

The Municipal World

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

Vol 2

ST. THOMAS, MARCH, 1892.

No. 3.

CONTENTS.

	PAGE.
Treasurers and Their Security.....	26
Ontario Drainage Commission.....	26
Notes.....	26
Assessors Duties (concluded).....	27
Question Drawer.....	28
ENGINEERING DEPARTMENT.	
Municipal Engineering.....	29
Water Supply II.....	29
Highway Bridges II.....	31
Roads and Road Making III.....	31
Drainage of Road Beds.....	31
Country Roads.....	31
Notes.....	31
LEGAL DEPARTMENT.	
Municipal Law.....	32
Legal Decisions.....	32
Lewis vs. Brady.....	32
Vernon vs. Corporation of Smiths Falls <i>Re</i> McCollum and Trustees of School Section 6, Township of Brant.....	32
Correspondence.....	33
ADVERTISEMENTS.	
Any person replying to advertisements in this column will please mention THE MUNICIPAL WORLD.	
Charles H. Keefer, C. E., Toronto.....	34
James A. Bell, C. E., St. Thomas.....	34
B. Baer & Co., Doon, Ont., Highway Bridges Iron and Wood.....	34
Important Municipal Publications.....	35
W. Powis, F.C.A., Hamilton.....	35
St. Thomas Iron Works, Fire Escapes, Iron Bedsteads, etc.....	35
G. A. Stimson, Toronto, Municipal Debentures Wanted.....	35
American Road Machine Co., Hamilton, Champion Road Machines.....	36
The Dominion Bridge Co., Montreal, High- way Bridges, Iron and Steel.....	36

Notice to Advertisers.

Advertisements are solicited from firms doing business with Municipal Corporations.

FACTS TO CONSIDER.

That our subscribers include Mayors, Reeves, Councilors, Municipal Clerks, etc. The representatives of the people.
The rates are as low as the lowest.

FURTHER PARTICULARS AND RATES ON APPLICATION.

Address all Communications to

THE MUNICIPAL WORLD,
BOX 749, ST. THOMAS.

CALENDAR OF MARCH, 1892.

LEGAL, EDUCATIONAL, MUNICIPAL AND OTHER APPOINTMENTS.

MAR.

1. County clerks to transmit Minutes of County Council to the Minister of Education, also report of Auditors. Public Schools Act, Section 114.

Auditors' Reports on the School Accounts of High School Boards and the Boards of cities, towns and villages should be mailed to Education Department.

8. Chancery Spring Sittings open at Brantford.

15. Last day on which hares may be killed; R. S. O. Chap. 221.
Chancery Spring Sittings open at Owen Sound.

17. Chancery Spring Sittings open at Ottawa.

31. Last day for Councils of cities, towns, villages and townships to pass by-laws limiting number of shop licenses therein for ensuing year: Liquor License Act, Section 32.

Chancery Spring Sittings open at Cobourg.

SUBSCRIPTION RATES.

Single copy, 10 cts.
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 cts. each.

TOWN, CITY AND COUNTY COUNCILS.

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

NOTICE

Subscribers who do not receive their paper regularly will oblige, by communicating with the manager. New subscribers will receive the January and February numbers until the supply is exhausted.

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, MARCH 1, 1892.

Treasurers and Their Security.

An important question, that receives very little attention from many municipal councils, is the character of security given by their treasurers. This office in the municipality is just as important as that of the treasurer of any of our financial institutions handling a like amount of money, from whom first-class security is always required. They are paid well for the performance of their duties, and if the institution does not protect itself by guarantee bonds, a reasonable amount is paid in addition for the security furnished. The defalcations of municipal treasurers reported every year, and the failure in the majority of instances to realize the amount from the sureties, shows that many councils pay little or no attention to this important matter. Some radical change in the direction of improved class of security from municipal treasurers is very necessary.

Section 249 of the Municipal Act provides that treasurers shall give such security as the council directs for the faithful performance of their duties, and especially for duly accounting for and paying over all monies which may come into their hands. It is the duty of the council from year to year to enquire into the sufficiency of the security given by the treasurer and report thereon.

The security offered and accepted in the majority of cases, and in all cases in township or village municipalities, is private security. No one but those who can induce a sufficient number of their friends to sign the bond given to the council, can hold the office and fulfil the requirements of the Act in this respect. Every defalcation reported presents a different objection to private security. One is that the bondsmen are generally residents of the municipality, well acquainted with the members of the council, and who probably signed the bond when the treasurer was first appointed many years ago. The new council appointed from year to year neglected, in many instances, to examine and report on the bond, and when they did, no member raised the question of

sufficiency. The conclusion is that the treasurer is doing his business all right, and that the bondsmen are solvent, and that to make an enquiry as to their financial standing, is entirely unnecessary, and from personal reasons sometimes objectionable.

We know that persons signing bonds are as liable to become bankrupt or transfer their property, as other people, and that it is difficult at all times to ascertain the bondsmen's true financial standing. This has been found to have been the case when corporations tried to realize on treasurers bonds.

Section 281 of the Municipal Act provides that the bonds or policies of guarantee or any incorporated or general stock company empowered to grant guarantee bonds or policies for the faithful accounting of public offices and other like purposes, may be accepted instead of, and in addition to, the bond or security of any officer or servant of a municipal corporation. That this class of security is preferable will be easily understood, more especially by those who have at any time been interested in settlements of accounts of treasurers in default.

The principal reason given by councils for not procuring this class of security from treasurers is the rates charged by the companies doing business in Canada, whose bonds the councils are empowered by the Act to accept.

Notes.

Many clerks and others are in favor of the formation of a municipal officers association. We would like to have their opinions on an association in each county, and the benefits that might be derived therefrom.

There are many questions that a meeting of the municipal officers in a county could regulate, viz.: the form of the assessment rolls, assessment slips and collectors' rolls, the different methods of carrying on the work of a municipality, systems of keeping municipal accounts and debenture statements, preparation of collectors' rolls, etc.

Clerks will kindly remember THE WORLD when mailing printed copies of council proceedings, auditors reports, by-laws, etc. We may in the future have something to say in reference to blank forms used by municipalities, and before suggesting any improvements, we would be pleased to receive samples of assessment slips and other forms used in different parts of the province, with a memo. of any improvements the sender can suggest.

* * *

The question of abolition of statute labor will soon form a subject for discussion in many municipalities. That such a reform is highly necessary is admitted by those interested in good roads and the economical expenditure of the public money. Councillors should make known their views on this subject, especially those representing municipalities in which statute labor has been abolished.

Ontario Drainage Commission.

A very successful meeting of the drainage commission was held at Rigetown, on Friday and Saturday, the 5th and 6th February. A large number of the representative farmers of the townships of Howard and Harwich were in attendance. A great many objections were found to our drainage laws (as they at present exist,) and suggestions were offered with a view of remedying the same. There is a vast difference of opinion between those residing on high lands and those whose lands are low with regard to the manner of levying assessments for drainage works. The high-landers contend that in consequence of their land having naturally plenty of fall they should only be assessed for the portion of the drain passing through their property and that those living upon the low-lands should bear the expense of finding an outlet for such water. The low-landers, on the other hand, contend that in many cases were it not for the water brought down by artificial drains constructed upon the high lands they would be able to till their land to better advantage and could take care of what water comes naturally upon them. The majority of those who have so far given evidence before the commission are of opinion that engineers, in making their assessment for the construction of a drain, should specify the portion of lot benefited and not spread the assessment over the whole lot. All the witnesses agree that the appointment of the drainage referee was a move in the right direction, and it will be the means of expediting, simplifying and lessening the costs of drainage suits. A meeting of the commission was held at Chatham on the 8th, and at Dresden on the 9th, and at Glencoe, Friday and Saturday, the 12th and 13th February. On Monday, the 15th, the commission met at Sarnia, and the whole of the week was devoted to the county of Lambton.

* * *

Alterations in school section boundaries should be brought before the council without delay. By-laws for this purpose must be passed on or before the first day of May. All parties whose property is affected by the proposed change must be notified before the by-law is passed, in such manner as the council directs.

* * *

Clerks will be assisted greatly in the work of preparing statute labor lists and collector's roll if they furnish the assessors with a map showing the division of the township into school sections and road divisions, and thereby enable them to make correct entries in their rolls. A copy of the school section map must be filed in the county clerk's office. Clerks neglecting this duty are liable to a penalty of \$10 00.

Assessors' Duties.

II.

In the last issue the different Acts governing assessors' duties this year were referred to, and the more important provisions respecting exemptions, and the duties of assessors under the Franchise Assessment Act of 1889, as amended, were considered.

The following affidavit in addition to all others directed by the Assessment Act is required to be entered at the end of assessment roll by the Franchise Assessment Act :

"I have not entered any name in the above roll, or improperly placed any letter or letters in column 4 opposite any name, with intent to give to any person not entitled to vote, a right of voting.

"I have not intentionally omitted from the said roll the name of any person whom I believe to be entitled to be placed thereon, nor have I, in order to deprive any person of a right of voting, omitted from column 4, opposite the name of such person, any letter or letters which I ought to have placed there."

The same property and other qualifications as heretofore are continued with respect to voters in such of the municipalities, townships, and places in the Electoral Districts of Algoma East, Algoma West, East Victoria, North Hastings, North Renfrew, South Renfrew, Muskoka and Parry Sound, as shall from time to time have no assessment roll or voters' list.

Opposite the name of every person qualified to be a voter the assessor shall in column 4 (mentioned in section 14 of *The Assessment Act*) and (in addition to the letters, if any, required to shew the qualification of such person in respect of municipal elections) write in capitals the letters M. F., meaning thereby "Manhood Franchise," and number all such names, and in column 8, mentioned in section 14 of *The Assessment Act*, enter

- (a) In the assessment roll of a city, town, or village, the residence of such person by the number thereof (if any), and the street or locality whereon or wherein the same is situate.
- (b) In the assessment roll of a township the concession wherein and the lot or part of a lot whereon such person resides.

MODE OF ASSESSING REAL ESTATE.

Land occupied by the owner shall be assessed in his name.

Land not occupied by the owner, but of which the owner is known, and at the time resides in the municipality, or has given the notice mentioned in section three, shall be assessed against the owner and occupant, if the occupant is any other person than the owner.

If the owner of the land is not resident within the municipality, then, if the land is occupied, it shall be assessed in the name of the occupant and owner; but, if not occupied, and the owner has not requested to be assessed therefor, it shall be assessed as land of a non-resident.

Where land is assessed against both the owner and occupant, or owner and tenant, the assessor shall place both names within brackets on the roll, and shall write opposite the name of the owner the letter "F," and opposite the name of the occupant or tenant the letter "T;" and both names shall be numbered on the roll.

When the land is owned or occupied by more persons than one, and all their names are given to the assessor, they shall be assessed therefor in the proportions belonging to or occupied by each respectively; and if a portion of the land so situated is owned by parties who are non-resident, and who have not required their names to be entered on the roll, the whole of the property shall be assessed in the names furnished to the assessor as the names of the owners, saving the recourse of the persons whose names are so given against the others.

If any member of a partnership so requests, his share of interest, of or in the real or personal property of, or belonging to the partnership, shall for all purposes and in all respects be assessed as if the same were the separate and individual property of such member, and formed no part of said partnership property. (Ont. Stat. 42 Vic. ch. 32, sec. 3.)

The assessor shall write opposite the name of any non-resident freeholder, who requires his name entered on the roll, as hereinafore provided in column number three, the letters "N. R." and the address of such freeholder.

Except in the case of mineral lands herein-after provided for, real and personal property shall be estimated at their actual cash value, as they would be appraised in payment of a just debt from a solvent debtor.

In estimating the value of mineral lands, such lands and the buildings thereon shall be valued and estimated at the value of other lands in the neighborhood for agricultural purposes, but the income derived from any mine or mineral work shall be subject to taxation, in the same manner as other incomes under this Act.

In assessing vacant ground, or ground used as farm, garden or nursery, and in immediate demand for building purposes, in cities, towns or villages, the council may direct in this matter, and in towns and incorporated villages where the extent of such grounds exceeds ten acres, the council may direct as to the mode of assessing in such lands.

Every railway company shall annually transmit on or before the first day of February, to the clerk of every municipality a statement showing:

- 1. The quantity of land occupied by the roadway, and the actual value thereof,
- 2. The real property other than the roadway in actual use.
- 3. The vacant land not in actual use by the company.

And the clerk of the municipality shall communicate such statement to the assessor.

29a. Plank, gravel, macadamized or other toll roads shall be assessed as real estate in the municipality in which the same are situate, and in making the assessment the assessor shall take into consideration the value of (1) the land occupied by the road, (2) the materials employed in the superstructure, (3) toll houses, buildings and gates on the road, (4) quarries and gravel pits and roads to and from such places, and used in connection therewith, but this section shall not include bridges 100 feet in length or over, and the approaches thereto, which are on or along such toll road and which are used therewith.

29b. Every toll road opened by any municipality, corporation or person, upon which any toll is established, whether leased to a tenant or not, shall be assessed in the minor municipality in which the same is situate, and where the road extends or runs into or through more minor municipalities than one, each minor municipality shall assess that part thereof which lies within its limits, and according to the value of that part, whether a toll gate or bar is or is not upon the road in that municipality.

29c. The stock or shares held by any person in any toll road and the dividends or income derivable therefrom are hereby exempted from assessment.

The stipends or salaries of clergymen and ministers of religion, and parsonages or dwellings occupied by them with the land attached thereto, shall be liable to assessment for all municipal purposes in the same manner, and to the same extent as the incomes, dwellings and property of other persons. The article numbered 25 of the 7th section of *The Assessment Act* is repealed.

NON-RESIDENT LANDS.

As regards the lands of non-residents who have not required their names to be entered on the roll, the assessors shall proceed as follows:

1. They shall insert such land in the roll separated from the other assessments, and shall head the same as "Non-Residents' Land Assessment."

2. If the land is not known to be subdivided into lots, it shall be designated by its boundaries or other intelligible description.

MODE OF ASSESSING PERSONAL PROPERTY.

Subject to the provisions of Section 8 of the Assessment Act, no person deriving an income exceeding \$400 per annum from any trade, calling, office, profession or other source whatsoever, not declared exempt by the Assessment Act, shall be assessed for a less sum as the amount of his net personal property than the amount of such income during the year then last past in excess of the said sum of \$400, but no deduction shall be made from the gross amount of such income by reason of any indebtedness, save such as is equal to the annual interest thereof; and such last year's income, in excess of the said sum of \$400, shall be held to be his net personal property, unless he has other personal property liable to assessment, in which case such excess and other personal property shall be added together, and constitute his personal property liable to assessment.

The deduction of \$400 from the income of a person having an income exceeding that amount shall not be made in case such income exceeds one thousand dollars.

The personal property of an incorporated company, other than the companies mentioned in the following sub-section, shall be assessed against the company, in the same manner as if the company were an unincorporated company as partners.

The personal property of a bank or of a company which invests the whole or the principal part of its means in gas works, plank and gravel roads, railways and tram roads, harbours, or other works requiring the investment of the whole or principal part of its means in real estate, shall, as hitherto, be exempt from assessment; but the shareholders shall be assessed on the income derived from such companies.

The beneficial owner of shares which do not stand in his own name may be assessed for the income he derives therefrom, as if the shares stood in his own name.

All personal property within the province, the owner of which is not resident in the province, shall be assessable like the personal property of residents, and whether the same is or is not in the possession or control, or in the hands of an agent or a trustee on behalf of the non-resident owner; and all such personal property of non-residents may be assessed in the owner's name, as well as in the name of the agent, trustee or other person (if any) who is in the possession or control thereof.

The property shall be assessable in the municipality in which it may happen to be.

This section does not apply to dividends which are payable to, or other choses in action which are owned by and stand in the name of a person who does not reside in the province.

The personal property of a partnership shall be assessed against the firm at the usual place of business of the partnership; and a partner in his individual capacity shall not be assessable for his share of any personal property of the partnership which has already been assessed against the firm.

If a partnership has more than one place of business, each branch shall be assessed, so far as may be, in the locality where it is situate, for that portion of the personal property of the partnership which belongs to that particular branch; and if this cannot be done, the partnership may elect at which of its places of business it will be assessed for the whole personal

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.

A. R.—School Act, 1891, Section 12, 5th line, provides "that no section formed hereafter shall include any territory distant more than three miles in a direct line from the school house."

Does that mean that the whole lot must be within the three mile limit; no one lives on the lot to be added, but the owner lives in the school section. Trustees claim that the three miles would take in a half or more of lot.

My opinion is that the whole lot must be within the three mile limit. Let us hear from you in your February number.

Section 12, of the Public Schools Act, 1891, makes it the duty of the municipal council of every township (except where township boards have been established) to sub-divide the township into school sections, but no territory can be included in any school section which is distant more than three miles from the school house in such section. The council may divide a man's farm, placing a part of it in one section and the residue of it in one or more sections, even though the whole of it might have been placed in one section without transgressing the three mile limit. This appears clear from the provisions of Sub-section 27, said section which provides that where the land or property of an individual, etc., is within the limit of two or more school sections, the parts of such land or property so situated shall be assessed and returned upon the assessment roll separately.

We are therefore of the opinion that a whole lot or farm cannot, under any circumstance be placed in any one section unless the whole of it is within the three mile limit, and that any part of it outside of such limit must be placed in some other section, because it is the duty of the council to so divide the township that every part of it may be included in some section.

* * *

J. R.—What is duty of assessor in respect to farmer's sons, and have they to do statute labor?

Sub-Section 2 of section 2, of "the Franchise Assessment Act, 1889," enacts that "every farmer's son, bona fide resident of the farm of his father or mother at the time of the making of the Assessment Roll, shall be entitled to be and may be entered, rated and assessed on such roll, in respect of such farm," as a joint owner as provided in said sub-section. This enactment gives the farmer's son due right to be assessed as a joint owner with his father and mother if he so desires, and authorizes the assessor to so place him on the roll. We think, however, that in the absence of the expression of the desire to exercise the right thus conferred, the assessor should assess farmer's sons as such as provided in the Assessment Act.

If farmer's sons are assessed as joint owners, pursuant to the above sub section, they are not liable separately for statute

labor. The statute labor should be calculated simply on the value of the land in accordance with the scale in vogue in the township.

Section 6 of the Assessment Amendment Act, 1891, places a tenant farmer's son, bona fide resident on the farm of his father or mother, in the same position as to statute labor as the son of an owner jointly assessed for the land on which he resides.

* * *

G. F. D.—Last fall the public school board gave due notice that they desired the election for trustees to be held at same time as for council, and it was held accordingly. The trustees submitted their books for 1891 for audit to the men appointed to audit the accounts of 1890. These men (one of whom was a trustee last year) made out a brief abstract report which was rejected by the council, who declared that the recently appointed municipal auditors were the men who should make out the report, and that it should be in detail. While the second audit was in progress the trustees made out their annual report to the department, basing it upon the abstract statement that they had received.

This is the whole case. Now, please answer the following questions:

1. What auditors should audit the accounts of this school board for 1891?

2. (a) When trustees sell goods to the school board; (b) work for the board in repairing school buildings; (c) employ their apprentices on school repairs, and charge the board a wage that leaves them (the trustees) a profit over what they pay their apprentices; and for each and all of their accounts have drawn payment—can any action be taken that would inflict a penalty on these trustees?

The Public Schools Act, Section 107, Sub-section 11, provides that the accounts shall be submitted to the municipal auditors. It is the intention to have the accounts submitted to auditors at same time as the municipal treasurer's accounts. The regulations issued by the Education Department require auditors reports on the school accounts of boards of cities, towns and villages to be transmitted to the Department on or before the 1st March. That one of the auditors mentioned was a trustee (for the year for which the accounts were audited) would constitute him a party indirectly to the receipt of money from the council for school purposes, and he would not be qualified to act as a municipal auditor.

Section 191 provides that when a trustee has interest in a contract in his own name, or the name of another, or directly or indirectly receives any thing on behalf of the corporation, he shall vacate his seat or the fact of his having the contract vacates his seat at the board, and the contract shall be null and void.

See Section 188, as to penalty which may be recovered as provided in Section 211.

* * *

Municipal Council of Humphrey.—Case in free grant district.

A locates a piece of land and lives on it, but fails to pay the municipal taxes.

B cancels A's claim and locates for the land. Question.—Is B's claim subject to arrears of taxes?

It is maintained by some that as a locatee of a free grant under the Crown arrears of taxes cannot be collected.

In the case of cancelling the locatee's claim, and then purchasing from the Crown, the deed is issued and certificate of title granted subject to arrears of taxes then on the land.

We are of opinion that B's claim, under the circumstances above mentioned, is subject to the arrears of taxes, especially if the deed is issued and certificate of title is granted, subject to the arrears of taxes then on the land. We would refer our correspondent to Sections 189 and 171 of the Assessment Act. In note (b) to the former Section Mr. Harrison states in his manual that land, though not patented if sold or agreed to be sold or located as a free grant, the interest of the purchaser or locatee is liable to taxation and sale. Our correspondent might also peruse Chap. 17 of 52 Victoria, Ont., statutes.

P. S. DOWNIE.—In case of an appeal against an engineer's award *re* "The Ditches and Water-courses Act," the law provides that the clerk shall send a certified copy of said award to the Division Court Clerk, for the use of the court in said appeal. Who should pay the township clerk for copying said award, or does he (as I believe is customary) have to do it for nothing?

Sub-Section 4, of Section 11, of Chap. 220, R. S. O., 1887, provides that the judge who hears and determines such an appeal, "may order payment of costs by the parties or any of them, and fix the amount of such costs." The clerk's fee for copying the award is part of the costs of the appeal, and should be paid by the party ordered to pay the costs by the judge who adjudicates in the appeal. The writer had two cases of this kind during the summer of 1891, and he collected his fees for copies of the awards as above explained.

* * *

C. P.—Is it the duty of township clerks to prepare by-laws, the reeves duty or legal advisers duty? If clerk prepares them should he not be paid extra?

There does not appear to be any statutory provision as to the township clerks duty in this particular. We do not think it is the reeve's duty to prepare the by-laws, and it certainly is the legal adviser's duty to do so when required by the council and paid for his work. We think the township clerk should as part of his ordinary duties prepare the ordinary routine by-laws annually required, and should receive extra pay for any special by-law prepared by him, for instance a by-law prepared under the drainage clauses of the Municipal Act. It would be well for clerks to have some understanding with their respective councils as to this matter on receiving their appointments.

The Municipal World as Others See it.

I am pleased to learn that such a publication has been started, and it will be with much pleasure that I will not only place your paper on my list of exchanges, but will endeavor from time to time to supply your journal with articles bearing especially upon municipal health work. DR. BRUCE.

ENGINEERING DEPARTMENT.

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

Municipal Engineering.

Technical education has a two-fold value for the engineer: it gives him a knowledge of the operations and constructions of engineering art; it trains and develops his forces and faculties. The training of the mind to grasp and comprehend new truths, to examine and judge data, to investigate new plans and methods, to master new and greater problems, easily, readily and judiciously, to increase the capacity for work, skill and knowledge, the training of the eye and the hands, the discipline of the mind, the learning to think, to use the powers well and economically—all this is of far more value than the knowledge gained.

The great engineering enterprises of the world have required careful and intelligent supervision. No matter how ingeniously designed or how thoughtfully planned, some one must push them forward to completion. Executive ability has been the mainspring of many successes. With this as a forte engineers wrought marvelous accomplishments. To superintend, to supervise, to handle men and means with efficiency and economy, to command and direct a force as large as an army, to spur the laggards so that all will be finished together, to appreciate proper expenditure and control the finances, to decide current questions of business rapidly and correctly, calls for ability of high order.

Fertility of resource, improvement of method, novelty of construction, mechanical intuition, the investigation and application of natural laws, the adaptation of the means at hand to the end in view—all taken with consideration of safety and economy—these constitute the distinctive element of the engineer. His highest aim is to consider and determine the economic use of time, power and matter. This adaptation of means to the end, this command of expedients, is fundamental; without it training, experience, integrity, executive capacity will lack the engineering sense. Not only is this principle applicable to the conspicuous examples of engineering, but it applies all along the line of ordinary work in every-day practice, in little things as well as great, and in the present broad field of municipal engineering, where the work is so varied and has been performed in the past chiefly under the direction and supervision of unskilled men, it is specially applicable.

The Tilsonburg council has passed a by-law to prohibit farmers and others from offering for sale or disposing of any kind of fowl or game that is not properly drawn and clean.

Water Supply.

II.

The first and most important point to decide in the contemplation of waterworks is the source of supply. That it should be accessible, the quality pure and the quantity bountiful is not necessary to emphasize. The water should be healthful, and an expert chemist should always be employed to make satisfactory tests upon this point. When we reflect that water constitutes three-fourths of the human organism; that ninety-five per cent. of the blood and about eighty per cent. of our food is water, or its elements, its purity and healthfulness become matters of the most vital importance.

Permanence of the supply is essential. The projector of a public supply of water should first become familiar with the possible scope and objects of a good and ample system of supply, and become fully conscious of how intimately it is to be connected with the well-being of the people and their active industries in all departments of their arts, mechanics, trade and commerce, as well as in their culinary operations, and let him also appreciate the consequences of its failure, or partial failure, after a season of success. Let him feel that this work must be complete, durable and unailing, and let this feeling guide his whole thought and energy; then there is little danger of his going astray as to system, whether it be called "gravitation," "reservoir," "standpipe," or "direct pressure," or of his being enamored with lauded, but suspicious mechanical pumping automatons, and uncertain valve and hydrant fixtures.

When the people have learned to depend, or must of necessity depend upon the public pipes for their indispensable water, it must flow unceasingly. All elements of uncertainty must be overcome, and the safest and most reliable structures and machinery be provided. Many times, in different cities, a neglect, apparently slight, has cost, through failure, a fearful amount, and has sacrificed life and treasure. Having waterworks is not always having full protection unless they are fully adequate for the most trying hour. There is no mystery about "systems" of water supply, as they have of late years been often classified. The problem is simply to search out the best method of gathering or securing an ample supply of wholesome water, and then to devise the best method of delivering that supply to the people. Usually there is one source, the merits and demerits of which, when intelligently examined, favorably outweigh the merits and demerits of each and every other source, and there is usually one method of delivering that is conspicuously better than all others, when all the local exigencies are seen and foreseen. The usual methods of gathering the required supply are: To impound and store the rainfall or flow of streams among the

hills; draw from a natural lake; draw from a running river; elevation by steam or water power to a reservoir, and from thence a flow by gravitation elevation to low and high service reservoirs, and from thence flow by gravitation to respective districts; and by forcing with pressure direct into the distributing pipes, and cushioning the motion by a stand-pipe, or ample air-vessel and relief-valves.

The pumped supplies are usually drawn from lake, river, or subterranean sources. The selection of lake or river water for domestic use is to be governed by considerations of wholesomeness, and economy in financial expenditure must not exert too strong an influence in opposition to inflexible laws.

This selection involves an intelligent examination of the origin and character of the impregnations and suspended impurities of the water, and the possibility of their thorough clarification. Some of the impurities of water are really beneficial, while others, which are often present, are not to be accepted or tolerated. A mere suspicion that a water supply is foul or unwholesome, even though not based on substantial facts, is often a serious financial disadvantage; therefore earnest efforts to maintain the purity of the water must extend to the removal of all causes for suspicion. Chemical science and microscopy are valuable aids in this portion of the investigation of the qualities of waters. The nature and sources of the impurities, those that are comparatively harmless and those that are deadly, can be so clearly pointed out that an intelligent opinion can generally be readily formed of the comparative purities and values of the different waters.

When a good and abundant supply of water can be gathered at a sufficient elevation and within an accessible distance, the essential element of continuous full pressure delivery can then be secured, and in the matter of possible safety the gravitation method will usually be superior to all others. The quantity of impounded water when gathered in small storage reservoirs, and from relatively limited water-sheds, is subject to unpleasant influences which are to be provided against, and unless the hydrology and substructure of the gathering basin is well understood, the permanence of the supply may not fulfil enthusiastic anticipation.

The value and importance of sufficient elevation of the supply reservoir, when the delivery is by gravity, to meet the most pressing needs of the fire-service, ought not to be overlooked, for an efficient fire-service is usually one of the chief objects to be attained in a complete water supply.

The Ingersoll town council, after much deliberation, came to the conclusion that a town solicitor was an unnecessary luxury, and have done away with that appointment. They probably anticipated the publication of the MUNICIPAL WORLD.

Highway Bridges.

II.

All bridges should be made to sustain a live load of not less than one hundred pounds per square foot of floor, where they are on main roads subjected to heavy travel, and not less than eighty pounds per square foot of floor on those roads not subjected to special or excessive loads.

A wind pressure of not less than thirty pounds per square foot of the total area of the side of the truss should be provided for; this, together with the sway caused by passing loads, should be resisted by horizontal lateral bracing, one-half of said pressure to be treated as a moving load.

Timber, in tension, should not be strained more than eight hundred pounds per square inch.

In calculating the compressive strain on timber it is necessary to consider that the breaking and the safe load per square inch are not constant quantities, but diminish as the piece becomes longer in proportion to its diameter. If a very long piece be so braced at intervals as to prevent its bending at those points, then its length becomes virtually diminished and its strength increased; therefore, long horizontal or inclined pieces exposed to compression in the form of upper chords and braces in bridges are thus braced. Mistakes are sometimes made by assuming one thousand pounds as the safe compressive load for timber without any regard to the length of the piece. The strength of timber also depends on the seasoning; well seasoned timber will resist about twice the crushing load of green timber. In finding the breaking load of timber, the following formula of C. Shaler Smith may be used:

$$\frac{5,000}{1 + \left(\frac{\text{square of length in inches}}{\text{square of breadth in inches}} \times .004 \right)} = \text{breaking load in pounds per square inch of area.}$$

Not more than one-sixth of the breaking load should be taken as the safe load.

The timber used in a truss should be of first quality of their several kinds, straight in grain, free from large loose knots, shakes, sap or decayed wood, or other defects that would impair the strength or durability of the same.

The strength of timber subjected to transverse strain may be determined as follows:

$$\frac{W \times X^2}{Y} \times 450$$

W = breadth of beam in inches.

X = depth of beam in inches.

Y = length of beam in feet.

450 = coef. for centre quiescent breaking load.

For safety in practice not more than one-sixth of the quiescent breaking load should be employed. This margin is left for jars, jolts, irregularities in timber, vibration, etc.

Timber should be sawn so as to leave its sides parallel and its angles right

angles. Care should be taken to have all wind taken out before put in the structure so as to have perfect joints; this is necessary in order to secure equal bearings. It should be well seasoned, as this is of great importance, not only to its durability but also to the stability of the structure, as a very slight shrinkage of some of the pieces arising from the seasoning of the wood might cause material injury if not complete destruction to the structure. I consider timber sufficiently seasoned for bridge work when it has lost one-fifth of its weight when in a green state. Natural seasoning is preferable to any other, as timber seasoned in this way is stronger and more durable than when prepared by any artificial process.

In order to assist the timber in a bridge to withstand the effects of exposure to the weather it should be thoroughly coated with paint, but as this substance is of a perishable nature it should be renewed from time to time.

All joints of chords or braces, bearings, ends of posts and braces, ends of chords, keys and packing pieces, and wherever there is a bearing end grain, seat or joint, should be thoroughly coated with thick white lead before being put together; this adds greatly to the preservation of the joints and ends of the timber.

When the chords and braces of a truss are packed or built, that is, formed of a number of separate members, it assists preservation to cover the same with galvanized iron extending about two inches down the sides of the chord or brace and securely fastened with metal nails; this prevents the water from entering the joints, while a free circulation of air enters from below.

The iron used in the structure for panel or main straining rods should be upset at the screw ends, so that the diameter at the bottom of the threads will be 1-16th inch larger than any part of the body of the rods, and should not be strained more than ten thousand pounds per square inch, and that for horizontal lateral bracing should not be strained more than fifteen thousand pounds per square inch, and should be tough, fibrous and uniform in character. The angle blocks on the chords at the ends of the braces should have their faces at right angles to the line of such brace, and have a rib on the under side about half an inch in depth, to be let into the chord.

There is no rule for determining the amount of camber for a bridge, but it should certainly be such that the heaviest load placed upon it will not bring the chords horizontal, but in practice 1-30th of the span in feet, measured from centre to centre of the outer panel points, is considered sufficient to represent the camber in inches. When the chords are cambered they become the concentric arcs of two circles, with the upper one longer than the lower, and the vertical become radii of said circles, and although their length remains the same, the space be-

tween them at the upper chord becomes greater than at the lower, and this renders it necessary to lengthen the diagonal braces. Therefore in practice the importance of ascertaining how great this increase in length is cannot be overlooked; for if so, the different parts of the truss will not fit accurately together. I determine this increase in the following manner:—

Let *ab* represent the upper chord in camber; *cd*, the lower chord; *cd*, length of span; *ef*, camber; *x*, number of panels. Then, *efd* is an arc of the circle *cdh*. Produce *fe* to meet the circle *cdh* at *h*. *ce* will equal 1/2 of span.

$$\therefore \text{Rect. } c e e d = \text{rect. } f e e h.$$

$$\therefore \frac{c e \times e d}{f e} = e h.$$

$$\therefore f e + e h = \text{diameter of the circle } c d h.$$

$$\therefore \frac{1}{2} f h = f g, \text{ or radius.}$$

$$\therefore c g = f g.$$

$$\therefore f h \times 3.1417 = \text{circumference of circle } c d h.$$

Then, in the triangle *ceg* we have the sides *cgce*, and the right-angle *ceg*.

$$\therefore c g : c e :: c e g : e g c.$$

$$\therefore \text{Log. } c g : \text{Log. } c e :: \sin. c e g : \sin. e g c.$$

Then, twice the angle *egc* = angle *cdg*.

$$\therefore 360^\circ = \text{circumference } c d h.$$

$$\therefore 1 = c d h \div 360^\circ.$$

$$\therefore c g d = \frac{c d h}{360} \times c g d = \text{arc } c f d, \text{ or}$$

lower chord.

Then, *cfp* + *x* = length of panel on lower chord.

And in a similar manner by adding the height of the truss to the radius of the circle the length of the panel on the upper chord may be found.

When the increased length of the panel at the upper chord is found, the length of the diagonal brace may readily be determined thus:

Let *abm n* represent a panel without camber, and *fe m n* represent a panel with camber.

Let *x* = width of panel on lower chord.

Let *y* = depth of truss.

Then *fx* and *be* together = increase to panel.

\therefore to find *ne*, or length of diagonal with camber, we have the right-angled triangle *ane* with *an* = *y*, and *ae* = *x* + 1/2, increase.

$$\therefore n e = \sqrt{x^2 + y^2}.$$

to be continued.

An experimental sidewalk is now in operation in Chicago. It consists of two movable platforms 300 feet long, moving side by side in the same direction, one at a speed of three, the other at six miles an hour. It has carried 500 persons at a time, and seems to be a success. It will be used at the World's Fair. —Exchange.

Roads and Road Making.

III.

Drainage of Road Bed.

The road-bed should be perfectly drained, the want of special attention to this necessity is the chief cause of the heavy annual expense of maintenance. A road badly designed and constructed can seldom be rendered satisfactory. Great care must be taken not only with the drainage of the road surface, but also with that of the road-bed and adjoining land, and where the road is to be constructed on a wet, retentive soil, a system of under-drainage must be provided by cutting trenches across the road-bed, and discharging, into the side ditches. These trenches should be from eighteen inches to two feet deep, and about one foot wide across the bottom, having the side sloping outward, in these should be constructed porous drains, composed of brick-bats flat stones, or whatever suitable material is at hand, and the trenches filled up again to the level of the road-bed with stones. The number of these cross drains must be regulated by the nature of the soil, in stiff heavy clay they should be much closer than in loose soil. On each side of the road-bed at a distance of about twelve feet. Open ditches should be cut of a sufficient size and declivity to readily conduct away all water that can possibly fall on the road. The strips of ground between the road and the open ditch should remain in sod with a nearly cut edge defining the road-bed, which will serve the same purpose as a curb, and should be connected by open grips running to the side ditches. These grass strips will be found in every way preferable to the general plan of removing the surface to the same slope as the road, as so many road masters do with the mistaken idea that it facilitates drainage, firstly, because the cut edge helps to collect the surface water, and readily discharges it into the proper channels; and secondly, because they will always be clean and prevent the sides of the road from being cut up by cattle and the consequent carrying of mud on the road surface; not to mention the neat and tidy appearance they give to the road, when nicely trimmed at the same time saving the cost of removal. These edges should never be so high as to prevent the passage of vehicles in the case of emergency.

Country Roads.

By some it is contended that road building should be entrusted to private enterprise, as it would encourage ingenuity and competition, but the wisdom of this scheme, we think, is open to serious objection, as experience proves that the opposite is the result. Nowhere are better roads to be found than in Europe, which is owing to the system employed for their maintenance. In most countries of Europe the roads are under government

control, and the disbursements for their maintenance are frequently the largest outlay the government is compelled to provide for. The benefits accruing from this system are manifold, and aids the farmer in keeping pace with men in other lines of business, and also with the progress of the country. In Canada and the United States the population in many of the rural districts is rapidly decreasing, and farm mortgage indebtedness in those two countries is increasing at the rate of nearly ten million per year. There is no denying the fact that the farming community in both countries complain of hard times, while on the other hand the European farmer is prosperous and contented. In America the soil is richer and more fertile than that of Europe, and the facilities for carrying on farm operations are superior. Yet with all these advantages the farmer in America fails to keep pace with the European agriculturist. All conditions compared singularly enough the main difference is found in the rural roads. Such being the case it is reasonable to suppose that the farmer's condition in America would be somewhat meliorated if proper roads were constructed for the marketing of his produce. A writer in an American paper gives the following valuable information on road building in Europe.

In Belgium the principal roads are in the hands of the government, and in 1880, in the nine provinces, over 79 per cent. of the high roads were of this class, the entire length of the roads being 4,173 English miles.

In Italy the minister of public works is head of the department of public roads. These roads are mostly undertaken by contract and are under the government engineers. The contracts extend also to the cost of repairs.

In Bavaria, too, the roads are supported by the State and here a stringent law is in force against the use of narrow tires, so well does that country appreciate the damage to a road from them.

France has 130,000 miles of fine road for which the government spends about \$18,000,000 per year and such care brings its own reward, since the French government knows no more devoted upholder than the farmer. The system under which these roads are kept up is interesting. There is a chief officer who has charge of all the roads, and requires from his subordinates reports at frequent intervals; in this manner information is always on hand showing the exact condition of the roads. Of course the work is divided into sections which, in turn, are under subordinate engineers. Broken stones is furnished by contract and, considering everything, the cost is surprisingly small.

In lower Austria, where the materials for road building are not easily at hand, a few years ago the government offered large rewards for whosoever would invent suitable substances to be used in such construction. The Austrians, also, em-

ploy several thousand road cleaners regularly, with inspectors, and maintain a continual system of repairs. Dirt is removed at once; and the slightest defect repaired in order to prevent the formation of ruts.

In Hungary, the state roads are under the minister of public works; while the country thoroughfares are maintained by the local governments.

From the above it will be seen that these governments consider good roads a more important factor than railways, as the traffic on the former exceeds the latter by millions of tons annually.

The report of the Department of Agriculture, at Washington, for the year 1888, contained the following reference to country roads:

"While our railway system has become the most perfect in the world, the common roads of the United States have been neglected and are inferior to those of any other civilized country in the world."

This may not apply with equal force to Canada, but the fact should not be overlooked that there is great need for a better system of road building.

Rapid Transit in Berlin.

As the noted electricians, Siemens and Halske, propose to operate an overhead electric railway in Berlin, another company has applied for permission to build an underground to be run by electricity, the tracks being thirty feet below the surface. The line will run under the city from north to south and also from east to west, a circling railway around the city connecting the four termini.

In the construction of the tunnel iron tubes will be used, and the trains consisting of one locomotive and four cars will be run on a three minute schedule.

The estimated cost of the line from north to south, the construction of which is to be commenced as soon as the necessary permission can be obtained, is \$3,000,000.

We are in receipt of the initial number of the MUNICIPAL WORLD, a monthly paper devoted to municipal matters, which has started under very favorable circumstances, having for its editor on legal affairs, Mr. H. F. Jell, solicitor of this place, and Mr. A. W. Campbell, P. L. S. and C. E., St. Thomas, for its engineering editor. Mr. K. W. McKay, county clerk, of Elgin, as business manager. The publication is neat and brim-full of spicey and valuable information, and altogether reflects great credit to the above named gentlemen. We predict for the WORLD a bright and useful career.—*Rodney Mercury*.

* * *

Mr. Chas. Macdonald of New York, has granted the sum of \$10,000 to erect and maintain public reading rooms in Gananoque, his native town provided an additional \$5,000 is subscribed.

LEGAL DEPARTMENT.

H. F. JELL, SOLICITOR,
EDITOR.

Municipal Law.

The importance of the position held by municipal corporations in Ontario at the present day is considerably underestimated. We should consider each municipality—what it really is—a little state in itself. Its affairs are regulated by a parliament in miniature, called a municipal council, which has authority in the particular territory under its control.

In this age of books, newspapers and cheap literature of every kind, easy of access, every one, even in the humblest walks of life, has some knowledge of governments of the superior class. The great majority are possessed of information as to the different kinds of government that rule the several countries and states in the world—their peculiar characteristics and the portions of the globe over which they respectively hold sway—they know that a monarch is at the head of affairs in Great Britain, but that his or her powers are so controlled by the representatives of the people in Parliament assembled, that the vote of the masses is in reality the governing power; they are cognizant of the fact that our neighbors across the line prefer the Republican form of government and that a President and his congress control the destinies of that great people; they are aware that despotism rules in Russia with a rod of iron, but as to the powers, duties and responsibilities of the municipal council, their home, and we might be allowed to say their *fireside* government, the greater number of our citizens are comparatively in the dark. This seems strange when we consider the immediate and direct control which a municipal council exercises over the people within its jurisdiction; its extensive powers in regard to educational matters; its authority conferred by the Public Health Act, and its right to impose and levy taxes to meet the general annual expenditure. The latter requires more than passing notice. The payment of his share of the annual levy should prompt every ratepayer to inquire as to the reason for the expenditure. The amount of the levy and the disposition of the aggregate sum imposed is probably the best criterion as to whether the council of any municipality has managed its affairs judiciously or otherwise.

We would urge every ratepayer to take a personal interest in the municipality in which he resides, and inform himself thoroughly as to the powers, rights, duties and responsibilities of municipal councils, even if it be only from a selfish motive, and it is only those who have taken the pains to thus inform themselves and who are in addition men of integrity and sound judgment who should be elected to occupy a seat in the municipal parliament.

Legal Decisions.

LEWIS VS. BRADY.

This case has particular relation to the duties of collectors and the conduct of municipal councils in regulating the same. This was an action of replevin brought to recover goods seized by the defendant (collector) for taxes due from the plaintiff for the year 1886. The principal points decided are as follows:

The collector's roll for 1886 was not delivered by the clerk to the collector (the defendant) until the 1st of January, 1887, and no other day later than the 1st of October, 1886, had been prescribed for such delivery by a by-law of the municipality. It was held that the provisions of Sec. 120, of the Assessment Act, were directory, not imperative, and the omission to deliver the roll within the prescribed time did not prevent the collector from proceeding to collect the taxes, or have the effect of invalidating such proceedings.

The seizure complained of was made on the 9th of January, 1888, when the roll for 1886 still remained on the hands of the collector. On the 11th of December, 1886, the council by resolution directed the collector to proceed at once to collect the taxes for 1886. On the 7th March, 1887, by another resolution they directed the collector to enforce payment of the uncollected taxes at once.

On the 14th November, 1887, a resolution was passed instructing the collector to have the roll for 1886 returned by the 24th inst., and on the 17th January, 1888, the council by resolution extended the collector's time for collecting the taxes for 1886 until the 15th February, 1888, and authorized defendant to collect until above date. It was held that the defendant was, when he made the distress, collector within the meaning of Sec. 132 of the Assessment Act, and the roll being still in his possession, he had the authority to make it. He was a person authorized as collector, or in the place of the collector, to continue the collection under Sec. 133, and the distress made by him was valid.

The council passed a by-law on the 11th December, 1885, providing for the levying of rates for 1885, in which by-law defendant was appointed to collect the taxes for 1885. On the 23rd December, 1886, defendant entered into a bond with sureties, as collector, to the corporation, said bond reciting that he had been appointed collector. The council on the same day, by resolution accepted this bond as presented. No other appointment of defendant was proved and defendant did not think he had made the customary declaration of office. It was held that the fact of defendant's not having made the declaration of office did not make his acts void, and that he had been duly appointed collector.

It was also held that the appointment of another person as collector for 1887 in December, 1887, had not the effect of removing defendant from office.

VERNON VS. THE CORPORATION OF SMITH'S
FALLS.

This is a case of peculiar interest to all officers of municipal corporations: The plaintiff had been appointed chief constable of the village of Smith's Falls, for the term of one year. By a By-law of the council of the village, passed under the authority of Sec. 445 of the Municipal Act, the council dismissed the plaintiff from his office before the expiration of the year without assigning or apparently having any particular reason for so doing. The plaintiff brought this action against the corporation for damages for wrongful dismissal. Notwithstanding the terms of By-law appointing the plaintiff, his action was dismissed. It was held that plaintiff held his office only during the pleasure of the council, the council having no power in making the appointment to curtail their statutory power to put an end to the plaintiff's term of office at any time.

A reference to Sec. 279 of the Municipal Act will justify the inference that the principle of this decision is applicable to all officers appointed by a municipal council.

RE M'COLLUM AND THE BOARD OF PUBLIC
SCHOOL TRUSTEES OF SEC. 6, TOWNSHIP
OF BRANT.

This was an application made by the father of a pupil attending the school belonging to the above-mentioned school section, for a mandamus to compel the trustees to re-admit the son who had been suspended by the teacher of said school until he should replace with his own hands, the top of a desk which he had injured by cutting. The suspension took place on the 20th of February, 1888, and this application was made on the 7th of May, 1889. In the interval the father had appealed to three of the directors, to the public school board and to the annual school meeting. On each of such appeals the action of the teacher was sustained. The pupil had meanwhile been attending another public school. It was held that the discretion exercised by the master and trustees should not be interfered with, especially after the delay and change in the position of affairs.

The Municipal World as Others See it.

I am highly pleased with it. We have taken the Miscellany since its beginning, and consider it a good thing in the hands of municipal officers, but the improvements of the work, compared with its predecessor are so marked, that no one can fail to observe it. No one who is interested in municipal matters, and wishes to qualify himself, can afford to be without it. I wish you every success.

J. W. H., Mayor, Aylmer.

CORRESPONDENCE.

This paper is not responsible for opinions expressed by correspondents.

To the Editor of the MUNICIPAL WORLD :

DEAR SIR,—Bridge building is one of the most important works that municipal authorities have to deal with, to get the best and most intelligent designs and to have them carefully constructed and properly built, and of good sound material for their respective purposes. To accomplish this end skilled men are required, who fully understand the mode of construction and making of a bridge. There are yet a great many bridges built of poor designs and workmanship, simply because they are cheap. In a great many cases there is no competent person employed to examine plans to see whether the mode of construction is right and safe, and sufficiently strong to carry the loads the bridge may be subject to, but in most cases the cheapest will be the accepted tender, and perhaps the bridge be a danger to life and property from the first day it was built. Therefore, it should be the aim of municipal men to employ men who have experience and knowledge in the art of bridge building, and not always adopt the policy of the lowest tender, which is too frequently the case, where contractors furnish their own plans and specifications and the council decide which plan they will adopt. Another great error is that no provision is made to rebuild a bridge until the day a new one is required. In building wooden bridges, as a rule, the timber is secured from the immediate neighborhood where the bridge is to be built, and generally taken from the stump in the middle of summer, hewed or sawn, framed and put together, and there it is exposed to the hot sun, no protection offered to it. The consequence is the timber dries on the outside first; cracks of an half-inch wide open right to the heart; the high winds and teams crossing over the bridge raise the dust, which falls on the timber, the rains come and wash it into the cracks thus produced, and in a short time the grass begins to grow out of that timber, and rot sets in almost from the first year the bridge is built. Unless bridges are destroyed by floods, or other causes, as the case may be, preparation should be made in the winter season. Where bridges have to be rebuilt, timber should not be cut when in the sap, and a reasonable time should be allowed for timber to dry, and the construction should be such so as to protect the trusses and needle beams from the weather. No earthwork should come in connection or contact with the ends of trusses where they rest on the abutments, and it should be the duty of overseers of highways to see that such woodwork is kept free from earth or water settling around such ends of trusses, and there would be a vast difference in the duration of wooden bridges at a very

trifling expense. The cry through the country is it does not pay to build wooden bridges; they will only last from eight to ten years. Wooden bridges are standing in the States of New Jersey and Pennsylvania that have been built eighty and one hundred years ago, and are apparently in as good condition as when they were built. Simply because they were protected from the weather. They are sided in and covered with shingle roofs, put on the same as our barn buildings, and in spans of two hundred feet and over. Now we would not need to go to the trouble of a shingle roof, but our trusses should be protected from the weather. If any one built a building of frame and put the siding on the inside of the frame, everyone would say it could stand no more than eight or ten years before it would be rotted down. Just the same with a bridge, and so the fault lies not in the fault of the material but in its mode of construction. There is still a great difference between the cost of an all iron or wooden bridge. If, as per above, justice was done to our wooden bridges, the balance would still fall greatly in favor of wooden bridges. Let us just reverse this neglect on an iron bridge. Let it stand for eight or ten years and do nothing to protect it from the elements of the weather—at the end of that time it will not be much better than our wooden bridges thus treated. I have nothing against iron bridges, and do not want to be understood that way. There are cases, perhaps, where it is profitable to build an iron bridge in preference to wood in our country, but what I am aiming at is not to condemn a structure when it has not been properly protected.

Hoping that others may express their views on this important subject through your valuable paper,

I remain, yours, JUSTICE.

The *Municipal Miscellany*, formerly published in Arnprior by Mr. Nelson, has changed hands and will be continued under the name of *The MUNICIPAL WORLD* the first number of which has reached us. It deals exclusively with matters relating to municipalities. The municipal law is interpreted and explained, interesting decisions given, the duties of the various officers explained, etc. There is also an engineering department conducted by A. W. Campbell, C. E., in which are many valuable points on road making, drainage, water supplies, etc. The paper will be heartily welcomed and will prove of great service to all who wish to keep posted in municipal affairs.—*Deseronto Tribune*.

* * *

At the Grey Co. council a motion to memorialize the Government to amend the Municipa Law to enable township councils to close their financial year by Nov. 30, so that accounts may be audited before nominations, was lost, as was also a proposal to do away with one of the yearly sessions of the council.

continued from page 27.

property and shall be required to produce a certificate at each of the other places of business of the amount of personal property assessed against it elsewhere.

Every person having a farm, shop, factory, office, or other place of business where he carries on a trade, profession or calling, shall, for all personal property owned by him, where-soever situate, be assessed in the municipality or ward where he has such place of business, at the time when the assessment is made.

If he has two or more such places of business in different municipalities or wards, he shall be assessed at each for that portion of his personal property connected with the business carried on thereat; or, if this cannot be done, he shall be assessed for part of his personal property at one, and part at another of his places of business; but he shall, in all such cases, produce a certificate at each place of business of the amount of personal property assessed against it elsewhere.

If any person has no place of business, he shall be assessed at his place of residence.

Every person who holds any appointment of office of emolument to which any salary, gratuity or other compensation is attached, and performs the duties of such appointment or office within a municipality in which he does not reside shall be assessed in respect of the amount of such salary, gratuity or other compensation at the place where he performs such duties, and he shall not be assessable therefor at his place of residence, but, if required, shall procure a certificate of being otherwise assessed under the provision of this section; but this section shall not apply to county municipal officers, or to government officers or officers of minor municipalities when the location of the office is fixed by law or regulation of the government or municipality, but in such cases the salary, gratuity or other compensation shall be assessed against the incumbent of the office in the municipality wherein he abodes. R. S. O. 1887, 43 Vic. c. 27, s. 19; 50 Vic. c. 32 s. 2.

The personal property of a person not resident within this province shall be assessed in the name of and against any agent, trustee, or other person who is in the control or possession thereof and shall be deemed to be the individual property of such agent, trustee, or other person, for all objects within the Assessment Act.

In case of personal property owned or possessed by or under the control of more than one person resident in the municipality or ward, each shall be assessed for his share only, or if they hold in a representative character, then each shall be assessed for an equal portion only.

Personal property in the sole possession or under the sole control of any person as trustee, guardian, executor or administrator, shall be assessed against such person alone.

The exemption to which certain officers connected with the Superior Courts were, at the time of their appointment, and on the 5th day of March, 1880, entitled by statute, in respect of their salaries, is abolished as respects all persons appointed by the Lieutenant-Governor to such offices after the 5th day of March, 1880, or hereafter.

Where a person is assessed as trustee, guardian executor or administrator, he shall be assessed as such, with the addition to his name of his representative character; and such assessment shall be carried out in a separate line from his individual assessment, and he shall be assessed for the value of the real and personal estate held by him, whether in his individual name or in conjunction with others in such representative character, at the full value thereof, or for the proper proportion thereof, if others resident within the same municipality are joined with him in such representative character.

INFORMATION TO BE GIVEN TO ASSESSORS BY PARTIES LIABLE TO BE ASSESSED.

It shall be the duty of every person assessable for real or personal property in any local municipality to give all necessary information to the

Assessors, and if required by the Assessor, or by one of the Assessors, if there is more than one, he shall deliver to him a statement in writing, signed by such person (or by the agent, if the person himself is absent) containing:

(a) All the particulars respecting the real or personal property assessable against such person which are required in the Assessment Roll;

and if any reasonable doubt is entertained by the Assessor of the correctness of any information given by the party applied to, the Assessor shall require from him such written statement. (The fine for default shall be \$20.)

No such statement shall bind the Assessor or excuse him from making due enquiry to ascertain its correctness.

Every Assessor before the completion of his roll shall leave for every party named thereon, resident or domiciled, or having a place of business within the municipality, and shall transmit by post to every non-resident who has required his name to be entered thereon, and furnished his address to the Clerk, a notice of the sum at which his real and personal property has been assessed, and shall enter on the roll opposite the name of the party, the time of delivering or transmitting such notice, which entry shall be *prima facie* evidence of such delivery or transmission.

STATUTE LABOR.

No person in Her Majesty's Naval or Military Service on full pay, or on actual service, shall be liable to perform statute labor or to commute therefor; nor shall any non-commissioned officer or private of the volunteer force, certified by the officer commanding the company to which such volunteer belongs, or is attached, as being an efficient volunteer, but this last exemption shall not apply to any volunteer who is assessed for property. (*Firemen exempted in certain cases.*)

Every other male inhabitant of a city, town or village, of the age of twenty-one years and upwards, and under sixty years of age (and not otherwise exempted by law from performing statute labor), who has not been assessed upon the assessment roll of the city, town or village, or whose taxes do not amount to two dollars, or whose taxes do not amount to one dollar yearly therefor, to be levied and collected at such time by such person, and in such manner as the Council of the Municipality may by-law direct, and such inhabitant shall not be required to have any such property qualification.

The Council of every city, town and incorporated village may pass a by-law or by-laws to reduce or abolish the amount to be paid in lieu of statute labor.

Subject to the provisions of the next preceding section, every male inhabitant of a township, between the ages aforesaid, who is not otherwise assessed, and who is not exempt by law from performing statute labor, shall be liable to one day of statute labor on the roads and highways in the township.

Every person assessed upon the assessment roll of a township, shall be liable to the number

of days statute labor required to be performed under by-law of the municipality.

Every farmer's son, rated and entered as such on the Assessment Roll of any Municipality, shall, if not otherwise exempted by law, be liable to perform statute labor or commute therefor, as if he were not so rated and assessed.

Whenever one person is assessed for lots or parts of several lots in one municipality, not exceeding in the aggregate two hundred acres, the said part or parts shall be rated and charged for statute labor as if the same were one lot, and the statute labor shall be rated and charged against any excess of said parts in like manner.

DOGS.

The assessor or assessors of every municipality within which the Act has not been dispensed with, shall, at the time of making their annual assessments, enter on the assessment roll, in a column prepared for the purpose, opposite the name of every person assessed, and also opposite the name of every resident inhabitant not otherwise assessed, being the owner or keeper of any dog or dogs, the number by him or her owned or kept.

The owner or keeper of any dog, shall, when required by the assessor or assessors, deliver to him or them, in writing, the number of dogs owned or kept, whether one or more; and for every neglect or refusal to do so, and for every false statement made in respect thereof, shall incur a penalty of five dollars, to be recovered with costs before any justice of the peace for the municipality.

DUTIES AS TO COMPLETION AND RETURN OF ROLLS.

Subject to the special provisions relating to counties, cities, towns and villages:

Every assessor shall begin to make his roll in each year not later than the fifteenth day of February, and shall complete the same on or before the thirtieth day of April.

Every assessor shall, on or before the first day of May, deliver to the clerk of the municipality such assessment roll, completed and added up, with the certificates and affidavits attached.

DUTIES OF ASSESSORS IN REGARD TO ARREARS OF TAXES.

The treasurer of every county shall furnish to the clerk of each municipality, except cities and towns, in the county, and the treasurer of every city and town shall furnish to the clerk of his municipality, a list of all the lands in his municipality in respect of which any taxes have been in arrear for the three years next preceeding the first day of January in any year; and the said list shall be so furnished on or before the first day of February in every year, and shall be headed in the words following: "*List of lands liable to be sold for arrears of taxes in the year one thousand eight hundred and*"

The clerk of the municipality is hereby required to keep the said list so furnished by the treasurer on file in his office subject to the inspection of any person requiring to see the same, and he shall also deliver to the assessor

or assessors of the municipality, in each year, as soon as such assessor or assessors are appointed, a copy of such list, and it shall be the duty of such assessor or assessors to ascertain if any of the lots or parcels of land contained in such lists are occupied, or are incorrectly described, and to notify such occupants and also the owners thereof, if known, whether resident in the municipality or not, upon their respective assessment notices, that the land is liable to be sold for arrears of taxes, and enter in a column (to be reserved for the purpose) the words "*Occupied and parties notified,*" or "*not occupied,*" as the case may be, and all such lists shall be signed by the assessor or assessors and returned to the clerk with the assessment roll, together with a memorandum of any error discovered therein.

The assessors shall attach to each such list a certificate signed by them, and verified by oath or affirmation, in the form following: "I do certify that I have examined all the lots in this list named, and that I have entered the names of all occupants thereon, as well as the names of the owners thereof, when known; and that all the entries relative to each lot are true and correct, to the best of my knowledge and belief."

CHAS. 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 Work.

JAS. 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	International Cantilever
Tilbury "	Bridge
Milton "	Aylmer Waterworks
St. Thomas Sewage System	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.

Clarke's Magistrates' Manual, 2nd Edition

614 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.

Wm. 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.

WRITE FOR CATALOGUE

St. Thomas, Ontario.

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., LTD.

(SUCCESSORS TO TORONTO BRIDGE CO)

MANUFACTURERS OF

**Iron and
Steel Bridges**



ST. LAWRENCE RIVER BRIDGE, CANADA 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.

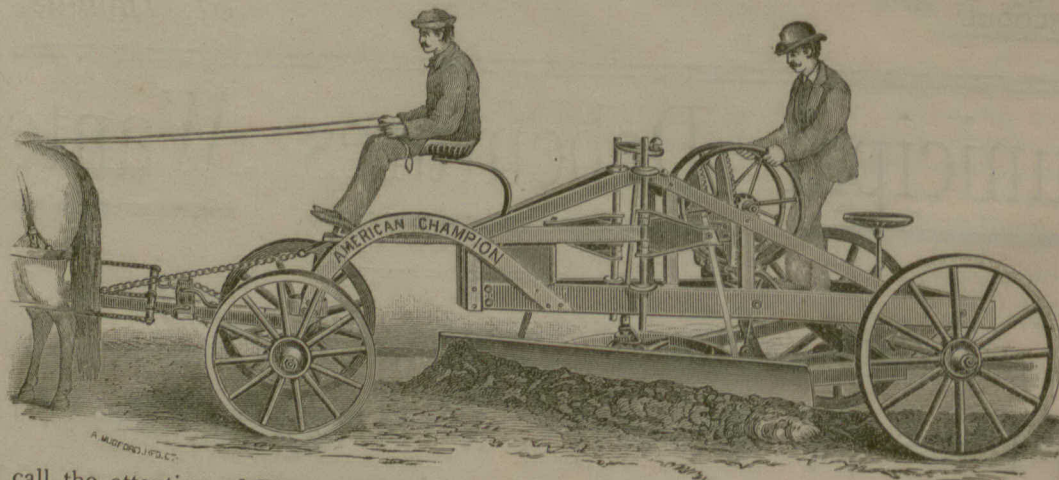
The cost of Metal Bridges, for a term of years, is less than the cost of building repairing and replacing wooden bridges, and believing the only reason so many bridges are still built of wood to be that those who are charged with the duty of contracting for them are not aware how little difference there 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, enables 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