be based on the net returns which the farmer can get from this land under proper cultivation. If the Government wishes to hold the farmer by establish land values and credits, it will be necessary that he be given better shipping and marketing facilities. The matter of sample markets is now under consideration. As an example of how grain grading has been handled, the following is an actual case in hand. On December 21st, 1916, a party billed two cars of wheat to his own order from Melville, Saskatchewan, consigning them to a firm in Fort William; on January 2nd, he received inspection report from Winnipeg. Not being satisfied with the grading he demanded a re-inspection and on January 4th, the grading was confirmed. The owner was not satisfied with the grading and decided to divert this grain to Minneapolis, the freight charge from Melville being the same to Fort William or Minneapolis. He came to Minneapolis with samples of this grain and there sold it on the sample market for 50c a bushel more than he was offered at Winnipeg. Since that he has shipped several cars more and the same thing was held true. This is only one of many cases which have occurred this fall and winter. It would seem that there was something wrong when the same wheat brought 50c a bushel more at Minneapolis than at Winnipeg. If the Government is desirous of helping the farmer such matters as this should have their attention.

Municipal Finance

JAMES MURRAY.

FINANCIAL REPORT OF TORONTO.

Commissioner Bradshaw, of Toronto, in his first annual report gives an index to his capacity as a controller of a city's finances. The value of the report lies largely in the simple form in which Mr. Bradshaw gives his analysis of the funded debt; the sinking fund and its porportion to each separate debt; debt limitation of the city; local improvement taxes, etc. We do not know the circulation, but such a report sent to each ratepayer would do more than anything else to ensure the interest and appreciation of the people in the doings of the local authorities.

The following is a statement of Toronto's funded debt, sinking fund, etc.:

Funded debt, as at 31st December, 1916:—Gross funded debt, \$97,730,920.83; deduct (1) specially rated and revenue producing debts as follows: Waterworks, \$14,495,946.74; ratepayers' share local improvements, \$14,057; civic hydro-electric system, \$7,898,000; civic abattoir, 0415,608; exhibition buildings, \$1,230,075; civic street railway, \$2,082,737; Toronto Street Railway pavements, \$4,465,010.26. Also (2) sinking fund of \$23,062,347.20 on gross funded debt, less sinking fund of \$9,314,942.48 on foregoing specially rated and revenue producing debts, \$13,747,404.72—\$58,391,895.72; net debt \$39,339,025.11. Assessment, etc.:—Assessed value of rateable property, \$588,348,777; exemptions not included in foregoing, \$85,288,148; revenue from taxation for 1917, \$14,707,573; revenue other than taxation for 1917, \$4,322,175; population, 1916, \$460,526; area of city, 25,330 acres; tax rate for 1917 (including schools, 6-7-10 mills, 25½ mills.

ADMINISTRATION OF SINKING FUNDS.

Commissioner Bradshaw, in his annual report, deals with sinking funds as follows:

The sinking fund is essentially a trust fund for the benefit of debenture holders and taxpayers. It is built up year by year, from taxes, and with interest accumulations is calculated to be sufficient to pay the principal of the various debts as they mature. It stands as a guarantee to the purchaser of the city's debentures that provision is being made for their prompt payment, and as an assurance to the taxpayer, that systematic provision is being made for the liquidation of the municipality's indebtedness. Purchasers of our debentures, as well as taxpayers, are entitled to know that the fund is being utilized solely for the purpose for which it was constituted, that it is being fully maintained and that it is being efficiently administered.

Fund as a Convenience.

In the past, some municipal sinking funds have been utilized more or less as a convenience to meet varying financial necessities. The municipality's debentures have been sold to the fund, and resold by it not because the sale was in the interest of the fund, but because it was convenient for the municipality for the time being that such sales should take place. No doubt these transactions arose from a lack of appreciation of the principles already referred to, viz.: that the fund is a trust and that its administration should be governed in accordance with the well recognized principles of trusteeship.

The method of making investments lies at the foundation of the fund's successful administration. In many instances, it has been the practice of the municipality to purchase its own debentures at the uniform price of par, no matter what rate of interest they carried, or what their true market value might be. Debentures issued carrying interest at 3½ per cent., 4 per cent, and 4½ per cent., have been publicly marketed at considerably below par, while others bearing the same rate of interest have, at the same time, been bought for the sinking fund at par; the sinking fund thus suffering to the extent of the difference between the artificial par value paid for them and the lower market value at which they should have been bought. The market price of the city's debentures disposed of during the year gave approximately a yield rate equivalent to 5 per cent., and purchases were made of them for the sinking fund on that basis, to the extent of \$6,644,914.58. The aim, unquestionably, should be to purchase investments, no matter whether they are the municipality's own debentures, or those of governments or other municipalities, on the most favorable terms possible, just in the same way that a trustee would do who was charged with the management of an estate.

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Securities Sold by the Fund.

Sometimes, although the necessity should not arise frequently, securities held by the fund have to be sold. The practice, in some instances, has been to dispose of those investments, held in the municipality's own debentures, to the municipality itself at the artificial value of par, no matter what the true market value might be. This course may have resulted on the average in the fund obtaining a higher price than the current market value, but if so, the municipality on the other hand has suffered. There is no necessity for a municipality, when purchasing securities from the sinking fund, to make a loss. The principle that should govern such sales is the same as that referred to in connection with purchases, viz.: that the best current market price should obtain. During the past year no sinking fund investments were sold by the city.

With due regard to the character of the investments which may be purchased, it will be realized that a much higher rate of interest than the assumed 3 per cent. should be earned. In 1916, all the new investments were purchased to yield 5 per cent. The great bulk of the securities held in the fund have been taken in, in past years, to yield from 3½ per cent. to 4 per cent., and as a consequence interest earnings will continue for some years at less than current rates.

Investment of moneys belonging to the fund should be made promptly and systematically. One of the basic essentials associated with every sinking fund is, that the moneys paid into it shall forthwith commence to earn interest.

UNIFORM SYSTEM OF TAXATION REQUIRED.

C. J. YORATH.

Mr. C. J. Yorath, City Commissioner of Saskatoon, gave a very instructive address before the recent City Improvement Convention, held in Winnipeg, on the subject of Finance and Administration, part of which dealing with uniformity in taxation systems, reads as follows:

The methods of raising current revenues throughout the Dominion are as diverse as other methods of municipal legislation and administration, and there is great need for the crystallization of ideas in this regard and the recognition of some established principles and methods of assessment and taxation.

In Western Canada during the boom days a system of taxation was largely adopted which provided for raising the greater part of local taxation by a tax on land alone. In some cities the assessment on improvements was reduced to a minimum, and in a few instances was entirely eliminated.

The arguments in favor of its adoption were:

- I.—That it was the simplest method of raising revenue.
- II.—That it would induce owners of land to develop their property.
- III.—That it would prevent the speculation in land.
- IV.—That it was the only fair and just method of taxation because the value of the land is entirely due to the presence and expenditure of the people.

What are the actual results?

- I.—It has proven to be the most difficult method of raising revenue and is largely responsible for enormous arrears of taxes.
- II.—It did induce owners to develop their property, so much so that property was developed beyond the normal demand, with the result that increased taxation has been incurred, rents have been reduced and the supposed benefits of the tax have acted like a boomerang against the owner.

Some owners were so obsessed with the idea of getting as much as possible out of their land that large six to ten storey blocks were built with the result that store and office accommodation is corralled upon a small parcel of land and the unfortunate owner of the balance is prevented, even if he would, from developing his property.

- III.—It did not prevent the speculation in land as while it was in operation Western Canada was passing through the greatest land speculation in its history. In fact, it stimulated speculation, as through the supposed advantage of inducing the owner to develop his property an unhealthy prosperity was created.
- IV.—No system of taxation can be just which makes it impossible for an owner to earn a fair interest on his investment and results in confiscation of his property.
- V.—It did not spread the burden of taxation over the community, i.e., through the payment of rents, etc., as owing to the unhealthy development which it partly created the supply was far greater than the demand and owners for the last three years at least have been compelled to take by way of rent whatever they were

offered, which in the majority of cases was not sufficient to pay three per cent on the money invested.

For a system of taxation to be successful, just and fair, it must

- (a)—Enable the local authority to raise revenue for its current expenditure expeditiously leaving as small a percentage of arrears at the end of the financial year as possible.
- (b)—Be based upon benefits received and ability to pay.
- (c)—Be distributed so that the cost of the maintenance of streets, sewers, etc., be charged against the property which is specially benefited and the cost of regulating, public health, education, police protection, etc., be assessed according to the ability of the resident to pay.
- (d)—Prevent an owner by the imposition of an unearned increment tax, from making an undue profit out of the enhanced value of his land created by the presence and expenditure of the people.

Adam Smith in his book on the Wealth of Nations lays down the principles:

"Private revenue of individuals arises from three different sources: Rent, Profit and Wages."

"The subjects of every state ought to contribute towards the support of the government as nearly as possible in proportion to their respective abilities, that is, in proportion to the revenue which they respectively enjoy under the protection of the state."

"Every tax, it must be observed once for all, which falls finally upon one only of the three sorts of revenue above mentioned, is necessarily unequal in so far as it does not affect the other two."

"The tax which each individual is bound to pay ought to be certain and not arbitrary."

"Every tax ought to be levied at the time or in the manner in which it is most likely to be convenient for the contributor to pay it."

"Every tax ought to be so contrived as both to take out and to keep out of the pockets of the people as little as possible over and above what it brings into the public treasury of the state."

Grice, the English economist in his "State and Local Taxation in Europe," sets out the general principles of taxation adopted on that Continent as follows:

"Local revenues must be raised first from prices and fees for services of the commune that have a direct benefit; second that there shall be taxation on certain forms of wealth that gain by the expenditure of the local revenue and then taxes on general wealth in accordance with ability to pay for the general good."

"When taxes are resorted to the rule given is: That taxes on land and building and trade are on principle of benefits received and on income as the measure of general ability. The law is that all kinds of expense incurred for special benefit shall be met by special payment and in proportion to benefit received and all other expenses by ability to pay. The ability to pay or income tax should cover such expenses as public safety and public health, primary education and poor relief and general administration expenses and the local management of such national service. It is claimed that irrigation, drainage, making and repair of roads, constructed mainly for agricultural purposes, or for the convenience and profit of industrial and manufacturing concerns should be met by benefit received and cases of mixed expenditure where special interest and general welfare meet should be met by taxes on real estate trade and income combined. This would include public roads, waterworks, fire brigades and street lighting."

The above are sound economic principles of taxation which have been tried out on the Continent of Europe and have proven just, fair, and equitable and should be the basis for a uniform system of local assessment and taxation throughout the Dominion of Canada.

CONVENTIONS GALORE.

Well may Winnipeg be termed the convention city. During June this gateway of the west had convention after convention. Following the convention of the Dominion Civic Improvement League, came that of the Canadian Manufacturers' Association. Next came that of the Retail Merchants' Association, then the convention of the National Council of Women, the Methodists convention and then the Conservative convention. Interwoven with these have been numerous conferences, with the result that the city has been continually full of visitors from all parts of the Dominion.

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SOME RECENT MUNICIPAL AWARDS.

WINDSOR, ONT.

A block of \$52,995 20-year 5½ per cent. and \$134,686 10-year 5 per cent. local improvements and parks and \$70,000 40-year 5½ per cent. hydro-electric bonds have been awarded to A. E. Ames and Company, Toronto, at 94.78.

LISTOWEL, ONT.

The town of Listowel, Ont., placed with W. A. Mackenzie & Co. on May 24, its two issues of \$20,000, 5½ per cent., 30-instalment school debentures and \$15,000, 5 per cent., 15-instalment loan debentures, the sale price being 94.485.

MATHESON, ONT.

The town of Matheson's (Ont.) issue of \$5,000, 6 per cent., 20-instalment fire loss bonds, guaranteed by the Province of Ontario, was awarded to R. C. Matthews & Co.

BRUCE COUNTY, ONT.

Bruce County's (Ont.) issue of \$100,000, 5½ per cent., 20-instalment debentures, put out for patriotic purposes, it was awarded to W. A. Mackenzie & Co. at 98.77, which is a small discount on a 5½ per cent rate.

ORANGEVILLE, ONT.

The town of Orangeville's (Ont.) issue of \$33,000, 5 per cent., 20-instalment Hydro-electric debentures, was awarded recently to Brent, Noxon & Co., at 94.03, (which is about a 5.73 per cent. basis.

PEEL COUNTY, ONT.

The Dominion Securities Corporation, Toronto, has purchased \$50,000 10-year 5½ per cent. patriotic fund bonds at 98.83.

ST. HYACINTHE, QUE.

A block of \$125,000 5½ per cent., 1 to 12 years serial bonds has been sold to Credit Canadien Incorpore, Montreal.

SASKATCHEWAN.

The following is a list of debentures reported sold from May 28th to June 1st, 1917:

School Districts.—Forest Hall, \$1,675. Goldman & Company, Regina; Stornoway, \$2,000. Great West Life Assurance Company, Winnipeg.

Rural Telephone Companies.—Herschel, \$26,100. H. O'Hara & Company, Regina; Prelate Eastern, \$3,700. W. L. McKinnon & Company, Regina; Rosetown Northern, \$4,200. Wood Gundy & Company, Saskatoon; Heavylands, \$300. W. L. McKinnon & Company, Regina; Daloo North, \$4,700. W. L. McKinnon & Company, Regina; Battrum, \$3,400. Nay & James, Regina; Aldenburg, \$17,000. W. L. McKinnon & Company, Regina; North Hazenmore, \$15,000. H. O'Hara & Company, Regina; Rosemound, \$8,600. Regina Public School Sinking Funds.

ASSESSMENT AND DEBENTURE DEBT OF BRITISH COLUMBIA.

The report of the provincial inspector of municipalities of British Columbia, shows that in the calendar year 1916 the total assessment of cities in our western province amounted to \$448,719,605, while that of municipal districts amounted to \$204,785,285, making a total for the province of \$653,504,890. The debenture debt for the same period amounted to \$73,676,039 for cities and \$21,623,065 for the municipal districts a total of \$95,299,104.

HOLLAND ADOPTS PROPORTIONAL REPRESENTATION.

Holland has adopted proportional representation as the method of electing representatives to its second chamber. The message was passed unanimously. P. R. has similarly been approved of unanimously by the British parliament for Ireland. Belgium, Sweden, Finland, Denmark are other European countries where P. R. has been adopted. It is promised by the president and the prime minister of France for the chamber of deputies after the war. There is also every possibility of this important electoral reform coming in Great Britain. The Proportional Representation Society of Canada has a big educational work ahead of it; but signs are not wanting that P. R. is coming in this Dominion, too.—Exchange.

UTILITIES—STATEMENT FOR 1916.

Statement showing the earnings of the utilities of the City of Edmonton for the year ending December 31st, 1916:

	Surplus on operation & maintenance.	Surplus over all charges, includ- ing depreciation.
Electric Light & Power..	\$196,255.16	\$ 64,788.82
Waterworks	167,965.95	9,570.84
Telephone	167,965.95	9,570.84
Power House (up to June 30th, 1916)	119,468.34	39,430.71
Street Railway.. . . .	132,755.88	*119,597.66
	\$789,666.23	\$138,200.41
		*119,597.66

Surplus over all charges on all utilities \$ 18,602.75
*Deficit.

The above figures speak for themselves. It will be noted that, taking the utilities as one corporation they show a surplus of \$789,666.23 over and above operation and maintenance expenses, and surplus of \$18,602.75 over all charges.

In this connection it may be pointed out that a private corporation does not lay aside what is known under municipal ownership as a sinking fund, to retire the debentures at the end of a certain number of years. It would be sufficient for a private corporation to pay to its shareholders a moderate rate of interest on their shares and lay aside a certain amount for future contingencies, but utilities operated by a municipal corporation are not only required to pay all operating, maintenance and depreciation charges and interest, but are also compelled to put aside a large sum of money each year into the sinking fund, for the redemption of the capital moneys invested, which is no doubt the safe thing to do, but when comparing municipal ownership with private ownership, this fact would be borne in mind.

The Street Railway has a surplus of \$132,755.88 over operation and maintenance expenses, and is earning 4 1-3 per cent on the capital invested, and showed a betterment of \$16,161.05 over the year 1915, which is considered satisfactory.

NO PERMANENCE IN WAR PROSPERITY.

"We should bear in mind that there is no permanence in war prosperity; that it is war business which has so accelerated the wheels of industry; and the termination of this must react on industrial activities with far-reaching results. Factories employed exclusively in this connection will close down. Kindred industries stimulated by high prices will suffer by the establishment of more ordinary conditions. Exports will decline as Europe imports less, and commodity prices will recede. Labor will become a glut on the market, aggravated by the return of soldiers in large numbers. All this appears certain to follow the establishment of peace, and the longer the war endures the more drastic will be the depression, because of the greater economic exhaustion of Europe and the effect upon her buying power. We have already seen the stock markets convulsed by a most improbable suggestion of peace."

"However, after the first shock of readjustment, we may expect a great demand for our farm products, building material, farming implements, etc., etc., in the rehabilitation of Europe. Pending this demand and in preparation for the depression in business that must occur, the prudent man will put his house in order."—Sir Herbert Holt, President of Royal Bank of Canada.

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WHY GIVE LAND AWAY.

J. E. MARTIN.

There is no need whatever at the present day and age for Canada to be giving away her valuable farm lands. Out of the 116,000,000 acres in the three Prairie Provinces that have passed out of the hands of the Government, less than 20 per cent is under cultivation (this in accordance with your own figures). The homestead lands are gone, the Government got no money consideration for them and very little in the way of cultivation, and a large number of the people who got land for nothing are not even living on it.

It would mean practically nothing to Canada to bring in settlers and let them take up land way back from the railroad, where they could not farm to advantage and then compel the railroads to build into these outlying districts. Your railroads have more than they can do now; they should be given a chance to give service on the lines they have already built. There are districts where part of the 1915 crop is not yet hauled out.

Why continue giving land away? The Dominion Government has been spending hundreds of thousands of dollars yearly (over eight hundred thousand dollars in 1916 alone) to give land away — and in the past three years Canada has lost five hundred thousand people (and the greater number of these native-born Canadians).

By giving lands away you are depreciating credit — a man appreciates a thing exactly in proportion to what it costs him. You give him a piece of land and he immediately figures it is not worth much — he has nothing to work it with, gets no income from it, and as soon as he proves up, he throws it on the market for little or nothing. You are depreciating your own land values, depreciating land credits and consequently the general credit of the country.

Would it not be better to sell these lands, thereby insuring money and credit to the Dominion and the Provinces, appreciating land values and general credit and doing away with the necessity for any penalty taxes and duties which are keeping out people and capital? It is suggested that instead of continuing your policy of giving away farm lands, that they be set aside to be sold. You are selling your school lands and there is no reason why you could not sell all your lands; they need not all be sold now or at any one time — they could be set aside for this purpose and sold at such time as might work out to the best advantage; they could be sold the same as school lands, accepting a small payment down and giving the settler long terms of payment (even up to forty years) at a reasonable rate of interest. The Dominion and the Provinces need money and credit; the war debt will be heavy and it will be necessary to arrange some way to take care of it. These lands could be sold by the Dominion Government and a certain percent of the proceeds turned over to such provinces as do not have their natural resources. Why not sell these lands — you would do away with the harmful talk of "aCanadian War Taxes" in the States; the Dominion and the Provinces would be getting a fair price for the land and an annual income thereafter; you would get a better class of settlers, who, paying a price for their land, would have something at stake and would therefore stick and make good; they would put the land under cultivation and expect to pay for it out of the products raised thereon. True, it is right and proper that ample provision should be made for taking care of the returning soldier, but to continue to give away your valuable lands to outsiders in this day and age is an economic mistake. The whole of your legislation and effort heretofore, has been along the lines of giving your lands away—now that you should sell your lands and bid for a better class of settlers, the need of a change in this policy is very apparent.

In setting aside lands to be sold, provision should, of course be made for such of the returned soldiers, as wish to go on the land — as has been suggested, they could be given 160 acres, with assistance in the way of a loan. And such as cannot or do not care to go on the land, should have an equal consideration on a cash basis — this, of course, is no more than justice. The Government should be in position to handle this for them, so that they will get what they should out of it — not be forced to take land or scrip and sell it for anything they can get, as has heretofore been the case.

THE CANADIAN MUNICIPAL JOURNAL (PUBLISHED MONTHLY) IS A COMPLETE REVIEW OF CIVIC AFFAIRS IN CANADA AT THE PRICE OF ONLY ONE DOLLAR PER YEAR.

FILL THE CARS.

A little more co-operation between the merchants and the railways will do much to relieve the present freight situation. The railways are not trying to shift the responsibility on to the public, but are asking the public's help. Much more tonnage, for instance, could be handled with the existing locomotive power and terminal facilities if cars were loaded to capacity instead of being so often only two-thirds full. In the old days when traffic was lighter, it mattered less to the railways if a shipper did not use all the space he paid for — that was the shipper's loss. But now it is realized that the extravagance of one shipper may cause delay to others owing to the limited amount of locomotive power and terminal facilities. The shortage is not so much in equipment as in train crews, and labor in the yards and roundhouses. Anything which can help to secure quicker clearance and freer movement in the yards helps to speed up the movement of freight. Another drawback to the economical movement of freight is that a great many consignees order not the full carload of freight, but merely the minimum allowed under the classification. It would materially help to solve the problem if in placing orders consignees would order enough to fill a car to capacity instead of the minimum, which very often does not represent more than half a carload.

The question of the capacity of cars is itself the subject of investigation. The standard of loading grain, for instance, has remained the same for many years, but improvement in the engineering of cars has gone on steadily, so that the modern freight car can bear stresses greatly in excess of what was possible twenty years ago. The result is that there is prospect of considerably increasing the load line on quite a large proportion of freight equipment, thus increasing the train capacity without requiring additional train crews. Grain cars rated for 80,000 lbs. are found capable of carrying over 90,000.

It has been figured that if the average load could be increased on Canadian railways in 1917 by five times over that of 1915, this would be equivalent to 54,800 additional cars, requiring no additional locomotives or man-power.

Canadian business men are, therefore, being urged to co-operate with the railways in their endeavor to increase the existing carrying capacity, by using to better advantage the present available rolling stock. Light bulky commodities, of which there are many, should be loaded to the full cubic capacity of cars. Heavier freight should be loaded to the full carrying capacity which is 10 per cent in excess of their stencilled capacity.

The following figures are taken from the Railway Statistics of the Dominion of Canada, issued by the Deputy Minister of the Department of Railways and Canals, and cover all the railways of Canada:

Note.—1907 is the first and 1915 the last year for which figures are available.

	1907.	1915.	Inc'se.
Total tons freight carried 1 mile	11,687,711,830	17,661,309,723	51.1%
Aggregate capacity of freight cars (in tons).	2,908,903	6,731,265	131.4%
Total freight cars	105,540	201,690	91.1%

The car capacity increased 5.8 tons. The contents increased 3.0 tons.

48% of the additional capacity provided was not used. The public is asked to co-operate with the railways in an endeavor to remedy the existing car shortage.

It can be done by utilizing to better advantage the present available rolling stock.

By increasing the average car load to 23.4 tons or 5 tons more than during 1915 would be equivalent to the placing of 54,800 additional cars in service.

Light bulky commodities, of which there are many, should be loaded to the full cubic capacity of cars. Heavier freight should be loaded to the maximum carrying capacity authorized.

"The financial and economic strength developed by Canada since the beginning of the war is little short of marvelous. In the first seventeen months she evolved from a debtor to a creditor country, with a balance of \$206,706,000 in her favor. In the past twelve months the balance has reached \$329,000,000. More remarkable still is the transition from an habitual borrower in London to a lender to the Imperial Government, coincident with the raising of large domestic loans."—E. L. Pease, Managing Director Royal Bank.

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Capital Paid Up.....	12,911,700
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