

The Municipal World

Published Monthly in the Interests of Every Department of our Municipal System—the best in the World.

Vol. 2.

ST. THOMAS, APRIL, 1892.

No. 4.

CONTENTS.

	PAGE.
Reduction of number of members of County Councils.....	38
House of Industry, County of Elgin.....	39
CORRESPONDENCE.	
No Statute Labor.....	40
A County Association.....	40
Country Roads.....	40
ENGINEERING DEPARTMENT.	
Municipal Engineering.....	41
Boards of Health.....	41
County Roads Improvement Clubs.....	41
Best lighted city in the world.....	41
Drainage, I.....	42
Notes.....	42
Roads and Road Making, IV.....	43
Foundations for Street Pavements.....	43
The Lost Art of Roadmaking.....	43
Notes.....	43
LEGAL DEPARTMENT.	
Green vs. the Township of Orford.....	44
O'Byrne vs. Campbell.....	44
Village of Weston vs. Couron.....	44
Stalker vs. Township of Dunwich.....	44
Notes.....	44
Question Drawer.....	45
ADVERTISEMENTS.	
Any person replying to advertisements in this column will please mention THE MUNICIPAL WORLD.	
Ontario Water Meter Co., Toronto, Meters, etc.....	46
Charles H. Keefer, C. E., Toronto.....	46
James A. Bell, C. E., St. Thomas.....	46
B. Baer & Co., Doon, Ont., Highway Bridges—Iron and Wood.....	46
Important Municipal Publications.....	47
W. Powis, F. C. A., Hamilton.....	47
St. Thomas Ironworks Fire Escapes, Iron Bedsteads, etc.....	47
G. A. Stimson, Toronto, Municipal Debentures wanted.....	47
American Road Machine Co., Hamilton, Champion Road Machines.....	48
The Dominion Bridge Co., Montreal, Highway Bridges—Iron and Steel.....	48

SUBSCRIPTION RATES.

Single Copy, 10 cents.

One Copy, 1 year, \$1.00.

TOWNSHIP AND VILLAGE COUNCILS.

Six copies when ordered for each member of the council and the clerk, \$5. Additional copies for officers appointed by the council, 50 cents. each.

TOWN, CITY AND COUNTY COUNCILS.

Ten or more copies for members of one council, 75 cents. each; additional copies for officers appointed by the council, 50 cents, each.

NOTICE

We desire to ensure the regular and prompt delivery of this journal to every subscriber, and request that any cause of complaint in this particular be reported at once to the office of publication. Subscribers who may change their address should also give prompt notice of same, and in doing so should give both old and new address.

CALENDAR FOR APRIL-MAY, 1892.

Legal, Educational, Municipal and Other Appointments.

APRIL.

1. Clerks of counties, cities and towns separated from counties to make return of population to Educational Department—Public Schools Act, Section 129.
Chancery Spring Sittings open at Woodstock.
Last day for Free Library Board to report estimates to the Council—Free Library Act, Section 6.
Last day for petitions for Tavern and Shop Licenses to be presented—License Act, Sections 11 and 31.
Last day for removal of snow fences erected by Councils of townships, cities, towns or villages—Snow Fences Act, Section 3.
4. Assize Courts open at Picton, Perth and Simcoe.
Chancery Spring Sittings open at Lon Ion.
5. " " " Barrie.
Assize Court opens at Berlin.
7. Assize Court opens at Pembroke and Cayuga.
Chancery Spring Sittings open at Hamilton.
Last day for Treasurers of Local Municipalities to furnish County Treasurer with statement of all unpaid taxes and school rates—Assessment Act, Section 145.
8. Last day for Collector to return to Treasurer the names of persons in arrears for water rates in municipalities—Municipal Waterworks Act, Section 21.
11. Chancery Spring Sittings open at Stratford.
Assize Court opens at Brantford and Sandwich.
12. " " " Whitby.
13. " " " L'Original.
15. Good Friday.
18. Chancery Spring Sittings open at Goderich and Cornwall.
Annual meeting Ontario Teachers' Association, Toronto.
Assize Courts open at Lindsay, Ottawa and Sarnia.
19. Assize Court opens at Owen Sound.
20. Last day for non-resident land holders to give notice to clerk of ownership of lands to avoid assessment as lands of non-residents—Assessment Act, Section 3.
Chancery Spring Sittings open at Toronto.
25. Last day for Clerk to make up and deliver to assessors list of persons requiring their names to be entered in the roll—Assessment Act, Section 3.
Assize Courts open at Peterboro and Chatham.
Chancery Spring Sittings open at Brockville and Walkerton.
28. " " " Guelph.
30. Last day for Completion of Roll by Assessor.
Last day for non-residents to complain of assessment to proper Municipal Council—Assessment Act, Section 77.
Last day for License Commissioners to pass regulations, etc.—Liquor License Act, Section 4.

MAY.

1. Last day for Treasurers to furnish Bureau of Industries, on form furnished by Department, statistics regarding finances of their municipalities—Municipal Act, Section 252.
Last day for passing by-laws to alter School Section boundaries—Public Schools Act, Section 81.

The Municipal World.

PUBLISHED MONTHLY.

ONE DOLLAR PER ANNUM IN ADVANCE
SINGLE COPY 10c

SIX COPIES, WHEN ORDERED FOR EACH MEMBER OF THE
COUNCIL AND THE CLERK, \$5.00

Address all communications to

K. W. McKAY,

Manager, box 749, St. Thomas, Ont.

E. A. HUGILL, Travelling Representative.

Communications and advertisements for next issue
must be in on or before the 20th of this month.

ST. THOMAS, APRIL 1, 1892.

Reduction of Number of Members of County Councils.

The reduction of the number of members of county councils is at present engaging the attention of some of our Provincial Legislators. Many plans for this desired reform have been proposed with just as many important objections. The bill introduced to increase the number of voters required for a deputy reeve to 750 does not give equitable representation when villages are compared with township municipalities in which the number of voters does not exceed 750. One objection to the present system is that villages are increasing, and that village and town representatives almost outnumber township representatives in some counties. A comparison as to population, equalized value, or number of voters, shews that this is not an equitable arrangement, and if the qualification for deputy Reeves is fixed as proposed, this inequality of representation will be still greater.

The bill introduced by Mr. Hardy provides for a sweeping reduction in the number of members of county councils. If it is approved of by the ratepayers of the county, to whom, if passed, it will be submitted at the next municipal elections, the councils in counties of not more than 40,000 population, will be composed of 7 members; more than 40,000 and under 60,000, 9 members; all counties over 60,000 population, 11 members.

The mode of election will be as follows:—On or before the 1st day of December the clerk of the county may receive nomination papers for one or more county councillors, signed by fifty or more ratepayers. The nominees must have the same qualifications as municipal councillors. If only the number to which the county is entitled are nominated—for instance, if the county is entitled to nine councillors and only nine are nominated—they will of course be declared elected by acclamation. If more than the requisite number are nominated, and an election is required, the nominations will be sent to the township and other municipal councils, and will be voted on by the Reeves and

deputy Reeves. Each reeve and deputy reeve will have as many votes as the county council will have members. Thus, if eleven councillors are to be elected, each reeve and deputy reeve will have eleven votes, which he may distribute as he pleases, giving all to one candidate, or five to one and six to another, or one to each of the eleven, or making any other division that he desires. Under this plan a township council having a reeve and deputy reeve would, through them, have twenty-two votes for a council of eleven, and so on. The county clerk will receive the votes, add them up and declare elected the eleven persons having the highest number of votes.

The principal objection to this bill is to be found in the manner of election of the members of the council. There is no good reason why the people should not continue to vote for the county council candidates at the municipal elections. To take from them the established right to vote for their representatives in the county council in the manner proposed is to deprive them of that which in the past they have used wisely. The fact of making the councils of the local municipalities a constituency for the election of members of the county council will not prevent these bodies being composed entirely of members resident in a particular section of a county having a majority of votes, leaving more remote districts and smaller municipalities entirely unrepresented. It is not to be supposed that members of township councils, while being the choice of the people, will always elect the representative the majority of the people would have chosen, and while the pernicious ward system is possible in townships (and it has been adopted in a large number) county councillors will be elected, in some instances, by the vote of representatives of wards, not townships, and of a very decided minority. If the ward system is abolished, and it should be, one important objection to the bill would be removed.

Another plan worthy of consideration is to divide each county into districts composed of polling sub-divisions or local municipalities, so that each district will contain about the same number of votes, and to elect district councillors independent of the local councils. In this way the number of members of county councils could be easily controlled, and at the same time give an equitable representation throughout.

The county council should have the regulation of all matters of detail in connection with the division of the county into districts. The nominations for each district may be made in manner proposed in Mr. Hardy's bill, or by extending the provisions of section 97, sub. sec. A. and B., of the municipal act to counties divided into districts. The election should be held at the same time as elections for local councils. The districts should have three

representatives elected for each for a term of three years, to retire in rotation, same as school trustees. This would place the local and county councils in somewhat the same position to each other as county councils and the legislative assembly are now. The benefits that would accrue to counties by having the members of district councils elected for three years can only be estimated by those who are in a position to point out the many important matters that new and inexperienced members overlook. So much can be said in favor of this system that we recommend it to those desirous of promoting a reform as the best and only equitable plan of reducing the number of members of county councils.

The principal advantages of our proposed mode of reduction of the number of members is in the division of the county into districts, to be determined by the county council themselves. That they will be elected for a term of three years will be a decided advantage. If a majority of experienced members were always to be found in the councils, they would be better able to assist and check the work of officials, recommend reforms, and give intelligent decisions on many important questions brought before them.

It has been stated that the business of county councils is to be judged by the amount of the annual controllable expenditure. This is rather misleading. The county councils are instrumental in keeping the uncontrollable expenditure within reasonable limits, and in the majority of instances a large portion of this is for works and other debts contracted by former county councils. Many questions, not of a financial nature, are brought before them for investigation and consideration.

* * *

A mass meeting recently held in South Norwich asked the support of municipal bodies throughout the Province to urge the reduction of township councils from five to three members; that the county councils consist of one member for each municipality; that the Legislature and Federal Parliament be reduced at least one-half and the Senate wiped out entirely.

The bill for reduction of number of members of county councils provides that in case of a tie the county clerk shall prepare a paper for the name of each candidate having such equality of votes, and place them with six blank papers in a ballot box, and then, blindfolded and in the presence of the judge, sheriff, or county court clerk, the clerk shall draw by chance from the ballot box until the required number of names are drawn. A plan similar to this would relieve other municipal clerks from the responsibility of deciding in case of a tie (a duty which places them in an unpleasant position) under the present system.

House of Industry, County of Elgin.

The Institution is situated about two miles west of the city of St. Thomas, in the township of Southwold. The first committee was appointed by the Elgin county council in the year 1866, and after ten years discussion in the council it was decided to purchase land and erect a building, and the house was opened on the 7th day of February, 1876.

The building is constructed of brick, with two stories and a basement. The keeper's apartments, kitchen, store room and reception room occupy the centre part, 31 feet by 40 feet. There are three wings, 26 feet by 31 feet, one occupied by the men and the other by the women, while the third is utilized for hospital wards, and sleeping room on the top floor for men. The basement on both sides of the kitchen is used as a dining and day room for the men and women respectively. The basement of the rear wing provides for two bath rooms, shop and a clothes room. There are three storerooms in the basement adjoining the kitchen, also the keepers' dining room. The second flat provides a workroom and parlor for keeper, a reception room, two storerooms, sleeping apartments and day room for women, and sleeping apartment for men, two hospital wards, one for women and one for men, and the third flat provides four bedrooms for the keeper and one sleeping room for women and two for men.

The women's yard is 117x142 feet and adjoins the building. It contains an isolating cottage 24x16 feet, occupied by those who are unable to be kept with the other inmates. The wash house, 25x12 feet, two rooms, is situated immediately in the rear of and 40 feet from the main building, and adjoins the women's yard. The men's yard is 117 x 104 feet and contains a wood-shed 18 x 50, and an isolating cottage 22 x 44 feet, containing five rooms; this is connected with a yard surrounded by a high fence, and is used for confining idiots and male inmates who are unable to look after themselves should they wander from the institution. The barn 30 x 50 feet is situated 150 feet in the rear of the main building, has a stone basement, stable and root cellar. There is also a tool house 20 x 30 and a brick pig pen 18 x 2.

The total amount expended by the County for House of Industry, etc., is as follows:

Farm, 50 acres, cost.....	\$ 3000 00
House of Industry.....	10217 57
Fire escapes.....	382 26
Cottages.....	1413 32
Barns, wood shed, etc.....	1350 84
Tile drains.....	417 10
Tile drain outlet.....	60 70
Fencing.....	709 95
Orchard.....	85 84
Total.....	\$17637 58

Received from government grant on account of expenditure for land and buildings..... 3,000 00

Leaving amount actually expended by County.....\$14,637 50

The land and buildings were valued by the government inspector at \$12,000.00, on 1st January, 1891, and the grant of \$3,000.00 was received from the government during the year and expended in enlarging the institution. A contract has recently been let, amounting to nearly \$2,500.00, for a complete system of hot water heating for the main building, which has heretofore been heated by stoves. When this is completed it is expected that the balance of the government grant, \$1,000 00, will be received.

The farm is fifty acres, divided into eight fields. The house is situated about forty rods from the road, and is approached by a lane, with a row of evergreens and maples on either side. About 1,100 rods of tile drain have been put in from time to time, at a cost of \$477.80. The fields are all fenced with board fence. There is a fine young orchard, occupying six or seven acres, planted when the institution was first opened, and is just beginning to bear well. The farm is found to be large enough to utilize the labor of all the inmates of the institution, which with the assistance of the keeper, has always been found sufficient to work the farm to the satisfaction of the various committees of the county council who have had the supervision of the management. In the year 1891 the produce raised on the farm was valued at \$1155.00, and in addition to this a large amount of vegetables and fruit was raised and consumed during the year of which no account was kept. All the produce raised is consumed on the premises. The soil is not well adapted to the necessities of a farm for this purpose, the greater part of it being heavy clay. The garden is sandy and the balance formerly swampy is composed of black mould usually found where land has been under water. This and the garden is specially adapted to hoe crops, which the character of the labor available is well able to take care of.

One matter that seems to have been overlooked by the authorities when deciding on the location of this institution, is the water supply. Up to the present time the institution has depended entirely on two surface wells to provide drinking water for the inmates and farm stock. Last summer, being very dry, the supply was exhausted. Additional wells have been put down, and it is thought that this difficulty has been overcome for the future. The supply of soft water is collected from the roof of the main building in three large cisterns. This has been found not to be sufficient, and provision is being made for additional cisterns. The amount of water used, or that should be used in connection with a House of Industry, is very large, and in establishing similar institutions other counties should profit by this experience and if possible locate their building where it will not be necessary to depend on cistern or surface well supply.

A difficulty that up to the present time has not appeared to be a very serious one, is now engaging the attention of the management, that is, to provide for drains to carry sewage from the Institution. The farm being situated in a rather flat part of the country, to provide for a sufficient outlet, will require the expenditure of a large amount of money. It has not been decided how this difficulty will be overcome, but provision for sewage is equally as important as water supply, and is one of the first conditions that should have been required in purchasing a farm for this purpose.

The furnishings of the sleeping rooms for the men and women consist of iron bedsteads with straw mattresses, etc. The kitchen is supplied with a large cook stove and agricultural boiler, 30 gallon capacity. A contract for steel cooking range with hot water connection, and the necessary fitting for two bath rooms, has recently been let. Up to this time the management has been able to get along without proper facilities for bathing the inmates, a matter which causes a great deal of extra work, and renders it almost impossible to keep the building in the condition in which institutions of this kind should be.

The farm stock at the present time consists of a team of horses, weighing about 1,100 each, six cows, and some pigs.

The dietary of the inmates includes as much as possible what is raised on the farm. Contracts are let only for supply of bread and meat; groceries and other articles are purchased as required in the cheapest market, and in large quantities. This is different from the practice adopted in some other institutions, and has always been found to work well. During 1891 the daily average of meat was seven and one-twelfth ounces; of bread the daily average was thirteen and seven-thirtieths ounces per inmate. The total amount expended for the support of the inmates during 1891 was \$4,409.56; the average expenses per year for each person was \$60.49. The average expenses per year for each person, with interest on total amount expended by county added, was \$72.80. The average cost per week per inmate during the last ten years is \$1.10 per week. In the above the expenses of salaries, maintenance, medical attendance, clothing and repairs connected with the house and farm are included. Permanent improvements are charged to capital account, and the rate of \$72.80 shows the actual cost per year to the county for every expenditure in connection with the institution. The number of inmates varies from 60 to 85. The building will, at the present time, accommodate 125 inmates. It has been found that there is generally a much larger number of male inmates than female, and that the same amount of room for both would not be sufficient. There is at the present time accommodation for one-half more men than women.

The control of the institution is entirely in the hands of the county council, who appoint a committee of three of their number to supervise the management. This committee meets quarterly, to pass accounts, and whenever the business of the institution demands. There is also an inspector who acts in the absence of the committee, and sees that their instructions and the general regulations passed by the county council are observed in the management of the institution.

The keeper and matron have the immediate charge of the inmates and the institution generally; its success depends entirely on their careful management. If they practice economy the institution cannot but shew the results in annual returns. The salary of the inspector is \$150.00 per annum; the keeper and matron receive \$550.00, and one assistant for the matron \$12.00 per month; the physician receives \$200.00 per annum, and is required to visit the institution once a week and as much oftener as the circumstances may require.

CORRESPONDENCE.

This paper is not responsible for opinions expressed by correspondents.

No Statute Labor.

To the Editor of THE MUNICIPAL WORLD:

SIR,—Two years ago the council of the Township of Malden passed a by-law requiring the payment of fifty cents per day in commutation of statute labor. This placed the whole matter under the control of the council, and the people now get proper value for their money.

This year an effort was made to repeal the by-law, but a majority of the council could not see their way clear to support the measure, preferring to leave it to be discussed at the next nomination meeting.

JAMES HONER,

Township Clerk.

County Associations.

To the Editor of THE MUNICIPAL WORLD:

SIR,—In the March number of THE WORLD you refer to the formation of Municipal Clerks' Association in each county, and wish to have the opinion of clerks thereon. In response to your request, I may say that in this county of Wentworth we have had an association of that kind for several years. We have no regular constitution; our officers are a chairman and secretary; we have no stated times to meet, but do so as circumstances may require. When any change is made in the municipal law a meeting is called to discuss it and adopt some general mode of procedure to carry it out. At our meeting in September last we had the county clerk with us and enjoyed his company much. Considerable time was spent in revising the form of the assessment rolls; they had grown so large and heavy that clerks and assessors complained. The size of the

book for 1891, when closed, was 19 inches square, and weighed about ten pounds. We did away with some columns and crowded the rest into smaller space, reducing the book three inches in width. The rolls for 1892 are made of lighter paper but of good quality, and weigh only five pounds. We did away with the two columns used to enter particulars re steam boilers, and have the same entered in the back part of the roll. The secretary was instructed to see the local M.P.'s to have the assessment act changed in accordance with our suggestions.

Members of the society are expected to make a memo. of matters concerning which they wish information, and also of any improvement they can suggest and have the same discussed at our meetings. Each member is expected to do what he can to aid and assist his brother clerks in municipal matters, and to try and learn all he can from them in return.

The meetings so far have been both pleasant and profitable, and I hope may continue to be so.

A WENTWORTH TOWNSHIP CLERK.

The society in Wentworth is just what is needed in every county in the province. If similar societies are in existence in other counties we will be pleased to hear from them.—ED.

Country Roads.

To the Editor of THE MUNICIPAL WORLD:

When this country was first settled a large portion of the roads had to be made through the forest, which caused them to be built very narrow, an evil that continues to the present on a large portion of the roads. Our roads are not what they should be, from the amount of work that has been put on them, caused by the continued change of road overseers, some of them young men who never gave road making any study, and different men having a variety of ideas about road making. Also from the indifference of the farmers, many of them doing as small an amount of work as they could pass with.

The time has come when a better system should be adopted, as the country is getting well drained, and improved road making material is plentiful in most sections of the country.

Many people advocate the abolition of statute labor, and have road commissioners to superintend the roads, the work to be performed by contract, the money to be raised by taxes.

There are some objections to this:

Having more paid officials.

The main travelled roads would receive the largest amount of work and the by-roads would be neglected, which would cause a large amount of grumbling from the people living on the roads, while with the present system of statute labor, if the farmers have not good roads by their own farms, they have only themselves to blame for it.

The public roads lack very much in symmetry and uniformity.

There should be printed established rules furnished to all road overseers, so they may know their duty. I would recommend the following instructions as adopted by the Yarmouth council:

1st. Do not allow any person to move fence on the road allowance unless they have the permission of the council.

2nd. When making or repairing roads make the ditches not over six feet from the fence.

3rd. On all roads aim to make no ditch wide in the bottom for a winter track; if possible have the south ditch on a road running east and west, and the east ditch on a road running north and south.

4th. When grading roads avoid making the grade too steep; about one in eight. Many deep cuts can be avoided by putting in tile to carry off the water.

5th. Make roadbed about twenty feet in width, so that a load can be driven over.

6th. Make all culverts full width of turnpike, and level with roadbed.

7th. On all hills make water tables in October to keep from washing with winter rains.

8th. All grading and fresh gravel level and compact with harrows and weighted roller.

9th. Put up railings on dangerous embankments and hills.

10th. Have all foul weeds cut by the 5th of July.

11th. Avoid concentrating water out of the natural course.

12th. In drawing gravel throw out or break all large stones.

MATERIAL FOR ROADS.

The only available material for country roads are the natural earth, gravel and macadam or broken stone; the latter is too expensive where gravel can be secured.

There are three kinds of gravel—lake, river and pit gravel.

Lake gravel makes the smoothest road but will not stand heavy teaming. River gravel is the best, as it is purer from sand, earth and large stones. Pit gravel is inferior to river gravel, as it is generally mixed with some foreign substance, as earth, sand or large stones.

It would be a great benefit to roads in the spring, when the frost is out, to run over them with a machine, like the American road machine, to level down the combs and fill in the ruts.

To be continued.

THOS. ROBERTS, Sparta.

A correspondent writing to the *Mail* on the payment of officers by salary instead of fees says in reference to registrars:—"The municipalities audit most of their accounts annually. Why ever they don't include the registrars' books and accounts in the audit, seeing that they are so largely interested in the fees, is a mystery to me. From the appearance of many of the returns by the registrars, it should pay them to do so."

ENGINEERING DEPARTMENT.

A. W. CAMPBELL,
P.L.S., C.E., A.M.C.S., C.E.,
EDITOR

Municipal Engineering.

In treating a subject of such vast scope as municipal engineering, there are so many different branches of work called in to requisition, owing to local requirements in different municipalities. That it is almost impossible to lay down a set of rules applicable to all.

The first and most important point in every undertaking is to know what to do. When this is decided upon it should be carried out in the best and most economical manner. To do this good engineering is absolutely necessary, and becomes a source of economy instead of an expense to municipal government. What man would go to work to build a house without taking the advice at least of some practical man in that class of work, or because a man is a good carpenter what merchant would employ him to purchase a bill of goods? The same argument applies to a municipality, whether it be city, town, or township. The municipal councils are generally composed of able men who have been successful in their own especial line of business, but because they have thus been successful it does not follow that they would be equally so in any other line, especially if they have to deal with something entirely foreign to their business experience. The council should designate the amount of money they desire to expend for improvement purposes, but in the manner of expending such money a competent engineer should be consulted. He can save a municipality many times his salary each year by bringing to bear his knowledge of what will be necessary to arrive at certain results and obtain the objects required for the least possible outlay, besides directing the work to be performed in a systematic and satisfactory manner. It is therefore real economy to employ a man thoroughly qualified, and to pay him a liberal salary. In cities and large towns he should be required to give his whole time to the municipality, and in large cities he should have assistance necessary to give him sufficient time to properly consider every question which comes before him. In his office should be kept records of all his official acts, original plans, specifications, notes, maps and profiles; they should be arranged and indexed for reference without a protracted search. If the work of a municipality does not require the entire services of such a man, they should at least have a consulting engineer to whom they could refer in cases involving any considerable expenditure of money, who would be able to suggest the best and most economical methods of procedure. Such a

man, by his careful drawing up of plans and specifications for only one piece of work, will often save a municipality many times his fee and a great deal of trouble, for if plans and specification are loosely and ignorantly drawn up many things absolutely necessary may be omitted and not discerned till after the contract is let, and then the contractor will have a claim for extras that might have been entirely avoided. Every one knows the exorbitant demands made in bills for extra work not included in the plans and specifications. A large amount of money may be expended on work without obtaining the desired object, where half the sum expended in work properly directed might have accomplished the purpose.

Much has been heard of the danger attendant upon the system of stringing electric wires overhead, and reiterated demands have been made that all wires be placed underground. It is questionable, however, whether the carrying out of this demand would not tend to enhance rather than diminish the danger. An example of the peril which is likely to attend the underground system occurred in Toronto a few days ago. Illuminating gas from the street mains found its way in sufficient quantity into one of the man-holes in the public streets through which passes a telephone cable, to require but the faintest induction spark from the covering of the cable, or a spark of atmospheric electricity to cause an explosion. The spark appears to have been forthcoming, for suddenly the heavy iron man-hole covering which had been firmly bolted down, was torn from its seat and carried into the air. A horse which was being driven past the spot at the moment fell into the man-hole, and before it could be extricated there occurred a second explosion, burning the animal severely. The driver of the horse and another person who happened to be near the man-hole when the explosion occurred escaped with slight injuries. It is a well-known fact that about 10 per cent. of the total supply of illuminating gas which goes into the street mains leaks out at the joints and saturates the earth. This gas must find its way into the man-holes, and when the right admixture of gas and air is reached, the material is ready for an explosion. There is always danger with underground wires that the inductive current set up in the lead covering of the cable may become sufficiently strong to generate a spark which would be the means of igniting the combustible materials. Had the explosion to which we have referred taken place in the man-hole at the intersection of King and Yonge streets, where the traffic is always great during business hours, there would in all probability have been many persons killed. The daily press which has so often held up to view the horrors of the overhead system, should now have something to say on the other side of the question.—*Canadian Architect.*

Boards of Health.

Boards of Health should order all householders to thoroughly cleanse their premises, and see that the order is observed.

* * *

The sanitary inspector should discharge the multifarious duties appertaining to his office in a trustworthy manner. He should examine slaughter-houses, dairies, byres, house drains, etc. He should be particular in ordering foul privy pits to be emptied and disinfected, and in seeing that garbage from streets, yards, lanes and thoroughfares is removed or burned. Those that fail to comply with the inspector's orders should be summarily dealt with.

* * *

Great care should be exercised by health officers and others in observing that no unsound articles of food are exposed for sale. Beef, mutton, pork and fish, are often exposed for sale in an impoverished or unsound condition.

County Roads Improvement Clubs.

There ought to be started in every county an association for the improvement of county roads out of county funds. This improvement should not consist in any foolish attempt to adopt old methods, but should follow the experience of the world, and build new roads on the approved plan—permanent even if costly—as rapidly as tax collections will permit. The expenditure required is large, but the return is greater, and it is immediate.

The Best Lighted Cities in the World.

Paris, according to Mr. Alfred Shaw, is now the best lighted city in the world, and a model for all cities that are bent on introducing electric lighting on a grand scale. It is the great installation under the vast central markets of Paris that has enabled the municipality to command the situation, and to carry out a scheme which has been settled not hastily, but after a patient, scientific and systematic study. The second best lighted city is Berlin, which is now fully provided with the electric light. Throughout all its streets and suburbs, lights of twenty-candle power are placed 125 ft. apart, and at crossings and places of public importance and resorts, lights of fifty-candle power are used. The famous and fashionable street known as "Unter den Linden" is said to be the best illuminated street in the world; it has three lines of electric arc lamps, which are separated by two rows of lime trees.

Drainage.

Although we usually regard drainage as a means of rendering land sufficiently dry for cultivation, that is by no means a comprehensive view of the objects of the operation. Rain is the principal source of moisture, and a surplus of moisture is the evil against which we contend in draining. But rain is also a principal source of fertility, not only because it affords the necessary moisture to dissolve the elements of fertility already in the soil, but also because it contains in itself, or brings with it from the atmosphere, valuable fertilizing substances. The surprising effects of a fallow, even when unaided by any manure, has received some explanation by the discovery that rain water contains within itself, and conveys into the soil, fertilizing substances of the utmost importance, equivalent, in a fall of rain of twenty four inches per annum, to a quantity of ammonia contained in two cwt. of Peruvian guano with 150 lbs. of nitrogenous matter besides all suited to the nutrition of crops. Rain water contains in solution, air carbonic acid, and ammonia. The two first ingredients are among the most powerful disintegrators of a soil. The oxygen of the air and the carbonic acid being both in a highly condensed form, by being dissolved, possess very powerful affinities for the ingredients of the soil. The oxygen attacks and oxygizes the iron; the carbonic acid seizing the lime and potash and other alkaline ingredients of the soil, produces a further disintegration and renders available the locked-up ingredients of this magazine of nutriment. Before these can be used by plants they must be rendered soluble; and this is only effected by the free and renewed access of rain and air. The ready passage of both of these therefore enables the soil to yield up its concealed nutriment. We see, then, that the rain brings us not only water, but food for our plants, and that while we would remove by proper drainage the surplus moisture, we should take care to first conduct it through the soil far enough to fulfill its mission of fertility. We cannot suppose that all rain water brings to our fields precisely the same proportion of the elements of fertility, because the foreign properties with which it is charged must continually vary with the condition of the atmosphere through which it falls, whether it be the thick and marky cloud which overhangs the coal burning city, or the transparent ether of the mountain tops. The quantity of rain that falls varies much, not only with the varying seasons of the year, and with the different seasons of different years, but with the distance from the equator, the diversity of mountain and river, and lake and wood, and especially with locality as to the ocean. Yet the average results of nature's operations through a series of years are startlingly constant and uniform, and we may deduct from tables of rain falls, as from bills of mortality and tables of longevity,

conclusions almost as reliable as from mathematical premises.

All vegetables, in the various stages of growth, require warmth, air and moisture, to support life and health. Below the surface of the ground there is a body of stagnant water, sometimes at a great depth, but in retentive soils usually within a foot or two of the surface. This stagnant water not only excludes the air, but renders the soil much colder, and being in itself of no benefit, without warmth and air, its removal to a greater depth is very desirable. A knowledge of the depth to which this water table should be removed, and of the means of removing it constitutes the science of draining, and in its discussion a knowledge of the rain fall, humidity of the atmosphere, and amount of evaporation, is very important. The percentage of water of drainage from land underdrained with tile would be greater than that which is collected in reservoirs from ordinary gathering ground. If a soil were perfectly saturated with water, that is, held as much water in suspension as possible to hold without draining off, and drains were laid at a proper depth from the surface and in sufficient number to take off all surplus water, then the entire rainfall upon the surface would be water of drainage—presuming, of course, the land to be level and the air at saturation, so as to prevent evaporation. The water coming upon the surface would force out an equal quantity of water at the bottom through the drains—the time occupied by the process varying according to the porous or retentive nature of the soil; but in ordinary circumstances it would be perhaps about forty-eight hours. Drains usually run much longer than this after a heavy rain, and in fact, many run constantly through the year, but they are supplied from lands at a higher level either, near by or at a distance. If on the other hand, the soil were perfectly dry, holding no water in suspension, then there would be no water of drainage until the soil had become saturated. Evaporation is constantly carrying off great quantities of water during the warm months, so that underdrained soil is seldom in the condition of saturation, and on account of the supply by capillary attraction and by dew, is never thoroughly dry; but the same soil will at different times be at various points between saturation and dryness, and the water of drainage will be consequently a greater or less percentage of the rainfall. From experiments made to ascertain what quantity of water dry soil will hold in suspension, the following results were obtained: One cubic foot of soil of average porosity will hold .4825 cubic feet of water, which is a little more than three-and-one-half gallons. A dry soil four feet deep will hold a body of water equal to a rainfall of 23.17 inches vertical depth, which is more than would fall in six months on an average. The quantity which is not drained away is used for vegetation or evaporated, and the fact

that the water of drainage is so much greater in proportion to the rainfall in England than in this country is owing to the humidity of the climate, in which evaporation is only about one-half what it is in this country. Evaporation takes place at any point of temperature from 32° or lower to 212° at which water boils. It is increased by heat, but is not caused solely by it—for a north-west wind evaporates water and dries the earth more rapidly than the heat of a summer's day; and when under ordinary circumstances evaporation from a water surface is slow, it becomes quite active when brought in close proximity to sulphuric acid, or other vapor-absorbing bodies. The cold which follows evaporation is caused by a loss of the heat necessary to cause that phenomena. The water passes off with a vapor, as a solution, in the atmosphere; and as it leaves the body evaporated, it is evident that that body cannot be cooled by the process below the dew-point at which evaporation ceases. The amount of heat used in evaporating stagnant water from underdrained land might otherwise go towards warming the land and the roots of crops, this is a very serious loss.

New Electric Street Sign.

A new street sign has been patented by a New Yorker. It is to be placed around electric light poles, about 10 ft. from the ground, and has four faces of colored glass with translucent letters. At night it is illuminated by an enameled reflector placed behind each sign and receiving light from the electric light above it.

* * *

The council of the city of Victoria, B.C., have decided to commence the use of bituminous rock pavement. This material, which will be imported from Southern California, is described as being a good deal like asphalt, with the exception of being elastic, giving a good foothold to horses. The success of this material will be watched with interest by other cities.

Ontario Drainage Commission.

The Drainage Commission for Ontario complain of the trouble experienced in getting witnesses to attend and give evidence as to the defects in the working of the acts relating to drainage without ending special invitations to attend. Now this is not as it should be. The Commission are engaged in a most important work, affecting seriously the future of very many districts, if not the entire province, and they cannot be expected to know who are able to give important evidence in any locality, but no person who feels himself competent to assist in this work should be unwilling to render any assistance in his power. We sincerely trust the efforts of the Government will be ably seconded by all parties possessing knowledge in this particular line.

Roads and Road Making.

IV.

Foundations for Street Pavements.

The want of a proper foundation is one of the most frequent causes of the failure of street pavements. A foundation should be composed of a sufficient thickness of some incompressible material which will effectually cut off all connection between the subsoil and the bottom of the paving material, and should rest upon a well-drained bottom, for which in cities a perfect system of sewerage is indispensable. The principal foundations are those of sand, broken stone, pebbles, and concrete.

SAND FOUNDATIONS.—This material, when it fills an excavation, possesses the valuable properties of incompressibility, and of assuming a new position of equilibrium and stability when any portion of it is disturbed. To secure these qualities in their highest degree, the sand should be very carefully freed from the least admixture of earth or clay, and the largest grains should not exceed one sixth of an inch in diameter, nor the smallest less than one-twenty-fifth of an inch. The bed of the road should be excavated to the desired width and depth, and be shaped with a slope each way from the centre, corresponding with that which is to be given to the pavement. This earth bottom should be well rammed, and a layer of sand four inches thick be put on, be thoroughly wetted, and be beaten with a rammer weighing about forty pounds. Two layers are to be in like manner added, and the compression will reduce the thickness of twelve inches to eight. The number of layers should be regulated by the character of the subsoil. Two inches of loose sand are to be then added to fill the joints of the stones, which may be now laid. The pressure of loads upon these stones is spread by the incompressible sand over a large surface of the earth beneath.

BROKEN STONE FOUNDATIONS.—A bed is to be excavated deep enough to allow twelve inches of broken stone to be placed under the pavement. A layer of four inches is first to be put on, and the street then opened for carriages to pass through it. When it has become firm and consolidated, another layer of four inches is added and worked in as before; and finally a third layer, making in fact a complete macadam road. Upon it the dressed paving stones are set. This method, though efficient, is very inconvenient, from the length of time which it occupies, and the difficulty of draught while it is in progress.

PEBBLE FOUNDATIONS.—This foundation is constructed of rounded water-worn pebbles or cobble stones. The best are of an egg-like shape, from five to ten inches deep, and of a diameter equal to half their depth. They should be set with their greatest length upright, and

their broadest end uppermost. They should be laid on a bed of sand or gravel from one to two feet deep. They should be rammed over three times, and a layer of fine gravel spread over to fill the interstices; all the stones should be heavy and hard, and those of similar size should be placed together. This has been adopted as the foundation of the dressed block pavement for streets on which there is a great deal of travel.

CONCRETE FOUNDATIONS.—Concrete is a mortar of finely pulverized quicklime, sand, and gravel, which are mixed dry, and to which water is added to bring the mass to the proper consistence. It must be used immediately. Beton (to which the name of concrete is often improperly given) is a mixture of hydraulic mortar with gravel or broken stone; the mortar being first prepared, fine gravel incorporated with it, the layer of broken stones subsequently added to a layer of it five or six inches thick, and the whole mass rapidly brought by the hoe and shovel to a homogeneous state. Three parts of sand, one of hydraulic lime, and three of broken stone is a good proportion. A mixture of one part of Roman cement, one of sand and eight of stone, has also been employed very successfully. Beton is much superior to concrete for moist localities. The excavation should be made fourteen inches lower than the bottom of the proposed pavement, and filled with that depth of the concrete or beton, which sets very rapidly, and becomes a hard, solid mass, upon which a pavement may then be laid. This is, I think, the most efficient of all the foundations, but also the most costly at first, though this would be balanced by its performance and saving of repairs. It admits of access to subterraneous pipes with less injury to the neighboring pavement than any other, for the concrete may be broken through at any point without unsettling the foundation for a considerable distance around it, as is the case with foundations of sand or broken stone; and when the concrete is replaced the pavement can be at once reset at its proper level without the uncertain allowance for settling which is necessary in other cases. The blocks set on the concrete should be laid in mortar.

The Lost Art of Roadmaking.

In Canada intelligent roadmaking in the country is, as a general thing, almost wholly unknown. The ridiculous misapplication of rustic labor and foolishness known as "road working" is the gravest farce an ordinarily intelligent people ever took part in year after year. It is too well known to need description, and the fact that it has long been tolerated suggests a doubt as to whether as a people we are not destitute of humor. The spectacle of all the able-bodied men of the "district" turning out under that master of road-making farce, the overseer of highways, as he is called, and spending a number of

days each year in making the roads almost impassable for the rest of the year, and thus imprisoning themselves in the country during the late autumn and early spring, is one that would have delighted the heart of Cervantes and perhaps furnished a companion volume to the adventures of the knight of La Mancha.

But the farce goes gravely on year after year. If here and there a city begins to agitate the cause of good roads into the country in the interest of both country and city residents, it is opposed with much the same arguments and obstinacy that good roads were opposed in England a century ago. The fact that it has been proved in other countries that good country roads have benefited the country on the whole far more than the cities is a fact country dwellers, as a rule, are ignorant of and apparently cannot understand or appreciate.

Railroads can never supply the place of good wagon roads, and the development of a system of good roads in any county will demonstrate that fact so clearly that the example would soon be followed by others.

New Fire Extinguisher.

A new fire extinguisher is composed of a mixture of water and liquid carbonic acid gas, which, upon being discharged through parts at a high pressure, causes the rapid expansion of the gas, converting the mixture into a spray more or less frozen.

* * *

A new paving material now being introduced in London is composed of granulated cork and bitumen, pressed into blocks, which are laid as brick or wood pavements. A pavement of this material is very elastic and pleasant to the feet and affords an excellent foothold for horses. There is almost an entire absence of noise.

* * *

The civic authorities of Hamilton have made the Bell Telephone Company pay \$1,500 for the privilege of erecting poles on the public streets. The company, through its solicitor, pointed out in protest against this measure the erection of a new building, reduced rates, and a probable additional expenditure for double wires.

Prices of Water in Other Places.

Metred water costs thirty cents per 1,000 gallons in Montreal, thirty cents in Hamilton, three cents in Buffalo, six cents in Detroit, thirteen cents in Rochester and twelve and a half cents in Toronto. In Detroit and Buffalo the water is supplied at a pressure too low to admit of its use for power without re-pumping. In St. Thomas it is supplied to the railways at five cents per 1,000 gallons. The price charged by the London Water Commissioners is fifteen cents per 100 cubic feet.

LEGAL DEPARTMENT.

H. F. JELL, SOLICITOR,
EDITOR.

Legal Decisions.

GREEN VS. THE CORPORATION OF THE TOWNSHIP OF OXFORD.

A contract for the construction of certain drainage works in the defendant township, provided for in a by-law passed by the defendants and founded on the usual petition was entered into under the defendants' corporate seal with the plaintiff. Between certain points the drain was to be tiled and covered. After the plaintiff had performed some of the work between these points, defendants' engineer, who personally superintended the work, discovered that the depths were not properly given, and he directed the drains to be deepened and the tile, as laid, to be taken up and relaid at the increased depths, whereby the plaintiff was required to perform considerable more work than was provided for by the contract.

The Municipal Act authorizes councils, in case of drainage works, to make an assessment upon the property of those benefited, when the means provided are not sufficient, and any damages recovered in proceedings respecting such works are to be charged against the lands benefited.

It was shown that the work done was absolutely necessary, as the drain would have been useless without it. No formal resolution of the council was passed authorizing the doing of this work, nor was there any contract therefor under the corporate seal.

In an action against the defendants to recover the value of said work, it was held that they were liable therefor.

O'BYRNE VS. CAMPBELL.

This was an action by one of the parties interested in an award under the Ditches and Watercourses Act, 1883, for the completion of certain drainage work by neighboring land owners. The township engineer had been required by the defendant in writing, after the time fixed by the award, to inspect the work with the object of having it completed according to the award.

The plaintiff alleged that the defendant neglected to inspect the work or cause it to be completed according to the award, and thereby the provisions of the award were not carried out, and the plaintiff had in consequence been unable to cultivate or use his land, and had his grass and other crops growing thereon greatly injured and destroyed, etc.

It was held that the provisions of section 13 of the said Act as to the inspection by the engineer were imperative, and an action would lie for breach of his duty; but even if the evidence had shown such a breach, the damages claimed were not

the proximate, necessary or natural result thereof. The other provisions of section 13 are merely permissive, and no action would lie for their non-performance. Nor, were it otherwise, could it be held that the damages claimed were the proximate result of such non-performance. The damages claimed by the plaintiff were the proximate, natural and necessary result of the drain not having been completed according to the terms of the award; but those who by the terms of the award ought to have done the work of digging the drain were the persons proximately responsible for the damages, and not the defendant.

THE CORPORATION OF THE VILLAGE OF WESTON VS. COURON, ET AL.

This was an action against the defendant, Couron, who was treasurer of the plaintiff corporation, and the defendant, Mason, his surety as such treasurer. The defendant, Couron, was also clerk of the said plaintiff corporation, and in that capacity was permitted by a resolution of the council to retain the collector's roll for three months, and he was granted a percentage on moneys received by him for taxes.

R. S. O., chapter 180, section 10 (now R. S. O., chapter 193, section 12,) enacts that no assessor or collector shall hold the office of clerk or treasurer.

It was held that the temporary function of collecting the taxes exercised by the defendant, Couron, was not of such a nature as to necessarily terminate his duties as treasurer, and that when the money came to his hands with which he charged himself as treasurer, the responsibility of the surety began, but that the latter should not be charged with any sums which did not appear in the books of the former as treasurer, and which were referable to taxes otherwise received by him.

STALKER VS. TOWNSHIP OF DUNWICH, ET AL.

In this action it was decided that a postmaster is "an officer or person fulfilling a public duty," within the meaning of R. S. O. (1877), chapter 73, section 1, and is entitled to the protection of the statute for anything done by him in the performance of such public duty; but where, professedly acting as a public officer, he endeavors to further his private interest by some act, he disentitles himself to the protection of the statute, and proceedings may be taken against him for such act as if he were a private individual.

It was held that where a pathmaster of a township, in the course of his employment, acted so as to disentitle himself to the protection of the statute, and damage was thereby caused to the plaintiff, the township corporation as well as the pathmaster was liable, and even, if not originally so, the corporation by sanction-

ing what was done, and refusing to amend it after notice, rendered itself liable.

It was also decided that damage to land, caused by an overflow of water, arising from negligently diverting the water from its natural course without providing a sufficient outlet, is not the subject of compensation under the Municipal Act.

We are pleased to note that the prospects are, through the efforts of Mr. John Waters, the Ontario Legislature will, at its present session, redress one of the grievances under which municipal clerks are at present laboring, namely: The absence in the Acts respecting Ditches and Water Courses of any provisions for the payment of fees to clerks for the performance of the extra duties imposed on them by the said Acts. This matter was referred to by a correspondent in the February issue of the "WORLD."

A liberal allowance should be made to municipal clerks for the performance of the duties in question.

In rural municipalities requiring a great deal of drainage, the clerks have hitherto, been compelled to devote a great deal of time and attention to give parties, needing drains, all necessary information, and directions as to the proper proceedings to be taken in such cases. They have also been expected to prepare all requisite notices and papers, without receiving herefor, any or at most very scant, remuneration.

It is to be hoped that the contemplated legislation will provide for, at least, a fair allowance to clerks for the above and other works imposed on them by the said Acts.

* * *

I consider that it is a very useful publication for municipal councillors and clerks. As I have been clerk for thirty-three years, I know that I have had great trouble many a time about municipal law, so I wish you every success in your undertaking. R. A.

By all means let such gravel roads as are made, be substantial. Better five miles of good and durable highway than ten miles of botch work. Whatever is worth doing at all is worth doing well. Different sections are cursed with poorly made roads in which good material has been wasted. Let us by all means avoid the mistakes of others while emulating their success.

Learn from the Railroads.

The railroads are kept in good condition by men who are constantly on the lookout for defects in the road-bed, and this plan can be profitably and advantageously used on turnpike and country roads. To repair a road only once a year does not put it in a proper condition immediately. To have good roads they should be under the daily supervision of those who are employed to keep them in order.

QUESTION DRAWER.

SUBSCRIBERS only are entitled to opinions through the paper on all questions submitted if they pertain to municipal matters. Write each question on a separate paper on one side only.

REEVE—There were notices put up sufficient and also trustees notified to change one part of a lot from one section to another section. Said notices were put up on the 4th inst., and the Council did not meet till the 19th inst. Was that sufficient notice for the Council to act on, or should they put it off till the next meeting of the Council that will be held on the 23rd April?

The notices read at the next meeting of the Municipal Council, we the undersigned, will ask to be set off, and could we have taken action at this first meeting, or was it right to wait till April meeting?

Sub-Section 2 of Section 81, of the Public Schools Act, 1891, provides that every township council shall have power "To alter the boundaries of a school section; or divide an existing section into two or more sections; or to unite portions of an existing section with another section, or with any new section, in case it clearly appears that all persons to be affected by the proposed alteration, division or union, respectively, have been *duly notified, in such manner as the council may deem expedient*, of the proposed proceeding for this purpose, or of any application made to the council to do so."

We think the notice mentioned by our correspondent was sufficient under the above sub-section, if it was given under the direction of the council, and in the manner provided by them, and duly served upon or brought to the notice of all persons to be affected by the proposed alteration.

If the above conditions were observed the council could have taken action in the premises at their first meeting (19th inst.) If the consideration of the application was postponed until the meeting to be held on the 23rd of April next, we think a further notice of the hearing on the last mentioned date should be served on all persons to be affected.

T. U.—I wish to ask a question in regard to the liability of Railroad Companies for paying taxes on right of way before acquiring the deed of land. The Parry Sound Colonization Railroad goes through our township, and they have had possession of the land for construction for considerably more than a year, and they were assessed for it in 1891. The engineer in charge notified me before the Court of Revision that he did not think they should be assessed for property they did not own, but that they should have the deeds for the whole of it by the 1st of January, 1892. Due notice of the Court of Revision was given, which was held on the 25th of June. No one appeared for the Railroad Company and, of course, the assessment stood. I would like to have your opinion on their liability. I may also state that I neglected to notify the engineer, personally, before the Court of Revision, but he does not urge that, but merely states the fact of not having their deeds, but they still refuse to pay.

Assuming that the Railway Company are in the possession, use and occupation of the lands, under agreement to purchase for the purposes of the railway, we consider the company at least the equitable owners of the lands and liable to pay the taxes mentioned.

RATEPAYER, FENELON FALLS.—At a meeting of our village council last summer a resolution was passed ordering the taxes against certain lots to be returned to the county treasurer. Amongst them was an amount of \$14.62 against a lot on which there had been erected, only a year or two before, a brick residence that could not have cost much less than \$3,000.00. The proprietor was residing on it; is the wealthiest man in the place, and had an abundance of goods out of which the taxes could have been made. The reason assigned by the members of the council for so doing was that there was a flaw in the title, and as by returning it to the county treasurer, the property would in due course be sold at the annual tax sale, the owner would have an opportunity of buying it in and thereby perfect his title. Also by the same resolution, an amount of \$4.80 was returned against a vacant lot, the property of the same individual, and the roll finally taken off the collector's hands without the statutory declaration having been made.

Did not the council violate both the letter and the spirit of the law in doing this? Are they not personally liable for the amount, and what is the duty of the present council in the premises, should they not order above amounts to be collected now?

The council acted wholly without authority in passing the resolution mentioned for the reason given, as it is no part of a municipal council's duties to remedy defects in the title to a ratepayer's land—and the treasurer had no right to accept the collector's roll without the declaration required by the statute on the part of the collector. The collector is not liable, as he was instructed by the council not to collect. We do not think the present council can collect the taxes in question by distress, nor can they avail themselves of the remedy given by section 131 of the Assessment Act. In note to said section Mr. Harrison says, "When, there is sufficient distress on the property, and the municipality by delay puts it out of its power to distrain, it seems this section would not give a right of action," or the allowing of the matter to stand until the amount is returned by the County Treasurer to the clerk as arrears of taxes against the land in question, when it should be collected with the percentage added in the same manner as ordinary taxes. See sections 141 to 143 Assessment Act.

P. M.—Is it legal for a municipality to appoint an assessor not living in such municipality, and who lives about two miles away, in the adjoining township?

Section 254 of the Municipal Act prohibits a municipal council from appointing one of its members assessor, and Section 12 of the Assessment Act provides that "no assessor or collector shall hold the office of clerk or treasurer," but we cannot find any statutory provision rendering it illegal for a council to appoint a non-resident assessor, simply because he is a non-resident.

REEVE—1. Should an auditor, nominated by the reeve, be affirmed by by-law of the council afterward?

2. Or would the auditor so nominated be duly qualified to act as auditor without by-law of the council?

3. Is it legal for county councils to make grants that are not provided for by statute? That is to say, grants for graveling roads and repairing roads in general to the various municipalities in the county, not assumed by by-law?

1. In general all officers appointed by a municipal council should be appointed by by-law. Section 258 of the Municipal Act renders it obligatory on every council to appoint two auditors at the first meeting thereof in every year after being duly organized, and gives the head of the council the right to nominate or name one of such auditors. The council is bound to appoint the person nominated by the reeve, and we think the appointment should be by by-law in the same way as the appointment of the person selected by the council.

2. We do not think the auditor would be duly qualified to act unless appointed by by-law as above.

3. A county council cannot legally make a grant not provided for or authorized by statute.

Sub-Section 5 of Section 566, of the Municipal Act, authorizes a county council to pass by-laws "for granting to any town, township or incorporated village in the county aid, by loan or otherwise, towards opening or making any new road or bridge in the town, township or village in cases where the council at large are sufficiently interested in the work to justify such assistance, but not sufficiently interested to justify the council in at once assuming the same as a county work, and also for guaranteeing the debentures of any municipality within the county as the council may deem expedient." In Note K to this Sub-Section Mr. Harrison says in his Manual "the ordinary powers of a county council are, so far as roads and bridges are concerned, to deal only with county roads and bridges. See also Note K to Section 20, and Note B to Section 282, of the Municipal Act, and in Note L to the above Sub-Section, "county councils have no power to make grants in aid of the ordinary roads and bridges of particular local municipalities." As to the jurisdiction of county councils over roads and bridges, see Section 532 of the Municipal Act.

A. R.—A young man, over 21 years of age, resides in this township but does not own any property in the township, and is not assessed in any way therein.

He is, however, owner of a property in a town in this county for which he is assessed and pays taxes in the said town. He claims that having to pay his statute labor tax in the town he is exempt from the performance of labor in the township under section 91 of the Assessment Act.

Some of the members of the municipal council claim that the clause "not otherwise assessed" in the said section means "not otherwise assessed in the township," and that he is therefore liable to perform his labor in the township as a young man.

As this is a matter of public interest you will confer a favor on the many readers of your valuable paper by giving your opinion on the question in the next issue.

We are of the opinion that if the young man has paid taxes in the town, and produces evidence that he has done so, he cannot be compelled to perform his statute labor in the township as a young man.

SAMSON.—If several ratepayers in a school section are in favor of a school house being moved, and the trustees of said section refuse to remove it, can the council compel them to move it, seeing it would be a great advantage to those living three miles from school house? If the council cannot compel them (the trustees) to move said school house, has the Public School Inspector any power to interfere or give any decision on the subject? If so, what would be the best course to take?

Sub. Sec. 11 of Sec. 40 of the Public Schools Act imposes the duty on the trustees to call a special meeting when petitioned to that effect by ten (10) ratepayers of the section for the selection of a new school site in the manner mentioned in said sub-section.

Section 65 of the said act provides that, "In case a majority of the ratepayers present at such special meeting differ as to the suitability of the site selected by the trustees, each party shall then and there choose an arbitrator, and the County Inspector, or, in case of his inability to act, any person appointed by him to act on his behalf, shall be a third arbitrator; and such three arbitrators, or a majority of them present at any lawful meeting, shall have authority to make and publish an award upon the matter or matters submitted to them."

Sec. 66 contains provisions as to the re-consideration of said award.

ALASKA.—When a farmer or mechanic is worth \$10,000 in notes and mortgages over and above his other personal property, should he be assessed for the \$10,000, or the interest thereon, as his income?

That portion of the \$10,000 which is principal invested in mortgages on real estate is not assessable, but the portion in notes and the interest on the principal invested in mortgages are assessable in the same manner as ordinary personal property.

See Assessment Act, section 2, sub-section 10; and section 7, sub-section 16 and 26.

D. J.—Has an owner's son a municipal vote?

There is no municipal voting qualification as an owner's son, unless the "owner" be a farmer and the actual occupant and owner of land in quantity not less than twenty acres. The son might be assessed jointly with the parent, and if the valua-

tion of the land on the assessment roll is sufficient each would be entitled to a municipal vote.

J. B.—Would it be legal for a council in making appropriations for roads to do so by resolution, and when work was completed to pass by-law paying for same?

The custom heretofore was to make the appropriations by by-law and the commissioners would give an order on treasurer for amount when work was done. It would sometimes happen that the work was done for less than was in the by-law, which might result in loss to the municipality if commissioners would be inclined that way.

The appropriations for roads should be made by by-law of the council, and payments up to the sum appropriated directed by resolution.

In cases where the commissioner has been authorized by the council to issue orders for payment, the treasurer honors and pays the orders only to the extent of the amount appropriated.

R. E. W.—1. There are four level railway crossings in an incorporated village; all of the cattle guards have been removed. What remedy has the corporation in this case, or was it according to law for the Railroad Co. to remove the said guards, the four crossings being on public streets?

2. In the event of the council passing a by law to permit milch cows to run at large, would the corporation be liable in case any loss should occur to the Railroad Co. through said cattle in connection with the crossings or otherwise?

(1) Railway Companies are required by statute to construct cattle guards on both sides of a public highway crossing their track, whether the railway be under Provincial or Dominion jurisdiction—and when made they are to be duly maintained. These cattle guards are to be suitable and sufficient to prevent cattle and other animals from getting on the railway—if they are not so made and maintained, the company is liable for all damage which may be done by their trains or engines to cattle, horses or other animals on the railway. We do not think the corporation can compel the company to make or maintain the cattle guards.

2. Generally speaking, cows can run at large unless prohibited from so doing by a by-law passed under the authority of the Municipal Act. The Railway Acts pro-

hibit any horses, sheep, swine or other cattle from being at large upon any highway within half a mile of the intersection of such highway. No liability would attach to the corporation under the circumstances mentioned.

Ontario Water Meter Co., Ltd.

MANUFACTURERS OF

WATER :- METERS

Meter Supports, Dial Extensions, Fixture Locks, Water Cart Registers, Strainers, Coupling Seals & Reservoir Indicators.

Send for Price Lists and Testimonials. Our Meters are in use in over 500 cities and towns in Canada and the United States. A guarantee given with all Meters. All information furnished on application to

A. C. WINTON, Secretary-Treasurer.

OFFICE: Canada Permanent Buildings,
No. 20 Toronto Street, Toronto, Ont.

CHARLES H. KEEFER

MEM. CAN. SOC. C. E.

Office, Manning Arcade, King Street West, Toronto.

Waterworks, Sewerage, Bridges.

Engaged since 1869 in engineering surveys and construction of Railways, Bridges, Canals, Waterworks and Hydraulic Works. Special attention given to Municipal Engineering.

J. A. BELL, C. E.

Mem. Can. Soc. C. E.

Special attention given to the construction of waterworks, sewers and bridges. Plans, specifications and estimates furnished, and constructions superintended. Correspondence solicited.

Office—Court House, St. Thomas.

Paris Waterworks
Tilbury "
Milton "
St. Thomas Sewage
System

International Cantilever
Bridge
Aylmer Waterworks
St. Thomas "

BRIDGE BUILDING!

The attention of Engineers, Contractors, and all Municipal men is called to the merits of the Baer Patent Combination Bridge. This is a combined wood and iron Bridge, so constructed as to allow them to be thoroughly protected from the weather, and at no place throughout the structure is it possible for any water to get into the joints or timber, thus preventing decay and possessing all the qualities of neatness, durability, strength, etc., possessed by iron Bridges, and is much cheaper in construction. These Bridges can be built in spans from 30 to 200 feet and over, if necessary. Over 50 of these Bridges have been built throughout Ontario during the past three years, and in every case the greatest satisfaction has been given. References will be cheerfully given.

Estimates and all other particulars furnished on application to

County Rights For Sale.

B. BAER & CO.,

DOON, ONT.

IMPORTANT BOOKS

For Mayors, Reeves, Councillors and Municipal Officers.

The Canadian Lawyer, 2nd Edition

It contains just what you want to know. It is reliable, being compiled by a Lawyer in active practice. It is practical and contains those points arising most frequently in every-day life. It contains over 225 forms which alone are worth more than the price of the book. Price in cloth, \$1.50, in leather, \$2.00.

Clark's Magistrates' Manual, 2nd Edition

674 pages. \$5, (leather).

Jones' Magistrates' Manual

Cloth, \$2.00; Half-calf, \$2.75.

To Mayors and Reeves who find it necessary to act as a Magistrate in their municipalities, these books will be found very useful and save them the trouble of looking up and interpreting the Statutes in complicated cases.

Harrison's Municipal Manual, 5th Edition

This book should be on the Council table in every municipality in the Province. The notes and explanations in reference to all important sections of the Municipal Acts make it a valuable assistant to Councillors who desire to discharge the business of the municipality in accordance with the true intent and meaning of the various Acts, with which they have to deal. Price \$7.00.

Address all orders to THE MUNICIPAL WORLD,

Box 749, St. Thomas.

W. M. POWIS,

F. C. A.

64 KING ST., EAST, - HAMILTON.

CHARTERED EXPERT,

Public Accountant

MUNICIPAL ACCOUNTS A SPECIALTY.

AUTHOR OF

"Municipal Finances and Accounts,"

WITH

Debenture Tables

SHOWING

YEARLY SINKING FUND

OR YEARLY INSTALMENTS

FOR ANY ISSUE OF DEBENTURES.

PRICE \$5.00

ST. THOMAS IRON WORKS

JOSEPH LEA, Proprietor.

Manufacturers of Fire Escapes, Registry Office Iron Shelving, Door and Window Guards. Iron Stairways, Jail Fittings, Iron Bed Steads, suitable for Houses of Industry, Hospitals, Jails, and other public buildings. Iron Fencing, 100 designs. Estimates on Iron Work for public or private buildings in any part of the Province cheerfully furnished.

St. Thomas, Ontario.

WRITE FOR CATALOGUE

Municipal Debentures Wanted.

I am desirous of purchasing any and all

Debentures of Towns, Villages, Townships
- - and Counties - - .

As they are issued (no matter for what purpose), and will pay the very highest prices for them. MUNICIPAL OFFICERS will kindly bear this in mind and write me, sending particulars and copy of By-laws, &c., at any time they are issuing debentures for sale. I have money to loan on first mortgage at very lowest rates of interest.

GEO. A. STIMSON.

9 Toronto Street, Toronto.

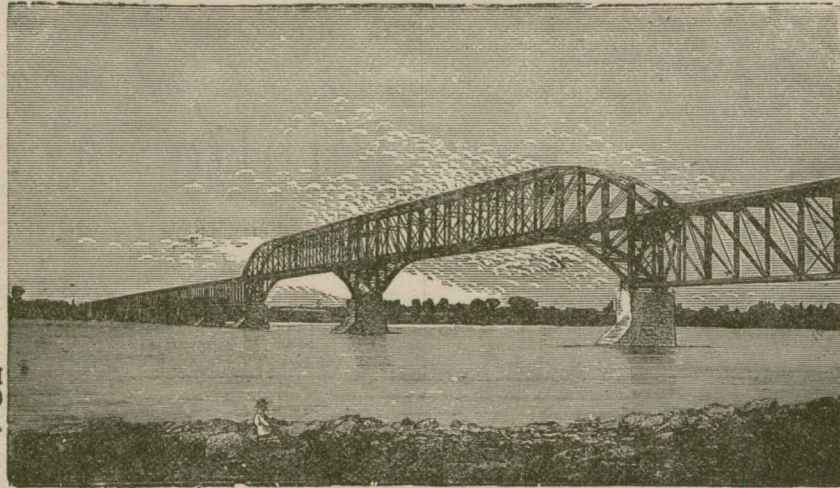
DOMINION BRIDGE CO., L'TD.

(SUCCESSORS TO TORONTO BRIDGE CO.)

MANUFACTURERS OF

Iron and

Steel Bridges



ST. LAWRENCE RIVER BRIDGE, CANADIAN PACIFIC RAILWAY, LACHINE, P. Q.

For Railways and Highways,
Iron Bridges, Turntables
Iron Piers and Trestles,
Bridge Rods
Right and Left Hand Sleeve Nuts
and all kinds of
Structural Iron Work.

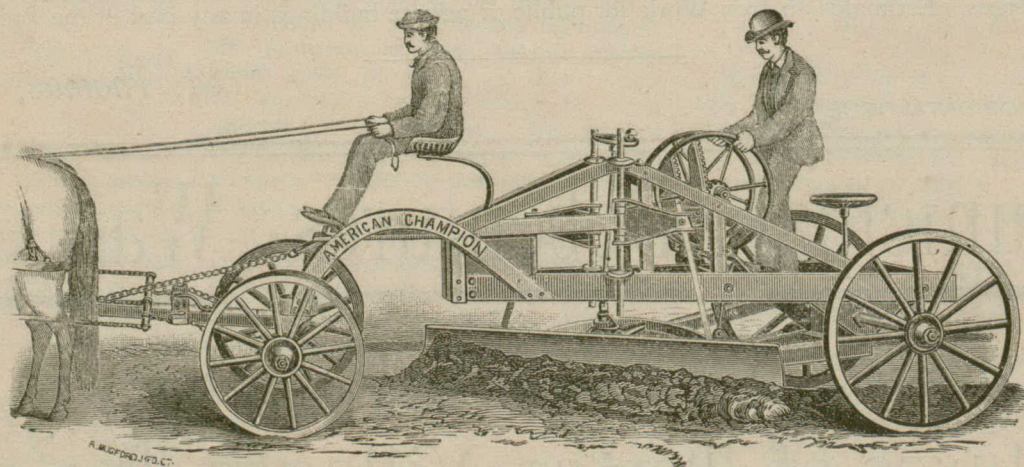
The cost of Metal Bridges, for a term of years, is less than the cost of building repairing and replacing wooden bridges, and believing the only reason so many bridges are still built of wood to be that those who are charged with the duty of contracting for them are not aware how little difference there really is in the first cost of a good Iron or Steel Bridge and a well-built wooden one, of equal strength, we are at all times pleased for an opportunity to quote prices to officers of counties, cities and townships, so that they may intelligently compare the cost of metal and wooden bridges. To enable us to name prices closely we need information on the following points: Number of spans and length of each span. Width of roadway and number and width of footways and sidewalks. Kind of Lumber to be used for floor joists and plank and its value. Name of nearest R. R. Station and distance of bridge site from station. Depth of water at ordinary level and height of floor above water. Also strength and capacity of bridge required, if any particular strength has been determined on; or a general statement as to the nature of travel over the bridge; whether on a country road, a well-ballasted turnpike, or located in a village or city, and subject to heavy loads.

WORKS: LACHINE, P.Q. OFFICE: Room No. 4, Windsor Hotel, MONTREAL, P.Q

Address Inquiries in Response to this Advertisement, to

DOMINION BRIDGE COMPANY, LTD., Montreal, Que.

American Road Machine Co., MANUFACTURERS OF



Champion

Road

Machine

We would call the attention of Town and Township Councils, City Engineers, Contractors and Boards of Works, to the **Champion Road Machine**, which is one of the most useful machines ever put before the public.

No Town or Township can afford to be without one or more of these machines; works in any condition of soil, stone no serious objection. None who see this machine work can fail to see the utility of same. We can furnish the best Solid Steel Scrapers, and the best Portable Rock Crusher in the market. Send for circular, etc.

We are the oldest and largest manufacturers of Road Machines in the United States and Canada; our unexcelled facilities, together with our long and varied experience, enable us to make our machines both cheaply and well, and to fill all orders promptly.

We will in the future, as we have in the past, ship our machines on trial, subject to our warranty, and will guarantee satisfaction in every case. We furnish prices with testimonials, etc., on application.

All correspondence, including orders for machines and repairs, should be addressed to

F. L. WRIGHT, Manager AMERICAN ROAD MACHINE CO.,

No. 124 York Street,
Hamilton, Ont.