## CONTENTS.

## PAGE.

## Editorials

There was no Seconder CORRESPONDENCE.
Roads and Bicyclists.
Clerks' Salaries
A Municipal Association.
Model City tiovernment
Interesting Items from Council Proceedings
Treasurers and their Security
Collector's Rolls.
ENGINEERING DEPARTMENT.
Light and Water.
Drainage, III.
Apportionment of cost of Improvements
Water Supply, VI.
Waste of Water in Cities
Roads and Road Making, VIII

## LEGAL DEPARTMENT

Legal Decisions
The Queen ex Rel Taggart vs. Hollings head.
Re Public School Board..
Tuckersmith McGill vs. Brantford
Re Wood and Toronto Junction.
..... 99
Dyer vs. Port Arthur
Fleming vs. Toronto.
School Law
Cuddy vs. Adelaide.
Sombra vs. Moore.
Evans vs. Lincoln.
Re Marshall and simeoe
Amendments Liquor License and Public
School Acts 1892
QUESTION DRAWER
Teachers and Trustees

## 4DVERTISEM ENTS

Any person replying to advertisements in this column will please mention Tha Munictral World
Hamilton and Toronto Sewer Pipe Co., Hamilton, Sewer, Culvert, and Water Pipe. Standard Drain Pipe Co., St. Johns P. Q Sewer and Double Strength Culvert Pipe Ontario Water Meter Co., Toronto, Meters, etc.
Charles H. Keefer, C. E., Toronto
James A. Bell, C. E., St. Thomas.
Baer \& Co., Doon, Ont., Highway Bridges-Iron and Wood.
The Carswell Co., Toronto, Ontario Statutes 1892.

Municipal Publications
G. A. Stimson, Toronto, Municipal Debentures wanted.
1 Dominion Bridge Co., Montreal, Highway Bridges-Iron and Steel.
St. Thomas Iron Works, Iron Bed Steads, Fire Escapes, ete.
Lytle's Rates Tables, for use in entering Taxes in Collectors' Roll.

## MUNICIPAL CLERKS

Lythe's Rate Table will assist you in entering Taxes in the Collector's Roll. It giv es rates by tenths of a mill from one to nine a nd nine-tenth mills. The author, a Clerk of considerable experience, knowing what was wanted, issued the work, which should be in the office of every Clerk. Price $\$ 2.00$

Address orders to The Municipal World, St. Thomas, Ont.

## CALENDAR <br> FOR <br> AUGUST, <br> 1892. <br> Legal, Educational, Municipal and Other Appointments.

August.

1. Last day for decision by Court in complaints of Municipalities complaining of equalization. -Assessment Act, sec. 79.
Notice by Trustees to Municipal Councils respecting indigent children, due.-P. S. Act. see. $40(7)$; S S. Act, sec. 28 (13).
Estimates from Sehool Boards to Municipal Councils for assessment for school purposes, due. - H. S. Act, sec. 14 (5) ; P. S. Act, sec 40 (8) ; sec. 107, (10), S. S. Act, sec. 28 (9) ; sec, $32(5)$ : sec. 55.
High School Trustees to certify to county Treasurer the amount collected from county pupils.-H. S. Act, sec. 14 (5).
High School Trustees to petition Council for assessment for permanent improvement, $-H$ S. Act, sec. 33.
2. Last day for service of notice of appeal from Court of Revision to County Judge in Shuniah.-Assessment Act, sec. 68. (2).
3. Last day for County Clerk to certify to Clerks of local municipalities.-Assessment Ac sec. 85.
Last day for Overseer of Highways to return as defaulter, to Clerk of municipality. Residents, non-Residents, Owners, etc, who have not performed Statute Labor.-Assessment Act, sec. 101
4. Rural Public and Separate Schools open. [P. S. Act, sec. 17 ( 1 ) ; S. S. Act, sec. 79 (1). Last day for receiving appeals against the High Schools Entrance Examination.
5. Provincial Normal Schools open (second session)
6. Applications for admission to County Model School to Inspectors, due.
7. High Schools open, first term. [H. S. Act, sec. 42.] Public and Separate Schools in cities, towns, and Incorporated villages open. [P. S. Act, sec. 173 (2) S. S. Act, 79 (2).]

## * NOTICE.*

We desire to ensure the regular and prompt delivery of this journal to every subseriber, 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.

As nany people, either thoughtlessly or carelessly take papers from the Post Office regularly for some time, and then notify the publishers that they do not wish to take them, thus subjecting, the publishers to considerable loss, inasmuch as the papers are sent regularly to the addresses in good faith on the supposition that those removing them from the Post Office wish to receive them regularly, it is right that we should state what is the law in the matter.

1. Any person who regularly removes from the Post Office a periodical publication addressed to him, by so doing makes himself in law a subscriber to the paper, and is responsible to the publisher for its price until such time as all arrears are paid,
2. Refusing to take the paper from the Post Office, or requesting the Postmaster to return it, or notifying the publishers to discontinue sending it, does not stop the liability of the person who had been regularly receiving it, but this liability continues until all arrears are paid.

# HAMILTON AND TORONTO SEWER - - - PIPE COMPANY - - - 

MANUFACTURERS OF


## CUITVEIRT PIPES

## HATMILTON, ONT.

## The Standard Drain Pipe Co.

玉t. ฐัobus
3. ©.
$\cdots$ MANUFACTURERS OF 2m
Salt Glazed, Vitrified Fire Clay SEWER PIPES

Double Strength Culvert Pipes


## INVERTS, VHSES

Chimney Tops, Fire-proof Chimney Linings AND..
FLL KINDS OF FINE GLAY GOODS
Agents in every town of importance in Canada.
Send for Price Lists and Testimonials from the leading Engineers.
Agents in St. Thomas

# The Atumicipal cilorlo. <br> PUBLISHED MONTHLY. 

## ONE DOLLAR PER ANNUM IN ADVANCE SINGLE COPY IOC.

Address all communications to
K. W. McKAY, Editor,

Box 749, St. Thomas, Ont.
Communications and advertisements for next issue must be in on or before the zoth of this month

## ST. THOMAS, AUGUST 1, 1892.

Making promises in advance is a matter that every member of a municipal council should avoid. That it is done, every one knows, more especially where an official is to be appointed. It is not very encouraging to see members of councils voting without considering which applicant would be the best for the position. In many cases a dead-lock is caused simply because councillors have promised to support their candidate although other better applications are before them.

We have received a copy of the Municipal and Assessment Acts consolidated in one volumn, with index for each. The only omission we notice is that index to the Municipal Act is not alphabetical or as complete as that to the Assessment Act. Notwithstanding this, municipal officers will appreciate the publication of the acts in a separate volume.
***

It is made clear by the Election Act of $1892, \mathrm{sec} .85$, that persons are only to vote at legislative elections in the division in which they reside, if entitled to vote in such division. We agree with a correspondent who states that a person should only be entered in the list for a legislative vote in the sub-division in which he resides, and if qualified in polling subdivisions in other wards he should be placed in part two.

We have to thank a correspondent for drawing our attention to an error in the article on voters' lists published in the July number. In giving the letters that may be used to designate the qualification as owner and manhood franchise in the fifteenth line of said article, the letters " $F$. \& M. F." should be "O. \& M. F."

We have received several communications from clerks asking if anything has been done towards the formation of a Municipal Officers' Association. As far as we are aware, no action has been taken up to the present time, and it is doubtful if arrangements could be made to hold a successful meeting before next January or February, and not then unless a majority of those interested express themselves in favor of the formation of an association.

We are willing to assist in every way, but unless it is shown that such an association would be largely attended we do not propose to make any move in the matter. On a previous occasion a strong effort was made in this direction, which was an entire failure. An unsuccessful first meeting was held in Toronto, a second meeting was not attended, and we believe the officers appointed had to shoulder a large portion of the expenses in connection therewith. If those in favor of the formation of such a society would kindly send their names to the Municipal World we will keep a record of the same, and announce through our columns the number received from time to time. A correspondent in another column offers some suggestions which, if carried out, would ${ }^{3}$ no doubt result in the successful formation of an association.

Since the granting of municipal bonuses to manufacturing industries was declared illegal there is a tendency to exempt the plant of such from taxation. This is seen in Toronto and Brantford, and the idea is likely to extend. If every place carries out the principle, the relative position of the industries will not be changed, nor will the relative advantages of the towns and cities that are competing for them. The manufactories will get the benefit of this movement and other people will pay the taxes.

*     *         * 

P, H. Bryce, M. D., Secretary Provincial Board of Health, is now Deputy Reg istrar-General, and will in tuture have charge of returns under the act for registration of births, marriages and deaths. These events must be registered with the clerk of the municipality. The person to report a birth is the father or mother of child, and it must be done within thirty days. A death must be registered by the occupier of the house in which the death takes place, and the return must be made before the burial of the body. A marriage is to be registered by the clergyman performing the ceremony within ninety days. There is a penalty of twenty dollars for neglecting or refusing to make these returns within the specified time. There is no charge made for registering. Clerks make their report to the government immediately after the rst of January and ist of July.

$$
{ }^{*} * *
$$

County councils should consider the advisability of having a police magistrate appointed. If in any instancethe salary required to be paid is found to be in excess of the probable benefit to be derived there from, the government would no doubt consider a petition for an appointment at a smaller salary than $\$ 600$ per annum, or if required amend the act passed at last session to meet the views of counties desiring to take advantage of it.

This season of the year is the time to agitate doing away with statute labor. It is easy to show the difference between work under the statute labor system, and that performed by contract and the expenditure of grants from the council. We are - very strongly in favor of the total abolition of statute labor, and recommend that proceedings be taken in each township to obtain the decision of the people in reference to this important matter, that meetings should be held to discuss the question with a view to havingall improvements on roads paid for the same as other expenses of the municipality out of the general fund.

The practice of municipalities sending deputations to Ottawa and Toronto, to advocate measures that will revive their business interests at the expense of the country at large, seems to be unnecessary, and it would require a large government purse to supply all their alleged requirements.

Would it not be better to elect efficient men as representatives, and encourage them to look after the interests of their constituents? There may be special cases where deputations assist in giving important information that might otherwise be overlooked, but as a rule members of deputations have a good time at the expense of the municipality, are unable to give a definite report or any thing else, other than that the powers that be have promised to take the matter into their consideration.

## There was no Seconder.

John Barry, mayor of Comwell, an Australian mining town, had been away on leave, and, as he outstayed it, a vote of censure was passed upon him: At the next meeting of the council, he, in his capacity of mayor, directed the minutes of the previous meeting to be read, which contained the following entry:
"A vote of censure was passed on the mayor for outstaying his leave, and it was resolved to ask for an explanation."
"Who proposed this vote of censure?" inquired the mayor.
"I did," said a councillor, standing up.
"You did, did you?" continued Mr. Barry stepped from his presidential chair to the unfortunate member. "Then take that!"
With these words the mayor smote his enemy in the right eye, and felled him to the ground.
"Who seconded this resolution ?" Mr. Barry asked, quietly resuming his position.
There was no answer; the councillors were not anxious for a physical contest with so hard a hitter as their mayor.
"Who seconded this resolution?" he asked again.

Still there was no reply.
"Then," said the mayor, taking up his pen, " as there is no seconder, it's informal. Scratch it off the minutes."


To the Editor of The Municipal World:
Dear Sir,-In your last issue you refer to the practice of riding bicycles on sidewalks and conclude your article by saying, " as the bicycle has evidently come to stay, the sooner those using the machines know their position in reference to the use of sidewafks, the better, not only for themselves, but the public generally."
I am sure in thus stating the matter you will meet with the approval of the Canadian Wheelmen's Association. This body, which includes all the leading clubs in the Dominion is a most powerful one, as is instanced by the manner in which they defeated a bill introduced in the legislature by Mr. Davis, of North York, some two years ago, with a view to restricting their rights as vehicles upon the highway. It has always decried sidewalk riding, and no bicyclist who does so and incurs damages, or punishment, will meet with any sympathy from the assuciation. Indeed there is no reason, in my opinion, for riding upon a sidewalk at all, unless the road is impassible. In the event of a collision, in all likelihood, the bicyclist will come out second best, and none but new and ignorant riders, whose conduct frequently brings the sport into disrepute, will be found doing so.

This year the association, following on the footsteps of similar bodies in both England and the United States, has formed a road improvernent committee, under the chairmanship of W. Kingsley Evans, of London, Ont. The duties of this committee are to bring to the attention of councils, and the public gererally, the disadvantage and loss to all concerned of having poor roads. The interests of wheelmen in this direction are the same as the farmer and the merchant, and I am sure Mr. Evans will do all in his power to urge on the good work.

In conclusion let me say that every cyclist who has toured to any extent will undoubtedly say that our main travelled roads in Western Ontario, such as Talbot street from St. Thomas to Windsor, and the London and Sarnia gravel road, are much superior to similar roads in Michigan and New York. Still, much remains to be done in road improvement, and much can doubtless be achieved by doing away with the wasteful and patchwork method of statute labor now practiced and the adoption of a systematic and practical method of improving our country roads.
Mr. Evans will, doubtless, soon be in a position to supply literature in regard to the matter, and the C.W.A. may be depended upon to do its share in helping on this grand work. Yours truly,
W. W. Owens.

Forest, Ont., July 9th, 1892 .

## Clerks' Salaries.

To the Editor of The Municipal World
Dear Sir,-With your permission I would like to say a word among the rest, about clerks' salaries. I agree with your correspondent that municipal clerks as a rule receive rediculously low salaries for the amount of work they perforn, that there is little chance of any remedy unless the legislature should pass an act fixing a scale by which clerks' salaries shall be guaged. But I think a lower scale than that suggested would very materially advance the salaries in most cases. I think the following would be a fair arrangement: For the first 200 names on the assessment roll, $\$ 50$ per 100 ; for the next 600 names $\$ 25$ per 1oo, names to be counted by twenties, thus 200 names or more up to $220, \$ 100 ; 220$ or more up to $240, \$ 110$, and so on.

Your next correspondent, signing himself " Reeve," furnishes an illustration of the necessity of the legislature passing an act fixing clerks' salaries. It is all very well for taxpayers having "a right to have all these things to deal with," so long as they have any idea of the work to be performed, which not one in fifty has. A very intelligent taxpayer said to me the other day "I suppose you have quite a bit of work after each council meeting," and that is the idea a great many have of a municipal clerk's work; they know nothing about the work of copying rolls, making schuol section rolls, voters' lists, bylaws, and so on, to say nothing of correspondence replying to enquiries, some of which involve a considerable amount of search, which all takes time.

And this is just where the difficulty comes in. "Reeve," and "Councillor" as well, are afraid to do justice to the clerk, even if they have a proper idea of the amount of work he performs, lest the formidable "taxpayer" (who is also a voter) may not approve. Now, I do not think that any one man has a right to one cent of the taxpayers' money that he does not honestly earn; and the legislature has taken every precaution, as far as acts of the legislature can prevent anyone from taking the taxpayers' money without giving a fair equivalent; at the same time, I believe that taxpayers have no right to the services of any one man, either as clerk or in any other capacity, without giving fair remuneration for it, and I think the legislature has as much right to interfere in one case as in the other.
Another thing I would like to refer to, while writing, is that of municipal clerks' conventions, and would suggest that the clerk of each county call a meeting of all municipal clerks in the county, and at meetings so called delegates be appointed to attend a provincial convention. It would have been a good thing if arrangements could have been made to hold a provincial meeting during the industrial
exhibition exhibition in Toronto.

Clerk

## A Municipal Association.

To the Editor of The Municipal World :
Allow me to congratulate you on the appearance of your paper, which I hope is as much appreciated in other parts of the province as it is in this county. It cannot help but be of great assistance to any one engaged in municipal matters, be they ever so well posted.

I have been thinking for some time of the best plan on which to organize an association of municipal officers, and have read with interest what has been said both in the Miscellany of last year, and The Municipal World in reference to the matter. One of your correspondents refers in the April number to the formation of a Municipal Clerks' Association in the county of Wentworth, and mentioned some of the benefits derived therefrom. If such an association was formed in each county, I think there would not be much trouble in organizing a provincial association, and until that is done I do not believe it would be advisable to endeavor to arrange for a general meeting unless a number of those who would be eligible for membership signify their approval of the same. My idea is that all clerks would not be able to attend, no matter when or where the meeting was held. That if an association was formed in each county matters of local interest could be considered and assistance offered to those destring it, the county associations could discuss the formation of a provincial association and delegates be appointed from each to attend the same. All municipal clerks would, of course, be as eligible as the delegates appointed.

Another matter that I think should be considered is that in the formation of a society of this kind the membership should not be confined to municipal officers alone, but should include the members of councils. There is an educational association in successful operation, its members being composed of the teachers and trustees of the schocls of the province, and to make any municipal officers' association a success, itshould include in its membership all those interested in municipal work. At a meeting of a general society, such as I propose, the municipal officers could form a society to further their own interests in particular, and representatives from rural and urban municipalities could each have a section which would be devoted to their special interests, and anything the different sections would have to suggest could be brought before the general meeting, and if concurred in would have considerable influence in bringing about desired amendments and improvements in municipal laws.
"W. L. H.," in a letter in the May issue of your paper, favors the formation of a provincial association first. I cannot agree with him in this, which I think will be readily understood from the above.

I also notice that some clerks are writing in reterence to legislation to increase (Continued on page roz.)

## Model City Government.

Under a recent charter a new plan of responsible government was introduced into the city of Cleveland. The council was reduced in numbers and devoted by statute to legislative functions, but the mayor, who was required to execute the laws, was provided with a cabinet of six members to assist him. These ministers, as they may be called, are heads of the six departments into which the executive business of the city is divided, viz. Public Works, Law, Accounts, Police, Fire and Charities. The director of public works has charge of all street improve-, ments, street cleaning, waterwcrks, sewers ${ }_{\text {s }}$ bridges and parks ; the director of law $i^{5}$ corporation counsel ; the director of $\mathrm{ac}^{-}$ counts is comptroller; the director of police has the management of the police force and health office ; the director of fire manages the fire department; and the director of charities has charge of the workhouse, infirmary, hospitals and cemeteries. In these six directors and the mayor is vested all the power before divided between thirteen boards of from three to five members each. The mayor is paid $\$ 6,000$, the director of law $\$ 5,000$, and each of the other directors $\$ 4,000$ a year salary. Now, the first result of the new system, which came into operation twelve months ago, was the awakening of the public to the importance of the mayoralty. The office had become one of great responsibility, and a good man had to be chosen for it. A good choice was made ; and the mayor, also appreciating his responsibility, selected with great care the best possible officers to act under him as advisers and departmental heads. The first year of this new system of municipal government closed a few days ago, and the results are such as may well lead other cities to wish to follow in the footsteps of Cleveland. The expenditure has been greatly reduced while the effective work done has been enormously increased, which of course means that a large amount remains in the pockets of the citizens, which under ordinary circumstances would have been withdrawn from them.

## Interesting Items from Council Proceedings Throughout the Province.

At the last session of the Middlesex county council a motion by Messrs. Gibb and Douglas was carried to have the council petition the provincial legislature to reduce the number of county councillors by dropping all deputy-reeves and giving the reeves of each municipality a vote for every $\$ 200,000$ or any fractional part thereof; and that the clerk forward copies of the petition to all county clerks in Ontario, with a request to have the matter laid before the council. The question of having two police magistrates appointed for the county, as provided for n act passed at last session of the Legis-
lature, was laid over until next meeting of the council.

The county council of Grey has appointed a committee to consider reduction of number of members of county councils. The question of establishing a House of Industry for this county was voted down at last session of the council. After a lengthy discussion, it was shown that over $\$ 29,000$ had been spent during the last ten years by local municipalities for support of indigents, and that there were thirty-nine persons in the county eligible for admission if the House was erected.

The county council of Bruce has decided that all taxes for county purposes be raised on land values, with the exception of five per cent. on personalty.

## A Doubtful Plan.

A resolution in favor of having the law changed, so as to cut down the number of members of county councils to one from each minor municipality, but allowing a representative to vote for each one hundred ratepayers he represents, was introduced at last session of the Ontario county council. The editor of the Whitby Chronicle expressed our opinion when he states that the great difficulty about passing measures effecting representation either in parliament or the county council, is that the county and township lines, as arranged many years ago, are in the way. Every little county and municipality wants to preserve its name and represeniation, and if this must continue there is no way but for large counties and municipalities to split up and have more than one member each. No reform in this connection will be permanent until all county and township lines are blotted out, and districts arranged on a basis of population, both for councils and parliaments.

St. Thomas city council have decided to make the taxes payable on Oct. Ist., and on all general taxes paid from that date to the zoth October a discount of two per cent. will be allowed; on all taxes paid after Oct. 20th and before December 2oth, no discount is to be allowed, but the full value demanded, and on all taxes not paid on or before December 20 th, five per cent. is to be added.

The council of Owen Sound have passed a by-law in reference to the use of bicycles on sidewalks. The Times says: The by-law provides that no one shall ride a bicycle on the sidewalks of Poulett street between Union street and Division; no bicycle on any sidewalk shall be driven at a faster rate than five miles per hour ; bicyclists overtaking pedestrians must warn them of their approach, and must turn out to the left hand side; a bicyclist falling to attract the attention of a pedes-
train when overtaking one, shall dismount and wheel his bicycle past.

A special committee appointed by the Kingston board of health have reported, recömmending changes necessary to improve the sanitary condition of the county gaol and court house. A copy of the report has been sent to Dr. Chamberlain, inspector of prisons, and unless the county council attend to the matter the government will no doubt be requested to take action towards enforcing the necessary work. County councils are sometimes very backward in making improvements around the county buildings, but we think there should be no excuse for leaving them in an unsanitary condition, especially when located in cities where water supply and connection with sewers is easily obtained. We know of some instances in which the government has taken action in matters of this kind, and councils in nearly every instance resented the interference with what they considered their own business. Whether they were right in so doing we are not in a position to say, but while county councillors are elected for a term of one year only, new committees will generally have charge of the county property every year, with the result that the ideas of many men who have no special information are to be seen in connection with the repairs and improvements made in and around many of our public buildings, especially those of counties. If, instead of making improvements in this way, committees were to have comprehensive plans made by a professional man who thoroughly understands the work to be undertaken, considerable benefit would be derived therefrom. Although the work might not be completed in one year, new committees would know exactly what was proposed by their predecessors, and when compteted the work would be very much more in the interests of municipalities than when done in accordance with the views of the members of different committees appointed from year to year.

Judge Rose told a Coburg jury that he thought it would be wise to withdraw the maintenance of some of the public buildings from the county councils and place them in the hands of commissioners appointed by the provincial government to be responsible for the proper application of the moneys. These remarks were called forth by the insanitary condition of the county buildings, which have duplicates in many parts of the province.

The Municipal Miscellany, lately published by Mr. George E. Neilson, at Arnprior, has now merged into THE Municipal World, issued from St. Thomas, Ont. It is spicy and neat in its literary and mechanical execution.- [Renfrewe Journal.

Treasurers and Their Security. II.

In the March number we referred to guarantee companies security as preferable for municipal treasurers. The return recently ordered by the legislature will show the amount of the defalcations of municipal treasurers that have taken place from 187 I to the present time, with the amount municipalities have either lost or received from their defaulting treasurer's bondsmen. This will no doubt be the means of suggesting legislation to place municipal treasurers as independent of their friends as other officials. It is simply a matter of business that councils should secure themselves against possible loss from a treasurer's defalcation. This cannot be done while private security is accepted.

Treasurers, as a rule, receive little enough pay, when the responsibility connected with the office is considered. A man in order to hold the position of muncipal treasurer should not be required to place himself under obligation to others, for the benefit of wealthy corporations. The desire for office is so great that there is no difficulty in securing officers at the salaries paid, who are willing to furnish this security. Many councils who have employed officers at low salary, and accepted private security, have in reality paid through losses many times what they would have been required to pay had they secured themselves in a business way in a recognised guarantee company. Councils can hardly avoid taking advantage of the large number of applications that present themselves when a position becomes vacant.
Private parties who sign treasurer's bonds think they are doing them a favor, where in reality the benefit is really derived by the corporation. Bondsmen, if so inclined, can place a treasurer in a very unpleasant position, by requesting temporary accommodation out of cerporation funds, and if refused they can notify the council without explanation that they wish to have their names withdrawn from the bond. This might suggest that all was not right, and prevent the treasurer from getting other security. If he desired to continue in the office, he would have to procure a guarantee bond, but as in most instances the premium required would be more than the salary paid, there would be no alternative but to resign.

Some plan should be devised whereby treasurers could hold office, not at the pleasure of both council and security, but of the council alone. Councils should be required to pay treasurers according to security furnished, and allow them in ad dition a reasonable percentage on the amount of money handled for the work and responsibility connected therewith. The bill just passed, to require auditors to examine and report on the sufficiency of treasurers' security, is a move
in the right direction, and will do much towards placing the security required by municipalities from the treasurers on a business basis.

The rate charged by guarantee companies doing business in Ontario for bonds for municipal treasurers is from oneto four per cent. per annum. The rate depends very largely on the way the business of the municipality is conducted, and the ability and financial standing of the treasurer himself. This rate may seem high,
but it is doubtful if but it is doubtful if in some municipalities companies would issue a bond at all, owing to the loose way in which the financial business is conducted.

The ratepayers of the township of Euphemia have decided not to exact the payment of $\$ 2,700$ from the sureties of the late treasurer of that township, since the auditor's reports did not show the true condition of the accounts owing to the manner in which certain moneys were borrowed by the reeve.

$$
{ }^{*} * *
$$

The referee appointed to ascertain the correct amount of deficit of the ex-treasurer of the county of Essex has completed his work. He finds that in 1876 there was a deficiency of $\$ 8,020$ and that at the present time the amount is $\$ 22,958$. The solicitor employed in behalf of the county has been instructed to proceed with the suit against the ex-treasurer, and to bring on the suits against the sureties.

At last meeting of the Kent county council, the report of committe on the matter of the ex-county treasurer's deficits was submitted. The committee had had overtures made on behalf of the sureties of the ex-treasurer, looking toward a settlement of the case, and had consulted the company's solicitor who had advised them they had power to compromise. The sureties had at first offered $\$ 2,000$ in settlement of all claims on them, but the offer was not entertained. They now proposed without prejustice, to pay $\$ 3,000$ and their costs. Committee considering that nothing short of $\$ 5,000$ should be accepted, and asked for power to settle the account on that basis. The total amount of defalcation was stated to be $\$ 6,154$.

## Collector's Rolls.

After the council has passed a by-law fixing the rate, the clerk can proceed with the completion of the collector's roll, and as provided in section 119, of the assessment act, he is required to set down in one column the amount ordered to be levied for county purposes and in another column the amrount raised for township, village, town or city purposes, as the case may be. In the column for special rates should be entered all debentures and other ${ }_{5}{ }^{\text {pecial rates. }}$

It is difficult to suggest anything that would materially assist clerks in making these entries. Our practice is to prepare a table containing, in the order of the columns in the collector's roll, the different rates required to be entered opposite the name of each person. Clerks who have not heretofore adopted this plan will find that the rates can be entered more correctly and in a shorter time than when each is taken separately. The tableshouldinclude the county, township and general public school rate, and any other rate that is levied generally throughout the municipality. It is the custom in many municipalities to enter in the roll, but one amount for all of these different rates. The section referred to, requires all rates to be entered separately so that ratepayers will know under what authority the taxes to be paid are levied, it is also sometimes very useful in giving information.
Every collector's roll is required to be completed and balanced on or before the first day of October, and a summary showing the total of the different rates entered therein; and should be handed to the treasurer of the municipality before the roll is placed in the hands of the collector, and the treasurer should charge the collecter with the total ampunt on the roll, and credit the different accounts for which special rates have been raised, with the amount entered in the roll for each.

Councils should see that the collector's bond is properly drawn up, signed and deposited with the clerk during this month.

A question that may arise in the preparation of collector's rolls is, should $\$ 150$ or 200 be raised in accordance with section $\$ 109$ of the Public Sctools Act for a school section in which two schools are situated? We are of the opinion that each school should be considered the same as if it belonged to a separate section.

Separate schools supporters, and the ratepayers in union sections, composed of part of a township, and a village or town are not required to pay this general public school rate or receive any benefit therefrom.

The New York Reconder keeps a regular force of street cleaners employed on the city's streets to show the officials how street-cleaning sught to be done. Each workman wears a jacket on which the word "Recorder" is displayed in big letters, so that the enterprise has somewhat the character of an advertisement.

This suggests a good way to get a city's streets cleaned without expense to the taxpayers. Let patent-medicine firms and other big advertisers be given the privilege of sending out gangs of workmen with advertisements on their coats, on conditions that a certain amount of pavement shall be cleaned by each man. This would be a beiter way of advertising than sending men along the streets with transparencies. The street-cleaners might be adorned with theatre lithographs, the license of the bill-boards being revoked. Thus might the streets of a great city become a thing of eauty as well as a joy forever.

## ENGINEERING DEPARTMENT.

## A. W. CAMPBELL

p.L.S., C.E., A.M.C.S., C.E.,

Editor.

## Light and Water.

The experience of water companies and municipalities that have put in an electric light plant in connection with their water works, has been such as to justify the assertion that electric lighting can be profitably supplied from the same plant as that now in use for the distribution of water. In localities where the quantity of horsepower, from water or steam, is more than sufficient for the pumps, and even where a small increase of power is necessary, these twin industries can be made financially successful. It is therefore a problem that water companies and municipalities should give attention to.

The power now utilized by the pumps varies according to the draft upon the supply pipes. For electric lighting the power must be absolutely steady. This is the first fact to take into consideration. The next is the source of supply of such power. If it be by water, it must be settled beyond a doubt that, at the minimum stage, there will always be enough and to spare to run both the pumps and the dynamos. This is more important with water than steam, as in the latter it is simply a question of increase of facilities, while with the former the amount of water is a fixed quantity varying only as to stages.

Where water stations are provided with duplicate apparatus, a further draft of power should be considered, as it might sometimes occur that all of the machinery in the station might be running at the same time. This might not occur in some stations, possibly not at all. But it is well always to consider the maximum demand and the minimum supply.

Water power has of late taken its welldeserved place at the front as an electric generator. When the wheels are properly governed, it furnishes the best, as well as the most economical power. An additional element which attracts attention to water power is, that distance within reasonable bounds is no barrier to its use. The wheels can be located wherever the fall may be and the current thus generated may be brought to the waterworks stations and there utilized, the same as if generated within the station. It is simply a matter of per cent. of loss, which may be made large or small, according to the means of transmission used, and the value of the power. It is not known that there are in existence any water pumps driven by electric currents, but several are being planned and no doubt will be in successful operation within the year. Electric motors have heretofore been confined to small
horse power, but the time has come when a greater amount of energy will be supplied in a small number of units and the horse power of the motor raised very largely.

In electric lighting, where the water station and the lighting plant are combined, there is a productive field to be entered. Public street lighting can be done cheaper than by a company, where the plant is separated from other stations. Private or commercial lighting can be done with the same relative economy. The Heisler system, of St. Louis, and the Indianapolis Jenny company, of Indianapolis, the former furnishing incandescent lights, and the latter arcs, have given special attention to the combination of water and light, and it is a question that is daily becoming more apparent to water companies who desire to increase their revenues, as well as new companies being formed with a like desire.

The same idea can be used where there is an electric railroad now running, or where there is a probability of one being organized. The local water company should give the subject prompt attention and en deavor to cover the entire field, with its present or increased facilities.

## Drainage. <br> III.

Whether drains should run up and down the slope of the hill, or directly across it, or in a diagonal line as a compromise between the first two, are questions which the beginners in the art and mystery of drainage usually discuss with great zeal. It seems so plain to one man, at the first glance, that in order to catch the water that is running down under the soil upon the subsoil from the top of the hill to the bottom, you must cut a ditch across the current, that he sees no occasion to examine the question further. Another, whose idea is to catch the water in his drain before it rises to the surface as it is passing up from below or running along on the subsoil and keep it from rising higher than the bottom of his ditch, thinks it quite as obvious that the drains should run up and down the slope, that the water once entering, may remain in the drain, going directly down hill to the outlet. A third hits on the keythorp system, and regarding the water asflowing down the slope under the soil in certain natural clannels in the subsoil, fancies they may best be cut off by drains in the nature of mains running diagonally across the slope.

These different ideas of men, if examined, will be found to result mainly from the different notions of the underground circulation of water.

To drain land effectually, we must have a correct idea of the sources of the water that makes the particular field too wet, whether it falls from the clouds directly upon it, or whether it falls upon land situated above it and sloping towards it, so that the water runs down as upon a roof from other fields or slopes to our own; or wheth-
er it gushes up in springs which find vent in particular spots and so is diffused through the soil.

If we have only to take care of the water that falls on our field from the clouds, that is quite a different matter to draining the whole adjoining region, and requires a different mode of operation. If your field is in the middle or at the foot of an undrained slope from which the water runs on your land or soaks through it towards some stream or swamp below, provision must be made not only for drainage of your own field but also for partial drainage of your neighbor's above, or at least for defence against his súrplus of water.

The first and leading idea to be kept in mind as governing this question of the direction of drains, is the simple fact that water runs down hill, or to express the fact more scientifically, constantly seeks a lower level by force of gravitation, and the whole object of drains is to open lower and still lower passages into which the water may fall lower and lower until it is discharged from our field at a safe depth.

Water goes down, then, by its own weight. Unless there is something through which it can readily pass to bring it out at the surface, it will go into the drains only because they are lower than the land drained. It will never go upward to find a drain, and it will gotowards a drain more readily in proportion as the descent is steep towards it.

To decide properly what direction a drain should have, it is necessary to have a definite and correct idea as to what office the drain is to perform, what water is to fall into it and what land is to be drained.

Suppose the general plan be to lay drains forty feet apart and four feet deep over the field, the question to be determined is as to the direction, whether across or up and down the slope, there being fall enough to render either course practicable. The first point of inquiry is what is expected of each drain? How much and what land it should drain? The general answer must be forty feet breadth, either up and down the slope, or across it, according to direction. But we must be more definite in our inquiry than even this. From what forty feet of land will the water fall into the drain? Obviously from some land in which the water is higher than the bottom of the drain.

If, then, the drain run, directly across the slope, most of the water that can fall into it must come from the forty feet breadth of land between the drain in question and the drain next above it. If the water were falling on an impervious surface it would all run according to the slope of the surface, in which case no drains but those across could catch any of it except what fell upon the drains, but the whole theory of drainage is otherwise and is based on the idea that we change the course of the underground flow by
drawing out the water at given points by our drains, or in other words that "the water seeks the lower level in all directions."

There is but a very small advantage in theory in favor of either system in soils which are homogeneous. But it must be borne in mind that homogeneous soil is rather the exception in nature than the rule. Without undertaking to advance or defend any peculiar geological views of the structure of the earth, or of depositions or formations that compose its surface, it may be said that very often the first four feet of subsoil is composed of strata or layers of earth of varying porosity.

Beneath sand will be found a stratum of clay, or of -compact or cemented gravel, and frequently these strata are numerous and thin. Indeed, if there be not some stratum below the soil which impedes the passage of water it would pass downward and the land would need no artificial drainage. Quite often it will be found that the dip or inclination of the various strata below the soil is different from that of the surface.

The surface may have a considerable slope while the lower strata lie nearly level, as if they had been cut through by artificial grading.

This is applicable only to land of peculiar structure, but there are reasons for selecting the line of greatest fall for the directions of the drains which are applicable to all lands alike.

The line of the greatest fall is the only line in which a drain is relatively lower than the land on either side of it. "Whether we regard the surplus water as having recently fallen on the field, and as being stopped near the surface by an impervious stratum, or as brought down on the strata from above, we have it to be disposed of as it rests upon this stratum, and is borne out by it to the surface."

If there is a decided dip or inclination of this stratum outward down the slope it is manifest that the water cannot pass backward to a cross drain higher up the slope. The course of the water must be downward upon the stratum on which it lies, and so all between two cross drains must pass to the lower one. The upper drain could take very little, if any, and the greater the inclination of this stratum the less the flow backward.

But in such case a drain down the slope gives to the water borne up by these strata an outlet of the depth of the drain. If the drain be four feet deep, it cuts the water-bearing strata each at that depth, and takes off the water.

In these cases the different layers of clay or other impervious "partings" are like the steps of a huge stairway, with the soil filling them up to a regular grade. The ditch cuts through these steps, letting the water that rests on them fall off at the ends instead of running over the edges.

Drains which run across the slcpe have been significantly called "mere catchwaters."

If we wish to use water to irrigate lands we carefully conduct it along the surface across the slope and allow it to flow over and to soak through the soil. If we desire to carry the same water off the field, as speedily as possible, we must carry our surface ditch directly down the slope.

Now, looking at the operation of drains accross the slope, and supposing that each drain is draining the breadth next above it, we still suppose the drain to be running full of water. What is there to prevent the water from passing out of that drain in its progress at every point of the tiles and so saturating the breadth below it? Drain- $\mu$ ipes afford the same facility for water to soak out at the lower side as to enter at the upper and there is the same law of gravitation to operate in each case.

Allusion has been made to cases where we may have to defend ourselves from the flow of water from higher underdrained lands of our neighbor. To arrest the flow of mere surface water, an open ditch or catch-water is the most effectual, as well as the most obvious, mode. There are many instances in Canada where lands upon the lowest slopes of hills overflowed by water, which fell high upon the hills, and after passing downward till arrested by rock formation is borne out again to the surface in such quantity as to produce just at the foot of the hill almost a swamp. This land is usually rich from the use of the hills, but full of cold water.

To effect perfect drainage of a portion of this land, which we will suppose to be a gentle slope, the first object must be to cut off the flow of water upon or near the surface. An open ditch across the top would most certainly affect this object, and it may be doubtful whether any other drain would be sufficient. This would depend upon the quantity of water flowing down. If the quantity be very great at times a part of it would be likely to flow across the top of an underdrain from not having time to percolate down to it.

In all cases it is advised, where our work stops upon a slope, to introduce a cross-drain connecting the tops of all minor drains. This cross drain is called a header. The object of it is to cut off the water that may be passing along in the sub-soil down the slope and which would otherwise be likely to pass downward between the system of drains to a considerable distance before finding them. If we suppose the ground saturated with water and our drains running up the slope and stopping at four feet depth, with no header connecting them, they, in effect, stop against four feet head of water, and in order to drain the land as far up as they go, must not only take their fair proportion of water which lies between them, but must draw down this four feet head beyond them. This they cannot do be-
cause the water from a higher source, with aid of capillary attraction and the friction or resistance met with in percolation, will keep up this head of water far above the drained level.

In railway cuttings, and the like, we often see a slope of this kind cut through, without drying the land al ove the cutting, and if the slope be disposed in alternate layers of sand or gravel and clay, the water will continue to flow out high up on the perpendicular bank. Even in porous soils of homogeneous character it will be found that the head of water, if we may use the expression, is affected but a short distance by a drain across its flow. Indeed the whole theory as to the distance of drains apart rests upon the idea that the limit to which drains may be expected to effectually operate is at most two or three rods.

Whether in a particular case a header alone will be sufficient to cut off the flow of water from the higher land, or whether in addition to the header an open catchwater may be required, must depend upon the quantity of water likely to flow through or upon the land. An underdrain might be expected to absorb any mederate quantity of what may be termed drainage water, but it cannot stop a river or a mill stream, and if the earth above the tiles be compact even water flowing through the soil with rapidity might pass across it. If there is reason to apprehend this, an open ditch might be added to the header, or, if this is not considered sufficiently scientific or in good taste, a tile drain of sufficient capacity may be laid with the ditch above it carefully packed with small stones to the top of the ground. Such a drain would be likely to receive sand and other obstructing substances as well as a large amount of water, and should for both reasons be carried off independently of the small drains, which would thus be left to discharge their legitimate service.

Where it is thought hest to connect an open or surface drain with a covered drain it will add much to its security against silt and other obstructions to interpose a trap or silt basin at the junction and thus allow the water to pass off comparatively clean. Where, however, there is a large flow of water into the basin it will be kept so much in motion as to carry along with it a large amount of earth and thus endanger the drain below unless it be very large.

## Apportionment of the Cost of Drainage Improvements.

In considering the just apportionment of the cost of drainage, it is safe to assume that the principle laid down by the drainage law of Illinois, that the costs should be apportioned according to the benefits, is, in the main, the correct one. This assumption is no help toward the solution of the real question, which then becomes, How shall we classify justly the
benefits accruing from the proposed system of drainage? However carefully this classification may be made the result will only approximate exact iustice.

While we may profitably discuss the principles involved, each separate case must be decided on its merits, and will be modified, more or less by many considerations, among which we may mention, first, the lay of the land, whether very level, full of pond holes or rolling; second, whether the tract lies near the ditch or remote from it; third, the nature of the soil, whether porous or heavy; fourth, the nature of the subsoil, whether gravelly or hard pan; fifth, whether the district contains ponds of stagnant water, rendering the country unhealthy, which will be removed by the proposed system; sixth, the changing of the location of the ditch from the old channel or the cut-off; seventh, the benefit to highways, railroads and villages.

All these questions arise, and in some cases they are so closely connected with each other that it is difficult to discuss each independently of the other.
I. In a district where the land is comparatively level the quality of the soil is uniform, and where the system contemplates constructing an outlet from every tract of land in the district, the labor of classifying is comparatively easy. In one such district with which the writer is acquainted, all the land in the district is classified at 100, and no appeals were taken, though the district was obliged to pay $\$ 2.400$ to a lower district for an outlet. If a portion of a tract is rolling and the remainder low and wet, the area of the wet land should be carefully estimated, also the area partially benefited, with the percentage of benefits the higher lands will receive. This only can be known by a knowledge of the nature of the soil and subsoil and the elevation. Those lands should not be taxed which lie high enough not to leave the proposed ditch for an outlet for their drains, unless they are themselves wet and swampy or are in the vicinity of the ponds of stagnant water which the proposed drainage scheme will remove and thereby render the vicinity more healthful.
2. When the system contemplates only a main ditch, leaving the branches to be constructed at a future time and some of the tracts are quite remote from the ditch, I know of no better way than to classify as though each tract was to have an outlet, estimate the cost of building outlets to each tract,add this cost to the engineer's estimate, then give those tracts lying away from the ditch credit for the amount necessary to construct an outlet for them When these branch ditches cross two or more tracts of land, the credits allowed to each should be in proportion to the bene fits received by each from the proposed branch, the benefits, all other things being equal, would be in direct proportion to the use made of the ditch by the several tracts. Many of these branch ditches will
be of large tile, and frequently would not be used by the tract nearest the main ditch, except to drain the narrow portion of the tract through which the tile passes.

3 and 4. The nature of the soil and subsoil should have its influence in the classification, for a tract of land having a gravelly or sandy subsoil and a porous surface-soil will be much more benefited than a stiff clay with a hard pan subsoil, as in the former case an entire tract may sometimes be throughly drained by one ditch, while in the latter thorough drainage will only be accomplished by a large outlay for tile drains. Again, a tract of land not entirely reclaimed may receive as great a percentage of benefits as another tract for which the proposed ditch will give an ampleoutlet for the complete tile drainage, the percentage of benefits being measured by the enhanced value of the land.
5. While there may be a question in the minds of some, the writer has no hesitation in saying that improved sanitary conditions are proper subjects to be considered in apportioning the cost of drainage improvements, for there is nothing that will enhance the value of our wet and swampy land more quickly and surely than a knowledge that the cause of malarial diseases has been removed. But,while I think that the greater healthfulness of a country should be classed as a benefit, there is probably no one thing that is more variable, for it is well known that there is some land almost uninhabitable on account of the presence of malarious and kindred diseases, other tracts equally flat are almost entirely exempt from them. At any rate the percentage of benefits must depend entirely upon the judgment of the engineer, aided, as it should be, by a full knowledge of the facts of the case.
6. In laying out a system of drains the engineer will frequently find that the system can be made more efficient by strengthening the old channel, or perhaps by changing the outlet, or by shortening the course to the outlet by a cutoff through a bank. These cutoffs usually add very much to the value of the ditch by leaving the farm land in better shape, by giving a more rapid fall to the ditch, and by shortening very much the distance. They sometimes add somewhat to the cost by requiring a greater depth of excavation in places, though this latter is usually over-balanced by the decreased distance and the diminished size of the ditch owing to the greater velocity of the flow. These cutoffs usually modify the benefits to a certain extent, but the same principles will control, as in other cases, except where the water is taken entirely out of the old channel and carried by a new outlet to another stream. In that case, lands lying along the channel and below the outlet of the proposed ditch should be taxed for benefits from protection from overflow, but the percent. of benefit can only be determined by a thorough knowledge of the facts in each particular case. This know-
ledge should include the extent of the overflow as nearly as may be, by a careful examination of the lay of the land, and a knowledge of the soil, for we find some lands that are badly overflowed at times have natural drainage so that the lands will be good if the overflow can be turned away, while others are springy,so that they must be drained to be of much value.
7. How highly lands should be taxed for prevention from overflow, and how far down the old channel such tax should be allowable, can only be determined by a special knowledge of the particular case.

The rule laid down in the drainage law that highways and railway companies shall pay towards the construction of a ditch the same proportion that its benefits bear to the total benefits in the district, though leaving a wide margin for the difference of opinion as to values, is without doubt correct in theory, and will be as correct in practice as the judgment of the engineer. Where a drainage district includes a town or city, the rule for taxing the corporation for benefits for street, or as an outlet for sewers, would be the same as for highways and railways, while the property owners would be subjected to taxation for benefits to their property the same as farm lands, though the measure of value would be different.

In this question there are certain principles involved, some of which I have endeavored to discuss. A knowledge of these, together with a knowledge of the law; a thorough knowledge of the proposed system and a careful study of the topography and soil of each particular tract in the district, and a sound, unbiased judgment, form the qualifications necessary to a just apportionment of the cost of drainage, and I would adhere as closely as pos* sible to the theory of the law that the cost of the drainage sbould be in direct proportion to the benefits to be given, and endeavor to find out as accurately as possible the actual benefits that will accrue to each tract of the proposed improvement.
(To be Continued.)
The Municipal Miscellany has been renamed The Municipal World, and commences this year with the promise of great efficientcy in its field. Its usefulness will no doubt be extended, the paper coming under new management. Besides editorials on live municipal topics, the engineering, legal and municipal management departments are in good hands and as a medium for municipal officers it ought to have a wide circulation. Published at St. Thomas, Ont., at $\$ 1.00$ per annum in advance.-Barrie Examiner.

The Municipal World for May is at hand. It is replete with information on municipal matters, and should be in the hands of every municipal officer. Every council and public school board should subscribe for one or more copies.-Stouffville Tribune.

## Water Supply.

vi.

## Waste of Water in Cities.

The enormous waste of water in cities arises from many causes : leaky mains and pipes, defective appliances of all kinds, lack of supervision of public openings, and the perpetual flow from horse troughs, barrooms, hotels, private houses, etc. Ir addition, is the immense loss through factories and mills where the pipes are constantly flowing, and which do not even shut off the water when the works are closed.

There are but two practical methods of checking this waste, viz., by a system of inspection and enforcement of penalties, and by measuring and charging for the quantity taken. The former plan involves domiciliary visiting, always cumbersome and objectionable, by an army of inspectors, subject to both obstruction and improper influences in the discharge of their duties, and unless thoroughly systemized and maintained and aided by indirect instrumental determinations, is, in the nature of things, an approximation only to an effective method.

Actual measurement is preferable, as being more exact, automatic, effective and equitable. The water metre is merely a sleepless and tireless machine, not susceptible to bribery or violence, without discovery, requiring little attention, and recording actual consumption, regardless of the disposition made of the water which passes through it.

The two systems may be compared by supposing a given establishment to be furnished with gas at an annual rental and its economical use depending upon the carefulness of the occupants and an occasional visit by the inspector.
It is sometimes said that water should be "free as air," and in truth it is to anyone who chooses to procure it for himself, as light is free to him who goes to bed at dark; but he who wishes either light or water supplied to him, when and where, and in such amount, as he shall choose, must manifestly pay for it, and the metre will enable the department to make out just bills, and at the same time hold the watertaker responsible for the waste due to carelessness, wilfulness or defective appliances. When this system has been intelligently carried out, as in some of the better managed cities, the results show that the legitimate consumption of water for all purposes is from thirty to forty gallons. The argument that an undesirable economy might be exercised among a class of the population whose use of water should be encouraged, may be met by fixing a minimum allowance and charging by metre for all beyond that.
It is natural, perhaps, that city officials should turn their attention to drawing from new sources and increasing the machinery of their department, rather than undertake the unpopular and thankless task of
restricting waste. No one knows, who has not attempted it, how difficult is it to correct abuses of long standing. Few citizens are intelligent or liberal enough to voluntarily aid in securing a public benefit or necessity, if it must be accomplished at the cost of any inconvenience or restriction to themselves. Touch the pursestring, however, and it can be done. With the metre, registering waste, defective appliances will be repaired ; and carelessness of servants and employees corrected, and water closet will have a proper flushing tank instead of a constant flow, and the water will not be used in winter to protect a badly-laid pipe from freezing or the owner from a plumbing bill.
The waste from these sources, though of no great amount in a single instance, when multiplied by the immense number, represents a formidable quantity, which having been brought at great expense from the source of supply, flows to tide-water without having served any useful purpose whatsoever.
There are numerous patents for water metres, and no one is yet fully perfected and adapted to all localities, but there are three or four which, in service, have proved themselves useful and satisfactory machines when properly applied, and no other system has yet been discovered so simple and effective to restrict waste and systematize the business of furnishing
water.

## Roads and Roadmaking. viII.

The following rules will be useful to roadmen :
I. Never allow a hollow, a rut or a puddle to remain on a road, but fill it up at once with chips from the stone heap.
2. Always use strips for patching and for repairs during the summer months.
3. Never put fresh stones on the road, if by cross-picking and a thorough use of the rake the surface can be kept smooth and kept at the proper strength and
section.
4. Remember that the rake is the most useful tool in your collection and that it should be kept close at hand the whole year round.
5. Do not spread large patches of stone over the whole width of the road, but coat the middle, or horse track, first, and when this has worn in, coat each of the sides in turn.
6. Always arrange that the bulk of the stones may be laid down before Christmas.
7. In moderately dry weather and on hard roads always pick up the old surface into ridges, six inches apart, and remove all large and projecting stones before applying a new coating.
8. Never spread stones more than one stone deep, but add a second layer when
the first has worn in, if one coat be not enough.
9. Use a steel-pronged tork to load the barrows at the stone heap, so that the siftings may be available for binding and for summer repairs.

1o. Never shoot stones on the road and crack them where they lie, or a smooth surface will be out of the question.
II. Go over the whole of the new coating every day or two with the rake and never leave the stones in ridges.
12. Remove all large stones, blocks of wood and other obstructions (used for diverting the traffic) at nightfall, or the consequences may be serious.
13. Never put a stone upon a road for repairing purposes that will not pass freely in every direction through a two-inch ring, and remember that still smaller stones should be used for patching and for all
slight repairs.
14. Recollect that hard stone should be broken to a finer guage than soft, but that the two-thirds guage is the largest that should be employed under any circumstances where no steam roller is used.
15. Never be without your ring guage. It should be to the roadsman what the compass is to the mariner.
16. If you have no guage ring remember McAdam's advice, that any stone you cannot easily put into your mouth should be broken smaller.
17. Use chips, if possible, for binding newly-laid stones together, and remember that road-sweepings, horse-droppings, sods of grass and other rubbish, when used for this purpose, will ruin the best road in creation.
18. Remember that worn or rounded stones should never be used upon steep gradients, or they will fail to bind together.
19. Never allow dust or mud to lie on the surface of the road, for either of these will double the cost of maintenance.
20. Recollect dust becomes mud at the first shower, and that mud forms a wet blanket, which will keep a road in a filthy condition for weeks at a time, instead of allowing it to dry in a few hours.
21. See that all sweepings and scrapings are put into heaps and carted away immediately.
22. Remember that the middle of the road should always be a little higher-than the sides, so that the rain may run into the side gutters at once.
23. Never allow the water tables, gutters and ditches to clog up, but keep them clear the whole year through.
24. Always be upon your road in wet weather and at once fill up with chips all hollows or ruts where the rain may lie.
25. When the main coatings of stone have worn in, go over the whole road and gathering together all the loose stones, return them to the stone heap for use in the winter to follow ; for lonse stones are a source of danger and annoyance and should never be allowed to lie on any road

## LEGAL DEPARTMENT.

H. F. JELL, Solicitor,

Editor.

## Legal Decisions.

THE QUEEN EX REL TAGGART VS. HOLLINGSHEAD.
This is a case involving a nice point of considerable interest to those who aspire to the holding of a seat at a municipal council board, and also to municipal officers who are entrusted with the custody of important public documents. The following is a brief statement of the facts :On the 28 th December last (municipal nomination day) the respondent was nominated a candidate for the office of Reeve of the village of Dutton, Elgin county, for 1892. On the 4th of January of the present year he, having received a majority of the votes cast, was declared elected to fill said office. At the time the respondent was nominated he was one of the sureties for the treasurer of the said village. Between nomination and election days the village council met and passed a resolution purporting to cancel the treasurer's bond, in so far as it imposed any liability on the respondent.

On the above facts, after agreement by council, judgment was given, voiding the election, and requiring the respondent to pay the taxable costs of the proceedings.

After the argument of the case, the counsel for the relator produced before the presiding judge in the presence of the counsel for the respondent, as having been brought by the relator, what was said to be the original bonds signed by the respondent as surety for the treasurer, to show that it was in fact uncancelled. As to this, His Honor Judge Hughes, senior judge of the county of Elgin, by whom this case was heard and decided, remarked in his judgment: "The proceeding was quite irregular and has nothing to do with my decision, but it afforded me occasion to remark upon the extreme impropriety of persons who are entrusted with the custody of valuable documents belonging to a corporation, allowing them to go out of their hands for any purpose whatever, unless under the sanction of a writ, of a subpœena or an order of the judge."

H is honor also states in his said judgment that, "the fact that the the treasurer was not in arrears in his accounts and did not owe the municipality at the moment of the nomination, but that the account was overdrawn, had nothing to do with the subject in Jitigation, because he was liable to receive money under his employment in the office of treasurer at any moment whilst the bond remained uncancelled, and the whole question relates back to the time of the nomination and not to what took place subsequently, so that the election of the respondent was void "ab initio." "

RE PUBLIC SCHOOL BOARD OF THE TOWNSHIP OF TUCKERSMITH.
This was a special case submitted by the Minister of Education pursuant to the provisions of sec. 237 of chap. 225, R.S.O., 1887.

## The facts were as follows :

In 1875 , the township named, adopted a by-law establishing a township board of school trustees under the provisions of the statute in that behalf then in force.

In June, 1887 , upon the petition of the requisite number of ratepayers, as provided by sec. 63 of the Public Schools Act, the township councll submitted a by-law for the repeal of the by-law establishing the township board to the vote of the ratepayers, which by-law was lost.

In July, 1888, upon a like petition, the council provisionally passed and published a by-law for the repeal of the by-law under which the township board was established, and directed a vote to be taken thereon on the 3 rd of August, 1888.

The council was thereupon notified by those opposed to the by-law, that the council had no power to submit any further by-law under which the township board was established, or, at least, no power to do so uutil after the lapse o five years from the taking of the vote in June, 1887 , and an injunction was applied for, to restrain the council from submitting the by-law, on the grounds that the by-law to repeal, having been voted on in the year 1889 , cannot again be legally submitted, or at least cannot again be legally submitted until the lapse of five years from the date of the last vote.

Under the above circumstances the council unanimously wished a judicial decision on these points, as provided for by sec. 237 of the School Act.

It was held by Chancellor Boyd and Justices Proudfoot and Ferguson, that the plain meaning of sec. 63 of the Public Schools Act, R. S. O., chap. 225, is that after the township school board has existed for five years at least, the submission of a bylaw for the repeal of the by-law under which that board was established may be required at any time on the presentation of a properly signed petition, therefore, the by-law establishing the township board may be attacked with a view to its repeal, again and again, so long as the agitation against it subsists.

## M'GILL VS. CITY OF BRANTFORD.

Wilkes, Q. C., for the defendants, moved to set aside the verdict and judgment for the plaintiff for $\$ 800$ damages in an action tiied before Armour, C. J., and a jury at Braniford, and for a new trial of the action, which was brought against the city of Brantford to recover damages in respect to an injury to the plaintiff's leg, caused by a fall, owing, as alleged, to a defect in the sidewalk. Counsel for the defendants contended that they were not liable, as it was not shown that they had
had any notice of the alleged defect, and there was evidence that the wholesidewalk had been repaired a short time before the accident. He also contended that the accident was not caused by the alleged defect, but was the result of a scuffle between the plaintiff and some of his companions, in which he was thrown down, and that in any case the damages are excessive. Order made for a new trial unless the plaintiff accepts reduced damages.
RE WOOD AND TOWN OF WEST TORONTO JUNCTION.
Mr. Justice MacMahon gave judgment on motion by the corporation of the town of West Toronto Junction to set aside an award made in favor of William Wood and Albert Batho under the Municipal Act, awarding to each of them damages by reason of their respective lands having been injuriously affected by the construction of the grading and altering of the level of Keele street, in the town. The arbitrators were J. E. Robertson, J. J. Withrow and T. D. Delamere. They awarded Wood $\$ 1,124$ and Batho $\$ 400$. The learned judge holds that on all the grounds urged against the award the motion fails. Motion dismissed with costs.

> DWYER VS. TOWN OF PORT ARTHUR.

Judgment on appeal by defendants, who were the town and corporation and certain municipal councillors and contractors, from an order of Street J., granting an interim injunction restraining the defendants from proceeding to build and equip a street railway within the limits of the town of Port Arthur, and from the judgment of MacMahon, J., at the trial making the injunction perpetual. The appellants contended that the by-law under which they were acting was validated by subsequent legislation. The court held that the validating act was an answer to the action, and allowed the appeal, the plaintiff to have costs up to the time of the passing of the act, and as of a chamber's motion to dispose of the costs, the defendants to have costs thereafter and of this appeal. The court made no direction as to damages to the defendants by reason of the injunction, leaving them to be disposed of by the court below.

## flemming vs. city of toronto.

Judgment on appeal by the defendants, the city of Toronto, from the judgment pronounced hy Street J., at Toronto, at the trial of the action, which was brought to restrain the defendants from entering into any contract for the building of a bridge or bridges on Dundas street, Toronto, over the tracks of the Grand Trunk and Canadian Pacific railways, without first submitting a by-law to the ratepayers for raising money to pay for their erection. At the trial the defendants contended that under 53 Vic. (O.), chap. 50 , sec. 621 , sub-sec. 2, a by-law was not necessary ; but Street J., held that it was, and gave the plaintiff his costs of the action, though the
defendants had meanwhile passed a bylaw and taken other steps to validate their acts, thus making an injunction order no longer necessary. The appeal was taken on the grounds that the learned judge was wrong in finding that the corporation intended to execute the agreement in question without complying with the provisions of sec. 618 of the Municipal Act ; that the corporation had, in fact, complied with all the provisions of the section cited before the action was brought, and that therefore the council was in a position to pass a bylaw for raising the city's share of the moneys required without requiring the assent of the electors to such by-law. Appeal dismissed with costs.

## SCHOOL LAW.

In an action brought by the trustees of Union school section, No. 4, of Brock, including a portion of Mariposa, against the municipality of Brock, before Judge Dartnell, an entirely new and important question arose. The trustees required the township council to issue debentures to the amount of $\$ 2,200$ for the erection of a new school house. This was done, and the debentures handed over to the trustees, who sold them at a premium of about $\$ 200$. The cost of advertising and other expenses of the by-law amounted to about $\$ 56$. The township council struck a rate and levied this amount from the ratepayers of the school section, and the trustees brought this action to recover back the amount so levied, and also com plained that the costs attending the preparation, publication and passing of the by-law was excessive. The judge expressed his opinion that the costs were not excessive, and at all events were assented to by the defendants; that it seemed grossly inequitable that the ratepayers of seventeen school sections in the township should be called upon to pay the costs of the remaining eighteenth, incurred for the latter's sole benefit, and that even if the defendants' action was illegal, the plaintiffs' remedy was by injunction, and not in the division court. But as the point was new and important, he would give a formal written judgment for submission to the Minister of Education, so that he might direct an appeal if so advised.

## CUDDY vS. TOWNSHIP OF ADELAIDE.

The plaintiff appealed from the judgment of Armour, C. J., who tried the action at London, dismissing it without costs. The plaintiff claimed damages for trespass by the defendants in diverting upon his lands the waters of a creek upon a highway adjoining; or a declaration that the defendants are liable to keep in repair certain works erected by them, the latter claim being made under an informal agreement alleged to have been made with certain members of the municipal council. Appeal dismissed with costs.

## SOMBRA VS, MOORE.

The Court of Appeal for Ontario re
cently decided in the case of the township of Sombra vs. the township of Moore, that sub-section 4 of section 531 of R. S. O. (1887), chap. 184, which provides that "In case an action is brought against a municipal corporation to recover damages sustained by reason of any obstruction, excavation or opening in a public highway, street or bridge placed, made, left or maintained by another corporation or by any person other than a servant or agent of the municipal corporation, the last mentioned corporation shall have a remedy over against the other corporation or person for, and may enforce payment accordingly of the damages and costs, if any, which the plaintiff in the action may recover against the municipal corporation" applies to the case of an obstruction, excavation or opening, directly or immedi ately placed on, or dug in the highway, by the corporation or person against whom the remedy over is given, and does not give to one municipal corporation the right to recover from an adjoining municipal corporation damages recovered for an accident caused by the want of repair of a road, lying between the townships, which they were jointly liable to keep in repair.

The same court held in the case of the county of Halton vs. Grand Trunk Railway Company, that, on the following statement of facts, therehad been a breach of the condition entitling the plaintiffs to recover the whole amount of a bonus as liquidated damages: In 1874 the plaintiffs granted a bonus of $\$ 65,000$ to the Hamilton \& Northwestern Railway Company to be used by the company in the construction of a railway upon the condition that the company should remain independent for twenty-one years. In 1888 the Hamilton \& Northwestern Railway Company ceased to be an " independent" line and became merged in the Grand Trunk Railway Company (the defendants).

## EVANS vs. Lincoln.

An action brought against the county to recover damages caused by non-repair of approaches to a bridge. The action was not brought within three months after damage sustained, as required by a statute. On this ground the plaintiff farled, and action was dismissed with costs.
re marshall and the town of simcoe.
Mr. Justice MacMahon delivered judgment on motion by Marshall Brothers, of the town of Simcoe, porkpackers, to quash certain parts of the by-law, No. 2343 passed by the town of Simcoe on the 23 rd December, 1891, prohibiting the selling of certain commodities in the town in any place other than the market. Order made quashing that part of sec. 8 of the by-law, where the words "or on any other person's behalf" are used ; that part of sec. 35 , entitling the market clerk to a fee of twenty-five cents on sales by auction in the market place ; and the last section of
the by-law, in so far as it does not provide for payment to an informer of his share of the penalty, and also that part providing that a prosecution may take place before the mayor or a justice of the peace. In other respects motion dismissed. The applicants to have the costs of the portions of the motion as to which they succeeded.

## Amendments to Liquor License and Public

 School Acts.-1892.LIQUOR LICENSE ACT.
Members of municipal councils and constables shall be ineligible as bondsmen. The fee for transfer of a license is increased to \$10.

Brewers are not to sell ale or beer in less quantities than ten gallons, wine measure, or lager beer than four gallons, wine measure, excepting bottles, but the five gallon limit may continue for two years.

A form of record-book for the sale of liquors by druggist is prescribed.

Provision is made for an appeal to the county judge, under the direction of the attorney-general, in all cases where an order of dismissal is made of a complaint or dismissal laid by an inspector, or any one on his behalf, fifteen days notice to be given. The judge may rehear the complaint and take evidence.

The penalty for selling to prohibited persons is increased to $\$ 25$ and $\$ 50$.

The provisions of the act are to apply to municipalities who have passed a prohibitory by-law.

Prohibitory by-laws may be repealed by vote after three years.

## PUBLIC SCHOOL ACT.

The following words unintentionally repealed in the Act of 1891 , are re-enacted "Where the public school rate and the separate school rate are not the same, if the owner is compelled to pay a school rate in consequence of the default of the tenant to pay the same, he shall only be liable to pay the amount of the school rate of the schools to which in virtue of his right in this behalf he directed his money to be paid."

Union school sections composed of part of a township and any incorporated village are not to be included in the provisions of section 109.

The expenses of preparing and publishing by-laws and debentures are to be borne by the school section and not the municipality.

By-laws providing for exemption from taxation shall not apply to school rates.

We have received a copy of The MunICIPAL WORLD, a monthly journal, published at St. Thomas, and devoted to the interests of our municipal system, which is admitted to be the best in the world, though imperfect in some details. It is an excellent guide to municipal officers in the discharge of their duties.- [Kincardine Reporter.

## 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 orly.

Clerk.-If the assessors claim extra pay for the duties imposed on them by section 95, Public Schools Act (the equalization of assessment of union school sections), to whom should they go for their pay, the council that appointed them or the trustees of the union school sections equalized?

The council should pay the assessor for equalizing union school sections.
Councillor-Can a council pass a supplementary by-law to raise a sum of money, not exceeding $\$ 200$, to place water gates on a drain without sending the engineer on it? To ereat water gates on a drain, would it be considered keeping the drain in repair ?

The council have no authority to pass a by-law to raise money for the purpose mentioned, but may pass a by-law as provided in sub-section 21 of section 489 , of Consolidated Municipal Act, to compel owners of lands to erect and keep up water gates. The erection of water gates would not be considered repair or maintenance of a drain.

Hensall. - In case a farmer's son or tenant's son is assessed jointly with his father, as provided by section 2, Franchise Assessment Act of 1889, and amendments thereto, should the son of the farmer be marked in column five of the assessment roll as a freeholder, that of a tenant as a tenant, or should they be marked as formerly
2. Are farmers' sons, so jointly assessed, liable to jury service?

If the farmer's son is assessed, as provided in clause A, of sub-section 2, of section 14 A, of the Consolidated Assessment Act, 1892, he should be marked in column five as a freeholder (F), and if assessed pursuant to clause $B$ of said sub-section, he should be marked in said column as a tenant ( T ).

If the father be a tenant, and the son is assessed with him jointly, he should be marked in said column as a tenant (T).

## 2. No,

Goderich.-Has the council power to assess a school teacher's salary, salary being $\$ 430$, if he refuses to be assessedi?
No. Personal earnings are exempt to the amount of $\$ 700$ annually. See subsection 23 of section 7, Consolidated Municipal Act, 1892 . Section 8 of the said act gives a person, deriving an income exempt by law from assessment, the right to waive such e: emption, and require his name to be entered on the assessment roll for such income for the purposes set forth in the last-mentioned section.
Port Stanley. - Village council receives requisition from school board for amount required for school purposes. This is placed on collector's roll and paid to board in December. There is not sufficient on hand after board pays teachers and amounts advanced by the village during the year to make payments to teachers monthly until taxes are again collected. To meet these payments the school board applies to the council each month for amount required. The council has no tuoney on hand but horrows it to pay the school board. Who should pay interest on ainount borrowed? The village is in Union school section with part of two townships.

The school board's duty is to prepare estimates as to the amount required by them for school purposes, and request the levying of the same by the municipal council, as provided in the Public Schools Act, 18 gr . If the school board should make an insufficient estimate, and in consequence the amount levied by the council is not large enough for the purposes of the board, we do not think the council should pay the interest on sums borrowed by them at the request of the board to meet the deficiency.
Thamesvilile. - We have a young man, about thirty-five years old, possessed of about $\$ 200$ in cash and, perhaps, a little deviltry. From certain causes and natural exclusiveness, his mind is not just what it should be at present. Doctors will not certify to lunacy, but only as a little off at times. Apparently he is harmless, saving an occasional wish that he were dead (altinough when a man offered to kill him he found he was not ready). He lies about the streets to some extent and is, perhaps, a slight nuisance. He must sooner or later become a charge on the village, as he is now boarding at a hotel, and earning nothing. Can the council do anything in the matter, and what?

We do not see that very much can be done as the case stands. If the young man's conduct is such as to bring him within the definition of a vagrant, as given in the Revised Statutes of Canada, chap. 157, or the note (R), page 339 , and note (Q), page 396, of Mr. Harrison's Municipal Manual (1889), and there is a by-law of your village passed, pursuant to subsection 38, of section 489 , of the Municipal Act, he might be dealt with as a vagrant.

Algoma. - The council passed a by-law in regard to fences. Later they find one clause n- $t$ suitable. Can they change that clause or must they quash it and frame another ?
2. Does the railway fence, within the bounds of the municipality, come under the government of the municipality?
3. Would you kindly describe a lawful railway fence?
4. Must pigs be kept enclosed?
5. Can they not be at liberty, if only on a man's own farm ?
r. The council should pass a by-law, amending the existing by-law by striking out the clause which they do not deem suitable, and substituting the new clause in its place.
2. Only as to whether it is a lawful fence or not, as regulated by by-law of the municipality.
3. Such a fence as the by-law of the municipality defines to be a lawful fence.
4. Not unless restrained from running at large by a by-law of the municipality.

## 5. Yes.

Clerk. - In the year 1879 the Provincial Government sent a man into the township of Johnson to locate and build a road from Pollock harbor north to intersect the Bruce Mines road. When locating said road it was intended to build on the line between lots K and L in said township, but it has since been found that the road is wholly on lot K from the P. P. railway crossing to the Portlock river. This road was again repaired by Government grant in 1885 . In the year 1889 a municipality was formed, of which the township of Johnson forms a part.

A dispute has arisen between the owners of lots K and L as to the proper place for said road. The owner of K has petitioned the council to change the road to line.
I. Have the council power to change the road ?
2. If so, what steps must be taken ?
3. Are roads, built by the Government for the benefit of settlers and repaired by statute labor prior to the formation of a municipality, under the control of said municipality ? or
4. Do such roads come under section 543 of Municipal Act ?

The road in question answers the definition of a highway given in section 524 of the Municipal Act.

1. Yes.
2. Those set forth in sections 546 and 550.
3. Yes. See sections 524 and 526 of the Consolidated Municipal Act, 1892.
4. No.

We assume that the road mentioned is not vested as a provincial work in Her Majesty, as in that case the council would have no authority to deal with it. See section 542, Consolidated Municipal Act, 1892.
T. U.- There seems to be a doubt in the minds of our council as to whether they can escape the liability to pay for sheep destroyed by dogs. There is a large petition in, praying for the abolition of the dog tax, but the majority of the council think they would still be required to pay for sheep destroyed by dogs after abolishing the tax? Please answer the above query in your next issue.

If by-law is passed, as provided for by section 2, of chapter 62, Ontario Statutes, 1890 , to abolish the tax, the municipality would be liable to pay damages only to the extent of the amount to the credit of the Dog Fund account. See siction 7, chapter 214, R. S. O.
Subscriber. - How should a ratepayer in a township who owns more than two hundred acres of land be assessed for statute labor? It is held by some that any surplus over 200 acres must be assessed just the same as if it belonged to another individual and then the two added together.

Whenever a person is assessed for lots or parts of lots in a municipality not exceeding in the agregate 200 acres, the said part or parts shall be raised and assessed for statute labor as if the same were one lot, and the statute labor shall be charged and rated against any excess of such parts in like manner. See sec. 100 of the Consolidated Assessment act, 1892.

Hope-When the sons of tenant farmers are assessed as farmers' sons, should they be placed in Part I, or III. of the voters' list.

## In part III.

Essex.-It is proposed to construct extensions of water works in our town under the provisions of section 2, chap. 54 of Ontario Statutes, 1890, and to assess costs against the properties of petitioners who have petitiened for the extentions and to borrow money on debentures of the town.
I. What are the preliminary requisites to the passing of the necessary by-law? 2. Must same proceedings be gone through as are required for the ordinary local improvement and local assessment by-laws? 3. That would be an equal and equitable mode of making the assessment against the respec tive properties? If there are two houses on a street on which it is proposed to make an extens on, one twenty-five feet from a water main and
the other 300 feet from the main, in what proportion should they be assessed for the extension?

Section 2 of chap 53, Ontario Statutes, 1890 , authorizes the council on petition to pass a by-law for the construction of mains, etc., for the benefit of individuals. 1. A petition from the property owners asking for the construction of watermains, etc., must be presented to the council before a by-law is passed. 2. No. 3. The by-law may provide that the cost of thework so undertaken shall be charged as an annual special rate upon the lands of the petitioners designated in the petition, or for permitting the petitioners to receive the benefit of such waterworks upon such terms as the council may deem just.

The best plan to adopt, is for the council to put down the mains and fix an annual rate, to be paid by the petitioners for the use of water, the rate to be reduced to the regular rate as the number of services on the proposed extension increases. If the town puts down a main larger than is actually required for the service of the petitioners, the extra cost should be charged to the general fund, and the petitioners should pay an annual rate that, with the regular water rates will yield a revenue (say six per cent.) on the cost of a main sufficient for their purposes. The amount charged in excess of the regular water rate could be divided on the frontage basis, as the petitioners may agree or the council decide.

## Teachers and Trustees.

Educational Journal : Every teacher and every school trustee should make it one of his first duties to acquaint himself thoroughly with the School Act and the published regulations of the educational department. From the correpondence which we are continually receiving, it is clear that many a misunderstanding' between teachers and trustees could not have occurred if both parties had taken the trouble to acquaint themselves with the requirements of the law, in the matter of agreement with and payment of teachers. We have, for instance, before us just now a communication from a teacher asking some questions for which the Act and Regulations seem to provide tolerably clear answers. An agreement is made for the employment of a teacher for the six months beginning January ist, and ending June 30 th, at a given rate of yearly salary. To what proportion of the yearly salary agreed on is the teacher entitled at the end of the six month's engagement? According to the term of the school law the answer is to be found by dividing the amount of the annual salary agreed on by the whole number of teaching days in the year, and multiplying the quotient by the number of days actually taught. This is evidently the only fair method under ordinary circumstances. But it is hinted and seems altogether likely that the trustees may not so have understood the agreement, and may consider themselves under
obligation to pay only one-half the sum agreed on as the yearly rate. "Should the trustees take the latter view of their obligations, what should I do ?" asks the teacher. Now the answer to this question, and it is but one of a number of similar ones which have been asked during the year, is not so easily given as might be supposed. At first thought one might say "Cite the attention of the trustees to the clear provisions of the Act, which seem to have been designed to meet just such cases of dispute, and insist upon your legal rights."

It is quite possible that the courts would take this strictly legal view of the case, though that is a question upon which we cannot pronounce, for we do not know to what extent the judgment of the court would be influenced by any evidence which might be forth.coming to show the original intentions of the contracting parties. We, therefore, offer no opinion upon the legal point. But we take it for granted that our unknown correspondent wishes to be guided by the highest moral law, in all business transactions. If he does not, he is unfit to be a teacher of youth. The answer from the moral point of view obviously depends upon the intentions of the parties at the time the agreement was made. Assume, as is highly probable, that the trustees intended to bind them selves to pay only the one-half of the sum agreed on as yearly salary. Two questions then arise. First, what was the teacher's understanding of the agreement, $i, e$., what did he expect to receive? Second, what did the teacher believe or suppose to be the trustees' understanding of the agreement? If the teacher understood the law and honestly expected to be paid in accordance with it, and if he believed the trustees to have the same understanding, his view, being the legal one, should no doubt prevail. But if, as is supposable, the teacher understood the engagement, at the time of making it, in the sense in which we have assumed that the trustees understood it, and has since obtained additional light, or if he knew the law, but had reason to think or suspect that the trustees did not understand it, and failed to enlighter them, then the case is one in which the common sense moral dictum applies, viz., that an agreement is morally binding in the sense in which the person making it believed the other party to understand it, at the time it was made. In such a case what might be legally right would be morally wrong, and the honorable teacher would claim only what was morally his.

The third question asked us is a puzzle which might please the lawyers. The agreement providing that the salary be paid monthly, what part of salary should be expected each month? This question should have led to an understanding at the end of the first month. As the engagement was for six months, it is clear that the monthly payment should have
been one-sixth of the whole amount to be paid for the six-months of teaching. The moral is for all teachers. Do not make doubtful, ambiguous, or illegal agreements. Study the school law, and follow the forms provided by the department. Above all, have a clear understanding on both sides at the outset.

## (Continued from page 02).

their salaries. While I believe this is very necessary, I do not think that anything will ever be accomplished in this way, but if brought up at meeting of an association composed nut only of clerks, but of those who fix their salaries, anything that they would do would be more likely to receive attention. I would like to see the matter fully discussed through the columns of your paper, and while a general society may never be formed, still municipal officers should never lose sight of the privileges offered them through the columns of The World, for, as you have stated, "they may in this way contribute and participate in many of the benefits outside of those of a social nature that would result from an association."

$$
\begin{aligned}
& \text { Yours truly, } \\
& \text { County Clerk. }
\end{aligned}
$$

## Paving with Sand and Water.

The most novel street pavement yet suggested is being laid, on Front street, opposite the post office, at Palatka, Fla. It is a water pavement, at least it is popularly called such. At the last meeting of the council, permission was secured from the council,to experiment on Front street, and on Thursday operations began. The idea was suggested to the inventor by the hardness of the seashore, and the principle lies in keeping the earth constantly damp, so that traffic thereby makes it the more compact. The street was first levelled, and a long pipe with perforations was laid in a trench down the center, the street graded from the centre down the sides, the pipe being undergronnd. Connection was then made with an artesian well, and the water running through the pipe saturated the entire street. It is beginning to harden already, and the experiment is watched with great interest.-[Florida Times-Union.
The Municipal World, a monthly published in the interest of the various departments of our municipal system, and which should be read by every municipal officer in Ontario, whether elected or appointed, comes under our notice. Among the many useful hints are articles concerning our country roads, which receives too little attention at the hands of our municipal council.-Petrolia Topic.

$$
*_{*}^{*}
$$

The Municipal World is now published at St. Thomas. It is greatly improved and is a valuable journal.-- [Simcoe Reformer.

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 Work. Special attention given to Municipal Engineering.

# Oqtario Water Meter Co., Ltd. 

 manefracturers or
## 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 Pernanent Buildings,
No. 20 Toronto Street, Toronto, Ont.

## 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 cheerfolly given.

Estimates and all other particulars furnished on application to

County Rights For Saie

## MPORTANT BOOKS

For Mayors, Reeves, Councillors and Mun icipal Officers.

## 7he Canadian Lawyer, 2nd Edition

It contains just what you want to know. It is reliable, being com* piled by a Lawyer in active practice. It is p actical 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
$6{ }^{4} 4$ pages. $\$ 5$, (leather),

## Jones' Magistrates' Manual

Cloth, \$x.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 troubie 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 munici pality in the Province. The notes and explanations in reference to all important sections of the Municipal Acts make it a valuable 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 $\$ 7.00$.
Addres; all orders to THE MUNICIPAL. WORLD,
Box 749, St. Thomas

## NEARLY READY

Ontario Statutes, 1892 , which will contain
Municipal and Assessment Acts consolidated. Early orders will be filled promptly on date of publication.

THE CARSWELL Co. (Limited),
Law Publishers, Etc.,
TORONTO, CANADA.

## DOMINION BRIDGE CO., LT'D.



ST. LAWRENCE RIVER BRIDGE, CANADIAN PACIFIC RAILWAY, LACHINE, P. Q.
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 bridge; are still




 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.

## Municipal Debentures Wanted.

I am desirous of purchasing any and all Debentuxes of Towns, Villages, Iownships

-     - 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. <br> 9 Toronto Street, Toronto

## ST. THOMTAS IRON WLORKS <br> 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, IOO designs Estimates on Iron Work for public or private buildings in any part of the Province cheerfully furnished.

