

The Municipal World

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

Vol. 2

ST. THOMAS, JULY, 1892.

No. 7.

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NEARLY READY

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

THE CARSWELL Co. (Limited).

Law Publishers, Etc.,

TORONTO, CANADA.

CALENDAR FOR JULY-AUGUST, 1892.

Legal, Educational, Municipal and Other Appointments.

JULY.

1. DOMINION DAY.

All wells to be cleaned out on or before this date.—Section 113, Public Health Act, and section 13 of By-Law, schedule "A."

Last day for County Council to pass By-Law that nominations of members of Township Councils shall be on last Monday but one in December.—Mun. Act, section 113.

Before or after this date Court of Revision may, in certain cases, remit or reduce taxes.—Assessment Act, section 67.

Last day for revision of Rolls by County Council with a view to equalization.—Assessment Act, section 78.

Last day for County Treasurers to return to Local Clerks amount of arrears due in respect of non-resident lands which have become occupied.—Assessment Act, section 143.

Last day for establishing new High Schools by County Councils.—High School Act, section 8

Legislative School grant payable by Provincial Treasurer.—P. S. Act, sec. 122 (2).

6. Last day for your service of notice of appeal from Court of Revision to County Judge.—Assessment Act, sec. 68.

11. Departmental Primary, and High School Junior Leaving and University Pass Martication examinations begin.

14. Last day for completion of duties of Court of Revision in Shuniah.—Assessment Act, Section 64. S. S. 19.

15. Public School Trustees Semi-Annual Reports to Inspector, due.—P. S. Act, sec. 40 (13).

Last day for making returns of births, deaths and marriages, registered for half year ending 1st July.—R. S. O. Chap. 40. sec. 6.

20. The High School Senior Leaving, and University Honor Matriculation Examinations begin.

Reports on the High School Entrance Examinations, to Department, due.

Reports on the Public School Leaving Examinations, to Department, due.

Last day for performance of Statute Labor in unincorporated Townships.—Assessment Act, sec. 113.

31. Last day to which judgment on appeals, Court of Revision, may be deferred except in Shuniah and other districts.—Assessment Act, sec. 68.

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, sec. 40 (7); S. S. Act, sec. 28 (13).

Estimates from School 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.

✽ NOTICE. ✽

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

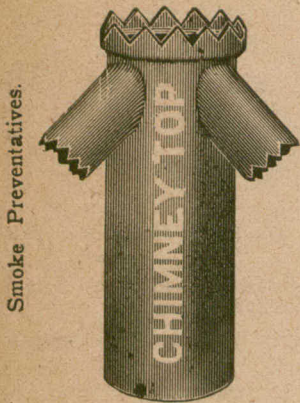
Subscribers whose orders were received during the latter part of June will receive circular usually enclosed with specimen copies only, their attention is directed to rate for the remaining numbers of local councils in counties where the county council has ordered a copy for each member.

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K. W. MCKAY, EDITOR,

Box 749, St. Thomas, Ont.

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

ST. THOMAS, JULY 1, 1892.

With this issue THE MUNICIPAL WORLD is enlarged and otherwise improved. The variety of subjects to be dealt with, and support tendered by municipal councils and officers throughout the province, suggested the change. In the future we will have space for all correspondence and questions submitted each month.

* * *

The proceedings of village, town and city councils show that considerable attention is being paid towards providing and improving parks for the benefit of the citizens. In many cases grants have been made for open air concerts being held at stated periods during the year. This is something that should be appreciated and encouraged in every way. There are many who are unable to go from home during the hot weather, and by the means of parks and other attractions provided by municipalities they are enabled to enjoy at home what their more fortunate neighbors enjoy at a distance.

* * *

A return ordered by the Elgin County Council was laid before them last session, showing that but three counties had taken any action towards the reduction of the number of members of county council, and that three counties hold only two sessions during the year. It would seem from this that the legislation tending to the reduction of the number of these bodies is not called for by the councils themselves, but by outside institutions and the press.

It is doubtful if any act could be brought forward that would be satisfactory to all. We are informed that the Government will again bring in a Bill for the reduction of the number of members of county councils at the next session, and rather than have a measure so unpopular as that proposed by Mr. Hardy last session, we think councillors themselves should consider the matter, and offer suggestions in reference to the proposed legislation.

* * *

The rapid increase in the number of bicycles in the towns of this province, brings with it a frequent cause for complaint that they are used on sidewalks,

thereby endangering the safety of pedestrians. The fact is that bicyclists are out of their proper place and are trespassers when they use the sidewalk. They have the same rights to the roads and streets as other vehicles have; they should be satisfied with this and keep to the road and leave to pedestrians uninterrupted use of the sidewalks. Many municipalities have found it necessary to pass by-laws in reference to this matter, and, as the bicycle has evidently come to stay, the sooner those using the machines know their position in reference to the use of sidewalks the better, not only for themselves but the public generally.

A Highway Trials Act Wanted.

At the last session of the county council of the county of Ontario the following resolution was passed referring to a matter which, if acted upon by the legislature, will be of great benefit to municipalities generally:

Mr. Parker, seconded by Mr. Mowbray moved:

That, in the opinion of this council, there should be some statutory provision made for the trial by a referee of actions against municipalities alleged to have resulted from the neglect of any municipality to keep a highway in repair, as is provided by the Drainage Trials Act for the trial of action as to claims arising under the Drainage Act.

2. That the warden and clerk be instructed to prepare and sign on behalf of the council a petition to the legislative assembly of the province of Ontario, for the passage of an Act empowering the referee under the Drainage Trials Act, or some other referee to be appointed for that purpose, to try all actions for damages in respect of the non-repair of highways.

3. That the said petition shall ask that such referee shall have, so far as the same may be applicable, all the powers of a referee and arbitrator under the Drainage Trials Act, and all the necessary powers of the master in chambers and a judge of the high court of justice over the proceedings, prior to, and on the trials of such actions.

4. That the said petition shall also ask that the said Act shall provide that claimants in such actions shall be required to deliver a statement of the damages actually claimed by them, and which will be accepted in settlement before the action is commenced, and that in the event of the claimant recovering an amount less than the amount claimed on the trial of the action, the municipality shall be deemed to have been justified in resisting the said action, and the plaintiff shall be disentitled to any costs of the same, and the defendant shall be entitled to set off against any judgment recovered the costs sustained by the municipality in defending the action.

5. And that there shall be an appeal from the decision of such referee to one of the divisions of the high court of justice.

Mr. Parker, in introducing his motion, said his municipality had recently had some undesirable experience in regard to the working of the present courts on suits for damages, and perhaps other members present represented municipalities which had been harrassed. In Pickering's last law scrape they had been unable to get a settlement until the matter came to court, and then had to agree to \$1,200 and half the costs. They feared to face the judge because he had on a former occasion urged a settlement unsatisfactory to the township; they could not face the jury because the records seem to indicate that juries mulct corporations in favor of private parties.

We would suggest that in addition to actions for damages caused by non-repair of highways, that actions against municipalities concerning the width and location of highways should be included, in fact all actions concerning highways that are brought against a municipality for any cause whatever.

We believe that the appointment of a referee under the Drainage Trials act is giving the greatest satisfaction and that the appointment of another referee as referred to in the resolution would meet with the same approval and success, if he is empowered to hear all actions against municipalities occasioned by non-repair, location or width of highways.

Chlorine Tests for Pure Water.

The Massachusetts State Board of Health has been making some very interesting experiments in regard to the pollution of rivers, with the result of being able definitely to say that the amount of chlorine in water is an indication of the degree of pollution. The Board has consequently published a map showing the normal amount of chlorine in the water in the different parts of the state. All other things being equal, if the amount of chlorine in the water is above the normal it can be taken as an evidence that the river is polluted with the sewage.

Commeudatory.

The townships about here should subsidise a paper advocating so ably the doing away with that fearful farce—statute labor. M. G., P. L. S., Collingwood.

Ampleased with THE WORLD, and I hope it will become a permanent institution, interesting and helpful to municipal officers and profitable to the publishers.

J. R., County Clerk, Grey.

THE MUNICIPAL WORLD is a very useful publication, and saves township officers a great deal of time and trouble searching the statutes for information that they can get at a glance by referring to THE MUNICIPAL WORLD. A. H.

Middlesex House of Industry.

The institution is situated in the township of Adelaide, adjoining the corporation of the town of Strathroy. It was opened in the year 1880. The question was advocated in the county council for two or three years before this, the principal point in dispute being as to location. The building is constructed of brick, three stories and a basement. The centre part is 50 feet by 58 feet, with two wings 40x50 feet, one occupied by the men and the other by the women. The basement of both wings is used as dining and day rooms for the men and women respectively. A wash room fitted up with fourteen basins is situated in a small room near the entrance to each dining room. Off the kitchen are located two pantries and two cellars, convenient for the storage of supplies and utensils required in the culinary department of the institution. In the kitchen is one large seven-hole, wood-burning cook stove, and sinks with hot and cold water connections. The second flat provides four bedrooms, parlor and dining room for the keeper, and office for the physician in the centre, and in each wing are located four bedrooms with four beds each and a bath-room. On this floor, as on the next, a wide hallway runs through the centre and full length of the institution, dividing it into four sections. The third flat is divided into four bedrooms of four beds, and two bedrooms of six beds each, with a bath room in both wings. The fourth flat contains four bedrooms, which are for hospital purposes, and while providing for the isolation of the patients placed therein, it has been found very inconvenient to wait on them there, owing to the distance from the kitchen and keeper's departments. The laundry is built of brick, situated in the rear, and is connected with the main building, and, besides providing for the wash room, containing six tubs in which the water is heated by steam, the drying room, a room for storing clothes, and six automatic water closets for the use of the inmates, there is also a meat room with large refrigerator.

The building is heated throughout by steam, and there is located in a brick building at the rear of the east wing a boiler house containing two boilers and a steam pump, used for supplying water direct to a large tank situated on the fifth floor of the institution. From this the water used in the different departments is taken.

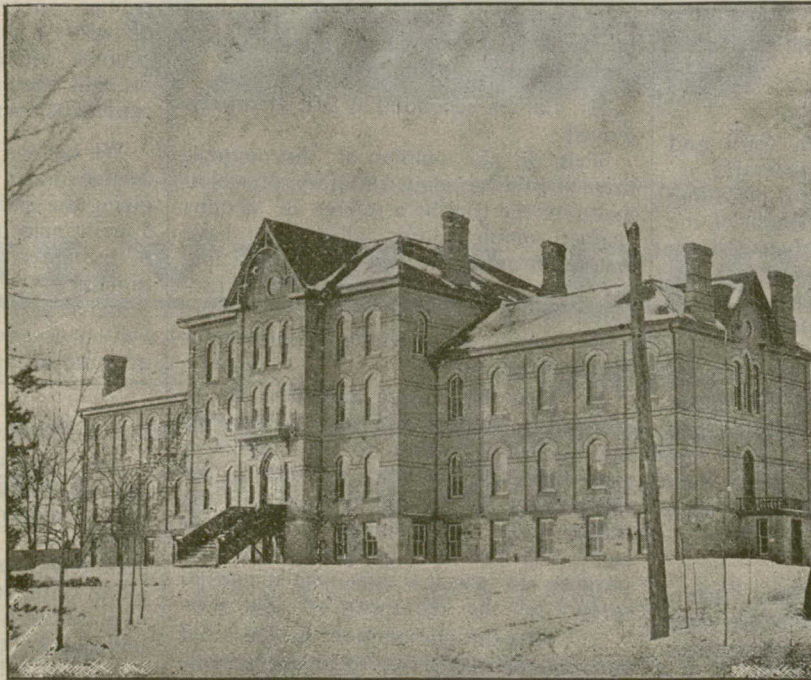
An excellent system of fire protection has been placed on each flat, which with the fire escapes make ample provision for the protection of the building and the escape of its inmates in case of fire.

Provision is also made in two tanks on the fourth floor for supplying hot and cold water for the bath rooms, and, as in the kitchen and wash room, the water is heated by steam. The system is found to work well, and to be economical. Wood is used for fuel. The sewage is carried to a brick cistern constructed near the barn, and is from there conveyed by a tank and distributed over the farm. At other times it is pumped out and absorbed in a compost heap prepared to receive it; this is also used on the farm.

The farm occupies forty-six acres, divided into four fields. The house which is situated about forty rods

eight cows, two horses, and large box stalls. This building will be enlarged during the present year. There is also a tool house and pig pen. The farm stock consists of a team of horses, six cows, one heifer and twenty-nine pigs. The keeper makes a specialty of raising pork for sale, and believes that it is profitable in connection with an institution of this kind. The dietary of the inmates is usually, for breakfast, porridge, milk, bread, molasses and tea; for dinner, soup, meat, bread, tea, vegetables in season, and fish on Friday; for tea, rice, milk, bread, molasses, tea. Twice a week sauce, twice a week butter, and once a week eggs. The number of inmates at the present time is seventy-one; forty-one men and thirty women. The highest number ever in the institution at one time, 100, with an average of eighty-five. The average cost per inmate is twenty-two cents per day, or \$1.45 per week, considering interest on investment, and every expense connected with the institution. The total cost of the farm, buildings and furnishings is placed at \$33,000; the Government grant of \$4,000 has been received.

The contract system has been adopted for the purchase of all supplies required. When tenders are received, samples of the articles accompany them, and when a tender is accepted the sample is kept and compared with the goods furnished. All supplies are ordered by the inspector, and when delivered the contractor receives a receipt from the keeper for the same. The control of the institution is entirely in the hands of the county council, who appoint a committee of five to supervise the management; the committee meets quarterly to pass accounts. The inspector has the general charge of every department, visits the institution weekly, and orders supplies. The keeper and matron have the immediate charge of the inmates, and its success is owing to their careful management. The salary of the inspector is \$100 per annum. The keeper and matron \$525, one assistant for the matron \$10 per month. The engineer, who has full charge of the heating and water supply, receives a salary of \$400 per annum. There is also a physician



HOUSE OF INDUSTRY, COUNTY OF MIDDLESEX.

from the road on high ground, is approached by a lane with a row of fruit and evergreen trees on either side. The soil of the farm is sandy loam and well adapted to the necessities of the institution; thirty-five acres are at present under cultivation. It has not been found necessary, owing to the character of the soil, to do much drainage. There is a small orchard occupying about one acre in extent; it is hardly as large as one would expect to find in connection with the institution. The farm utilizes the labor of the inmates, which, with the assistance of the keeper is sufficient to work it to the satisfaction of the management. In the year 1890 the produce raised was valued at \$2,450, of which \$500 worth was sold, the balance was consumed on the premises. The water supply is unlimited, and is derived from thirteen drive wells from fifteen to twenty feet deep. A spring creek also rises on the farm close to the institution.

The barn, situated about 150 feet in the rear of the wash house, is small, being only 30x38 with a brick basement. It will provide accommodation for

appointed by the county, who visits the institution weekly, and whenever the circumstances require.

The bedrooms are furnished with wooden bedsteads throughout, straw mattresses, and ordinary clothing. Every apparatus required for the economical management of the institution seems to have received favorable consideration from the various committees. One thing noticeable was a small mill used for crushing bones, thus supplying one of the most valuable fertilizers for use on the farm, at a minimum cost. There is also connected with the boiler house a complete apparatus for making all the soft-soap used, and arrangements have been made to supply that article for the use of the gaol in London. Another improvement in connection with this institution would be larger yards for the inmates, two cottages for use in special cases, and owing to the location of the hospital wards the erection of an elevator, as a means of access thereto, has been suggested.

In addition to this expenditure, on behalf of the poor, this county provides for destitute insane in other ways, and last year paid over \$800 for that account.

Taking all things into consideration, the house is well kept, a benefit to the county, and may be considered one of the best institutions of the kind in the province.

Voter's Lists.

Clerks are required immediately after final revision and correction of the assessment roll to make a correct alphabetical list in three parts.

Part one should contain the names in alphabetical order of all male persons appearing by the assessment roll to be entitled to vote in municipality at both municipal elections, and for members of the legislative assembly, and in addition to the number of the lot or other proper description of any parcel of real property, in respect of which each person is so qualified, the qualification should be designated in the proper column by the letters F. & M. F. meaning owner and manhood franchise, or T. & M. F. meaning tenant and manhood Franchise, or Oc. & M. F. meaning house-holder or occupant and manhood franchise, or F. S. & M. F. meaning farmer's son and manhood franchise, and when the qualification is in respect of income, the clerk is required in addition, to enter the place at which the voter resides in the municipality and in the proper column of the voters list the letters I. & M. F., meaning income and manhood franchise.

The second part should contain the names in alphabetical order of all other male persons, widows and unmarried women of full age appearing on the assessment roll, to be entitled to vote at municipal elections only, and in addition to the proper description of the real property in respect of which each person is so qualified he shall enter after their names in the proper column the letter F. T. Oc. or I.

The third part should contain the names in alphabetical order of all other male persons of full age appearing by the assessment roll entitled to vote in a municipality for members of the legislative assembly only, and in addition the place or lot at which the voter resides in the municipality and the letters M. F. to be entered after the name in the proper column. In addition to the above, the clerk, in making out the voters' list should insert a schedule containing the names numbered consecutively, of the post offices which by the assessment roll appear to be, or within the belief of the clerk are, the proper post office address as of the persons entered in the list, and shall according to the form and in the proper column therefore enter opposite the name the number which, according to the schedule is that of the proper post office address of the person.

In order to facilitate the selection of jurors the clerk is also required in making out the voters list to write or mark the letter J. opposite the name of every male person over 21 and under 60 years of age, who by the roll appears to possess as owner or tenant real or personal property in his own right or in that of his wife to the value of not less than \$600.00 in cities, and \$400.00 in towns, incorporated villages and townships, and shall show at or near the end of the voters list the

aggregate number of names of such qualified to serve on juries, and in the case of cities and towns the said list shall give the same information for each ward.

We do not think it is necessary for the clerk to take notice of the exemptions mentioned in the jurors act, but every one of proper age who appears to possess the property qualifications should be marked as eligible to act as jurors.

Where a ward is divided into polling sub-divisions, a person assessed in more than one of the said sub-divisions for a sufficient property to entitle him to vote at the municipal elections, his name should be entered on the list of voters in the sub-division in which he resides, and the words "and other premises" are required to be inserted opposite his name, and when it appears that a person is assessed for property within a municipality sufficient to entitle him to vote, or that such property lies partly within one sub-division and partly within another, the clerk shall enter his name on the list of voters in one of the sub-divisions only in which the property is situated with the following words added "partly qualified in sub-division No.—"

We think that in case of persons assessed in more than one polling sub-division for property sufficient to entitle them to vote, that he should only be entered in one of the polling sub-divisions in each ward, and that the words "and other premises" need not be inserted opposite the name unless the voter is qualified to vote in more than one ward. This is not exactly as enacted in subsection 10 of section 3 of the Voters' List Act, but is, we believe, the correct way to make the entries required.

Qualifications to vote at Municipal Elections.

1st.—All male persons, widows and unmarried women, 21 years of age who are entered on the assessment roll as freeholders, house-holders, occupants or tenants for an amount of not less than the following: in townships and incorporated villages \$100, in towns under 3,000 population, \$200, in towns over 3000 population, \$300, and cities \$400.

2nd. All male persons, widows and unmarried women, entered on the Assessment roll as being in receipt of not less than \$400 income.

3rd. All farmers sons entered as such on the assessment roll.

NOTE. If there are more sons than one assessed, and the farm, which must not be less in quantity than twenty acres is not rated at an amount sufficient, equally divided between them, to give a qualification to the father and the sons when the father is alive, and for the sons alone, when the father is dead and the mother is a widow, then the right to be entered on the voter's list shall belong to and be the right only of the father and such of the eldest or elder of the said sons, or if the amount at which the farm

is assessed, is insufficient, if equally divided between the father and one son, then the father should be the only person entitled to vote in respect of such farm.

Where real property is owned or occupied jointly by two or more persons and is rated at an amount sufficient, if equally divided between them, to give a qualification to each, then each shall be deemed rated within this Act, otherwise none of them shall be deemed so rated.

Qualification to Vote at Elections for Members of the Legislative Assembly.

All male persons who are entered in the assessment roll and have placed opposite their names by the assessor the letters M. F.

In preparing the voter's list the easiest way for the clerk to do is to revise a list for the previous year. By so doing he is less liable to make mistakes, has only the necessary changes to make, in number on assessment roll, the addition of new names, striking off all names of persons not appearing on this year's roll and any other alterations that are shown by the roll to be necessary.

No voters list of a municipality in which appeals have been entered against the assessment, should be placed in the printer's hands until the expiration of the time of appeal to the judge, and within forty days in cities, and in other municipalities within thirty after the final revision and correction of the assessment roll, the clerk is required to have at least 200 copies of the list printed in pamphlet form, to post up one copy in his own office, and deliver or transmit by post, registered, three copies to each judge of the county court of the county to which for judicial purposes, the municipality belongs, and two copies to each of the following persons:—Every member of the municipal council of the municipality, except the reeve, the treasurer thereof, the sheriff of the county, the clerk of the peace, every postmaster in the municipality, every head master or mistress of the public or separate schools in the municipality. The clerk is also required to deliver or transmit by post, registered, ten copies to each member of the house of commons and legislative Assembly for the electoral district in which the municipality or a part thereof lies, every candidate for whom votes were given, at the then last election for the house of commons and for the legislative assembly, and the reeve of the municipality.

Upon each copy of the list the certificate Form 2 as given in the Voters List Act should be either printed or written. The clerk is also required to publish notice of transmission and posting up of list in some newspaper published in the municipality or when no paper is published in the municipality, then in some newspaper published either in the nearest municipality in which one is published, or in the county town. The notice should be given in

CORRESPONDENCE.

This paper is not responsible for opinions expressed by correspondents.

Organized Municipal Action.

To the Editor of THE MUNICIPAL WORLD:

It is useless for us to understand the great movements which are going on in the world of to-day, unless we can apply that knowledge to our own local affairs, to our own townships and counties. Especially does the industrial world contain lessons for us. Two of its great movements we should note in particular.

First, manufacturing on a large scale has, in many cases, replaced manufacturing on a small scale. The advantages of this are manifold. Raw materials in large quantities, in all quarters of the world, are obtained, better in quality and cheaper in price. The division and organization of labor can be carried further. Expensive machinery is more freely used, and saving made in many other ways.

Secondly, a vast co-operative system has grown up among the artisans of North England and South Scotland. In all their towns are co-operative stores which in outward appearance are much like other stores but in reality are agencies by means of which the artisans buy their goods in common and so get them at cost. The managers of these local stores often did not know where to buy their supplies and were often cheated by the wholesale men. Hence, "a copestone was placed on the whole system" by organizing a wholesale co-operative society which appears like any other great wholesale concern, but in reality is simply an agency whereby the local stores get their supplies directly from headquarters at the lowest prices. It has its own steamships, imports tea from China, buys cattle in Liverpool and Glasgow markets, and buys nearly the whole butter product of Ireland. By this means the local stores get their supplies at the lowest possible prices, are sure of getting the best terms and the best goods: These two things are but phases of that organization, that systematized action which is the watchword of the modern world. Now, in this matter our municipalities are behind the times; our townships, our statute labor divisions are isolated, often acting at cross purposes, without union, harmony or systematic action. They are like manufacturers on a small scale.

Roadmaking machinery is often of the most primitive type and even the labor of men and horses is frequently only half used. They are like the co-operative stores before the wholesale society was organized.

In view of this, men are asking why a municipal bureau could not be organized in Ontario, which would be simply an agency for the municipalities, a means of helping them to help themselves, it would, in short, stand in the same relation to

them as the wholesale society stands to the local stores; and if the institution proved successful, experience would soon open up to it other fields of usefulness until through it the municipalities would be organized into a more homogeneous body than they now are, taxes and other resources would form a body of capital so vast as to place it in the position of a manufacturer on a large scale. Many kinds of supplies, municipalities cannot find at their own door; they could report to the bureau the amount of these likely to be needed during the next month, next year, etc., the bureau would keep record of all sales thus in a few years it would have a mass of statistics which would enable it to meet the demands made on it to a nicety. The statistician of New York once made from his past records an estimate of the number of deaths in the following year, from each of the common diseases. In several cases he came within one of the actual number.

A central office buying supplies for a couple of hundred townships could make much better terms with railways and wholesale dealers than isolated townships can. Such a bureau, too, in connection with the Government, could help us much in our road system, which at present suffers from two great evils. First, the boundary lines of roads have become uncertain; many townships have had expensive law suits arising out of this, and it is going to be a constant source of trouble in the future.

Secondly, the system of statute labor is inefficient. The resources of skill and science have been applied to this task, powerful roadmaking machines have been invented, new processes of roadmaking have been discovered. The peasantry of France draw their wagons over roads made of rock crushed down with mighty steam rollers. But in Ontario, the farmers in this task of the highest public importance, scornfully cast aside all the resources which modern science and invention place at their disposal, and keep to the old method. The system of statute labor can be and ought to be vastly improved, but even then it can never get itself into position to utilize all the resources which ought to be employed in roadmaking; and even if statute labor be abolished and commissioners be appointed, one may well doubt if isolated municipalities, each going its own way, can work out a good system of public roads.

Of these evils the first could be completely remedied, the second partially, if an authoritative survey were made of all the thickly settled parts of Ontario to the extent of running one line marked by iron landmarks through each township which in all future cases of dispute would give an instant means of settling the matter, expensive no doubt but cheaper than law suits, or appeals to Crown lands department.

(Continued on Page 84.)

Form 3 of the Voters' List Act; one insertion of notice is sufficient.

Owing to the time in which voters' lists are generally published, clerks will find difficulty sometimes in transmitting the copies to the head master or mistress of the public schools in the municipality. The great majority of the lists are published during the holidays when the teachers are absent from the schools. In many cases where teachers have resigned, new teachers have not been appointed, and as a consequence, the clerk is unable to comply with this provision of the Act. We would suggest that where teachers are not known or are not residents, that copies be mailed, registered, addressed to the teacher in care of the secretary-treasurer. We also think that if the Voters' List Act were amended by requiring the lists to be sent to the secretary-treasurer of every public or separate school of the municipality, and that he be required to post a copy on the door of the school house, it would be an improvement.

Within thirty days after the publication and posting up of the list, notice of errors or omissions in the list may be given to clerk or left for him at his residence or place of business, in writing. If the office of the clerk is vacant from any cause, the notice may be given to the head of the council of the municipality. The proceedings thereafter by the clerk, judge or parties respectively, and their respective powers and duties shall be the same as in the case of an appeal from the court of revision.

THE MUNICIPAL WORLD, published at St. Thomas, Ont., contains much valuable and essential information for all parties occupying municipal offices.—[*L'Original Advertiser.*]

* * *

An amendment of the Liquor License Act, passed at the last session of the Ontario Legislature, states that members of municipal councils and constables are ineligible to act as bondsmen for license holders, under the Liquor License Act.

* * *

Eligibility to office is granted women only in school administrations in England, Norway, in the the Swedish capital, and in the poor law administration in England, Sweden and Finland. In Russia (except in the case of the village assemblies), in Austria, and in Prussia female electors may vote only by proxy, but everywhere else they have the right to vote in person.—*Boston Commonwealth.*

* * *

The complaint has been made in the county of Oxford that the larger share of public honors is borne by bachelors. Among those thus conditioned are the Dominion member for the North riding, the provincial member for the South riding, the warden of the county, the county judge and the mayor of Woodstock. To remedy the evil a local paper offers to insert matrimonial advertisements free, or to give a premium to any lady who will secure one of the above gentlemen as a partner. Probably the best way to make the fair sex more interesting to candidates for office would be to place the names of women on the voters' list.

ENGINEERING DEPARTMENT.

A. W. CAMPBELL,

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

EDITOR.

Municipal Engineering.

The assertion is boldly ventured that there is no branch of engineering that requires more practical skill and sound judgment than municipal engineering, candidly admitting, however, that other branches require more scientific attainments, but upon none of whom rests more weighty responsibility than that of the municipal engineer, who is not only responsible for the best and most effectual drainage and sewerage systems, as well as the best methods of drainage, grading and improving the streets and alleys, but more especially for the very best and most effectual system of sewerage that can be devised, regardless of the necessary cost, for upon this very principal rests the health and lives of the inhabitants of the municipality. A very grave responsibility is, therefore, assumed by an engineer when planning a system of sewerage that will not breed the zymotic diseases from which many of our populous cities suffer. Careless construction has been the fruitful source of most, if not nearly all, of the zymotic diseases from which our cities suffer, and it devolves upon the engineer to see to it that health and lives are not jeopardized by carelessness and indifference in construction.

In some cities, up to within the last few years, the bottom courses of the invert of the sewers has been laid dry, allowing the poisonous liquids to percolate through and contaminate the soil, and scarlet fever has usually originated in that part of the city, where the conditions, from careless construction and irregular gradients, breed the disease.

When the engineer has accomplished his preliminary work to carry out and complete, his designs will require constant care and untiring watchfulness. Detailed plans must be prepared for the several parts of the work projected, which must be drawn with care and accuracy, specifications prepared and carefully guarded, contracts written and executed. A competent engineer knows best just what is necessary to be embodied in documents prepared for the construction of public works. Constant watchfulness will be required on the part of the engineer if he is desirous of securing careful and honest execution of his designs. A young engineer should make it a point to carefully watch and profit from the success of those older and more experienced in the profession.

It is a common error, especially among young engineers, to be led astray by the eccentricities of self-conceited persons,

having more cheek than brains, and whose sole aim is to see their names in print and gain a little notriety—not that I am in the least disposed to disparage the honest and zealous efforts of ambitious engineers, but I am always heartily glad to award all merited praise for every honest effort—but a young engineer especially should be very careful, as well in his profession as in his religion, to resist the temptation of being carried away by “every wind of doctrine.” My advice, therefore, is, never adopt any advanced idea, however plausible it may appear, without cautiously and very carefully weighing every proposition before giving unhesitating endorsement. At the same time he should never fail to investigate and encourage every proposition in the interest and advancement of his profession.

Sewer Ventilation.

It has been found that even in sewers of the best and most modern construction what is called “sewer gas” is generated in more or less quantity, that it arises from even fresh sewerage, but is far more noxious and dangerous to health when the sewerage has begun to decompose. Even where the sewers are so constructed as to remove all the sewage to the outfall within twenty-four hours (which has been decided to be the maximum time it should take), there is still an accumulation of slime on the inner periphery of the sewers, owing to the rise and fall of the sewer line, which by leaving a deposit on the sides of the sewer is constantly manufacturing gasses of decomposition.

It is no doubt true, that the more perfect the system of sewerage is, the less foul air there is in the sewers, but, in very few towns will there be found sewers or drains where gasses are not generated, which then find their way into other parts of the sewage system, unless they are dealt with in some effective manner.

Some difference of opinion exists as to what is the actual composition of this foul air in a sewer, but it is now almost universally admitted that it is highly dangerous to health if breathed, and is also sometimes very offensive.

“The foetid organic vapor,” or sewer gas, proper has for its companions in a sewer, sulphuretted hydrogen, a most poisonous as well as unpleasant smelling gas; carburetted hydrogen, due very often to leaky gas mains or services, or to decomposing vegetable matters, carbonic acid gas or carbonic anhydride (choke damp), and some ammoniacal compounds.

The actual component parts, however, of any gas in a sewer must vary considerably with its conditions, localities, etc., in the same manner as they would in any public building or room and it is impossible to tell without costly experiments, what gasses may be prevalent in any particular portion of

a sewer. But whatever may be the analysis of this foul air, there can be but little doubt that it contains organic matter floating about it as solids, and it is excessively injurious and even dangerous to breathe and that it should be caught and destroyed or rendered innocuous, and not be permitted to pass into and contaminate and poison the air we breathe.

Considerable difference of opinion has existed as to the movements of air in sewers, some engineers contending that it always found its way to the higher parts of the sewerage systems; others that it was carried with the flow of sewerage down the sewers; others that it varied with the rise and fall of the thermometer or barometer, etc. Exhaustive series of experiments upon this question have been tried, with the result that “throughout the entire series of experiments it is found beyond all question that the wind is the only agent causing movements of sewer air that could be recorded by an anemometer, and that the currents were up-hill or down-hill, according as the individual sewer experimented upon was affected by the wind.”

The whole subject of scientific and sanitary sewer ventilation is beset with difficulties. Whatever system of ventilation of the main sewers in any town may be adopted it is imperative that the houses connected with them should be properly trapped, ventilated and isolated, and this, in my judgment, is of even greater importance than the ventilation of main sewers.

1. A house drain should be constructed of stoneware pipe, salt glazed, perfectly smooth inside, of true circular section and thickness of material, straight in the direction of their length with the whole sockets of proper depth, and free from any cracks, blisters, sand holes or other defects, as even the most carefully manufactured pipes vary in diameter of sockets, etc., and it is well to have them sorted before commencing the work, it is scarcely necessary to add that no “seconds” should be allowed on the works.

2. The internal diameter of the drain should not be too large, 6 inches is generally quite sufficient to carry off all the sewage from an extensive establishment, even if the water from the roofs, or a portion of them, is included.

3. The inclination is governed by circumstances, but about 1 in 60 is found to be a very convenient fall for many hydraulic and other reasons will keep a syphon clear.

4. The jointing of the pipes should be executed with great care, if cement joints are made, each pipe should be jointed separately and it should be seen that no cement is left in the drain and that the joint is good all around. Sometimes tarred gaskin is used to prevent the entrance of cement into the pipes.

5. The sockets of the pipes should be sunk into the ground at the bottom of the

trench so as to give an even bearing, which, amongst other benefits dispenses with the chance of settlements.

6. No pipes should be allowed to be covered in until they have been inspected by the inspector, and in order to test the soundness of the joints, fill the drain with water, having first stopped up the end and note if the level of water is maintained.

7. Drains should not pass under buildings if it can be avoided, but if unavoidable they must be buried in good concrete and relieving arches turned to any walls passing over them.

8. Care must be exercised in filling over pipes not to break or injure them.

9. The trap to a house drain should be a syphon with a good cascade action, its position must be guided by circumstances.

10. The drain should end at outside wall of the house and be carried up the wall its full diameter to above the roof for extension, an inlet for fresh air being essential on the house side for the trap, if the drain has to pass under the house it must be similarly carried up on the other side.

11. All waste pipes and overflows to be entirely cut off from connection with any drain, and empty on to special gullies outside the house.

The object of good drainage may be summarized as follows: To ensure that there be no escapes of either liquid or gas from any portion of the drain or soil pipes, that the house is isolated from its neighbor and the main sewer, that a current of fresh air is constantly passing through all the drains and soil pipes.

I would urge the necessity of a register of all the drains being kept that are examined by the engineer's department. This can be done by having a series of numbered note books kept solely for this purpose, and all the information thus acquired must be plotted on the map of the town, if on a sufficiently large scale.

The necessity of correct plans of the drainage of buildings cannot be over estimated, especially for hospitals, asylums, workhouses, schools or public buildings, and even for the smallest dwelling house such a plan would often prove the greatest boon to the occupier or owner, as well as at all times to the engineer, the medical officer of health, and the inspector of nuisances.

A strange commentary on the anxiety of women to possess the franchise is furnished by the city of Boston, the most cultured centre in the United States. The advocates of women's rights in that city are finding it difficult to explain the apathy which exists among the Boston women to make use of their right to vote for School Commissioners. In the year 1888 20,262 women registered as voters, and 19,490 voted at the election. In 1889 only 10,051 voted, 1890 the number had fallen to 7,434, while in 1891 less than 6,000 exercised the franchise. It seems that the women of Massachusetts labored hard for years to secure the right to go to the polls, and yet in the course of three years the number who availed themselves of the new liberty fell from nearly 20,000 to 6,000.

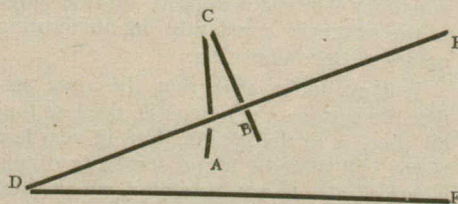
Roads and Roadmaking.

VII.

Loss of Power on Inclinations.

Every road should be perfectly level. If it is not a large portion of the strength of the horses which travel it will be expended in raising the load up the ascent. When a weight is drawn up an inclined plane the resistance of the force of gravity or the weight to be overcome is such a part of the whole weight as the height of the plane is to its length. If, then, a load rises one foot in every twenty of its length, a horse drawing up it a load of one ton is compelled to actually lift up one-twentieth of the whole weight, *i.e.*, one hundred pounds through the whole weight of the ascent, besides overcoming the friction of the entire load.

Let D E, in the following diagram, represent the inclined surface of the road upon which rests a wagon, the centre of gravity of which is supposed to be at C, draw C A perpendicular to the horizon, and C B perpendicular to the surface of the hill. Let C A represent the force of gravity or the weight of the wagon and its load. It is equivalent in magnitude and direction to its two rectangular component forces C B and B A. C B will then represent the force with which the wagon presses on the surface of the road, and A B the resisting force of gravity, *i.e.*, the force (independent of friction) which resists the ascent of the wagon or which tends to drag it down the hill.



To find the amount of this force from the two similar triangles A B C and D E F, we get the proportion :

$$CA : AB :: DE : EF$$

Representing the length of the plane by l, its height by h, and the weight of the wagon and load by W, this proportion becomes :

$$W : AB :: l : h$$

Whence $AB = \frac{W \cdot h}{l}$; that is, the resistance of gravity due to the inclination is equal to the whole weight, multiplied by the height of the plane divided by its length. If the inclination be one in twenty, then this resistance is equal to $\frac{1}{20}W$.

In this investigation I have neglected three trifling sources of error, arising from part of the weight being thrown from the front axles to the hind ones, in consequence of the inclination of the traces; from the diminution of the pressure of the weight owing to its standing on an inclined surface; and from the hind wheels bearing more than half of the pressure

in consequence of the line of gravity falling nearer them.

The results of experiments fully confirm the deductions of theory as to the great increase of draught upon inclinations.

From the results of experiments the following data is established :

Calling the load which a horse can draw on a level.....I.00

On a rise of 1 in 100	a horse can draw only	.90
" 1 in 50	" "	.81
" 1 in 44	" "	.75
" 1 in 40	" "	.72
" 1 in 30	" "	.64
" 1 in 26	" "	.54
" 1 in 24	" "	.50
" 1 in 20	" "	.40
" 1 in 10	" "	.25

In round numbers, upon a slope of 1 in 44 or 120 feet to a mile, a horse can draw only three-quarters as much as he can upon a level; on a slope of 1 in 24, or 220 feet to the mile, he can draw only half as much; and on a slope of one in ten or 528 feet to the mile only one-quarter as much.

This ratio will, however, vary greatly with the nature and condition of the roads; for although the actual resistance of gravity is always absolutely the same upon the same inclination, whether the road be rough or smooth, yet is relatively less on a rough road and does not form so large a proportional part of the whole resistance.

Thus if the friction upon a road were such as to require, upon a level, a force of draught equal to one-fortieth of the load, the total force required upon an ascent of one in twenty, would be one-fortieth plus one-twentieth, equals three-fortieths. Here, then, the resistance of gravity is two-thirds of the whole.

If the road be less perfect in its surface, so that its friction equals one-twentieth, the total force upon the ascent will be one-twentieth plus one-twentieth, and here, then, the resistance of gravity is one-half of the whole.

If the friction increase to one-tenth, the total resistance is one-tenth plus one-twentieth, and here gravity is only one-third of the whole.

We thus see that on a rough road with a great friction any inclination forms a much smaller part of the resistance than does the same inclination on a smooth road on which it is much more severely felt, and proportionately more injurious; as the gaps and imperfections which would not sensibly impair the value of a common knife renders a fine razor completely useless.

The loss of power on inclinations is indeed even greater than these considerations show, for besides the increase of draught caused by gravity, the power of the horse to overcome it is much diminished upon an ascent and in even a greater ratio than that of man owing to its anatomical formation and its great weight. Though a horse on a level is as strong as five men, yet on a steep hill it is less

strong than three, for three men carrying each 100 pounds, will ascend faster than a horse with 300 pounds.

Inclinations being always thus injurious, are particularly so where a single steep slope occurs on a long line of road which is comparatively level. It is, in that case, especially important to avoid or to lessen this slope, since the load carried over the whole road, even the level portions of it, must be reduced to what can be carried up the ascent. Thus if a long slope of 1 in 24 occurs on a level road, as a horse can draw up it only half of his full load he can carry over the level portions of the road only half as much as he could draw thereon.

The bad effects of this steepness are especially felt in winter when ice covers the road for the slippery surface causes danger in descending as well as increased labor in ascending. The water of rains also runs down the road, and gullies it out, destroying its surface and causing a constant expense for repairs, oftentimes enough to pay for a permanent improvement.

The loss of power on inclinations being so great as has been shown, it follows that it is very important never to allow a road to ascend or descend a single foot more than is absolutely unavoidable. If a hill is to be ascended the road up it should no where have even the smallest fall or descent, for that would make two hills instead of one; but it should be so located and have such cuttings and fillings as to secure a gradual and uninterrupted ascent the whole way.

* * *

The great volume of internal trade in every state is the common road trade. It exceeds by millions of tons the entire carrying trade of the railroads; for in addition to the fact that the great volume of freight carried by the railroads is, in the first instance, carted in one form or another over the common highways of the country, you know that enormous quantities of produce of all kinds are wheeled over the common roads under the requirements of local trade in rural sections, and that these vast quantities of produce consumed in the local market have no connection whatever with the railroad traffic. And so it becomes important to inquire in what matter this great carrying trade which is constantly going on over the common roads, and which supplies not only the immense freighting business of the great railroads, but the more important intercommunication between neighbors in the local market, can be carried on with best facilities and with least cost. Upon this question of economy the great railroad corporations of the country have established a valuable precedent. Each of these corporations is in the business to make money. Their one object is to give little and get much, and yet in spite of the gradually reduced rates charged by the great trunk lines to the general public they

have steadily increased in prosperity till the enormous wealth of these companies have become the wonder of the century. These railroad corporations began business in a crude, undeveloped and in some cases unsystematic way. Their desire to gain sharpened their wits, they experimented, and by experiments they found that the greatest savings of expense in the management of their railroads was to be attained by the adoption of easy grades and by adding to the smoothness and hardness of the roadbed. These two qualities of smoothness and hardness are the essentials of a good wagon road. You cannot have and keep such roads without good laws and intelligent supervision.

A good road is made to last for all time, and is kept in repair at half the cost and labor expended on the average dirt road of this country. It is looked after with the same system and care that are bestowed in the management of other departments of government, and every farmer living on the long line of that splendid roadway is happy and independent, in the consciousness that he is every day and every way in touch with the great world of business and society.

By the improvement of these common roads, every branch of our agricultural and manufacturing industries would be materially benefited. Every article brought into market would be diminished in price; the number of horses necessary as a motive power would be reduced, and by these and other retrenchments millions of dollars would be annually saved to the public. The expense of repairing roads and the wear and tear of vehicles and horses would be essentially diminished, and the thousands of acres of land, the products of which are now wasted in feeding unnecessary animals in order to carry on this character of transportation, would be devoted to the production of food for the inhabitants of the country. In fact, the public and private advantages which would result from effecting this great object in the improvement of our highways are incalculable, not only to the agricultural community as a class, but to the whole population.

It is a kind of reform that must come from the people, and most of all from the farmers. It is a reform that benefits all and injures none; makes you broader and better in your person and in your possessions; helps and hastens the happiness of your family; shields and saves the patient friend that drags your wagon so many miles from year to year; puts you on better terms with yourself and all mankind, and leaves you wondering what sort of a farmer that was who lived and labored in a sea of mire.

We notice that several municipalities intend printing the assessment roll this year. Ratepayers are evidently beginning to demand more information on public matters.

Drainage.

II.

OBSTRUCTION OF TILE DRAINS.

Certainly tile drains will get filled up and stopped if not laid with great care and with all proper precaution against obstructions. It cannot be too often repeated that tile drainage requires science, and knowledge and skill as well as money; and no man should go into it blindfolded or with faith in his innate perceptions of right. If he does his education will be expensive. It is proposed to mention the various modes by which tiles have been known to be obstructed and to suggest how the danger of failure by means of them may be obviated. Let not enterprising readers be alarmed at such an array of difficulties, for the more conspicuous they become the less is the danger from them. Probably more drains are rendered worthless by being filled up with earthy matter which passes with water through the joints of tiles than by every other cause. Fine sand will pass through the smallest apertures, if there is a current of water sufficient to move it, and silt, or the fine deposit of mud or earth which is held almost in solution in running water, is even more insinuating in its ways than sand.

Very often drains are filled up and ruined by these deposits, and unless the fall be considerable and the drain be laid with even descent, if earth of any kind find entrance, it must endanger the permanency of the work. To guard against the admission of anything but water, lay drains deep enough to be beyond the danger of water penetrating in streamlets. Water should enter the drain at the bottom, by rising to the levels of the tiles and not by sinking from the surface directly to them. If the land is sandy great care should be used. In draining through running sand, especially if there be a quick descent, the precaution of sheathing tiles is resorted to. This is done by putting small tiles inside the larger ones, breaking joints inside, and thus laying a double drain. This is only necessary, however, in spots of sand full of spring water. Next best to this mode is the use of collars over the joints, but these are not often used, though recommended for sandy land, at least, in all sandy land not perfectly solid; be careful to secure the joints in some way. An inverted turf carefully laid over the joint is often used. Good, clean, fine gravel is best of all. Spent tan bark, when conveniently procured, is excellent, because it strains out the earth, while it admits the water; and any particles of the bark that find entrance are floated out upon the water. The same may be said of sawdust.

To secure the exit of earth that may enter at the joints there should be care that the tiles are smooth inside, that they are laid exactly in line, and that there is a continuous descent. If there is any place where the water rises in the tiles, in that

place every particle of sand, or other matter heavier than water, will stop until, if the depression is sufficient, a barrier is formed and the drain stopped.

In speaking of the forms of tiles, the superiority of rounded openings over those with flat bottom has been proven. The greater head of water in a round pipe gives it force to drive before it all obstructions and so tends to keep the drain clear. The water from deep drains is usually very clear, and cattle find the outlet a convenient drinking place, and pigs find it a pleasant place to wallow, and they constantly tread up the soft ground there and obstruct the flow of water. All earthy matter and chemical solutions of iron and the like, tend to accumulate by deposit at the outlet. Frogs, mice and insects of many kinds collect about such places and creep into the drains. The action of frost in cold regions displaces the earth and even masonry if not well laid; and back water, by flowing into the drains, hinders the free flow of the water. All these causes tend to obstruct drains at the outlet. If once stopped there the whole pipe becomes filled with stagnant water, which deposits all its earthy matter, and soon becomes obstructed at other points, and so becomes useless. The outlet must be rendered secure from all these dangers at all seasons.

No crevice, however small, in a tile drain, is proof against the entrance of the roots of water-loving trees, and when roots enter a drain they grow like long, fine grass and become thickly matted together, and very soon close the drain, and those who lay tile drains near willows and ash and like cold-water drinkers must do it at peril of which they are warned, I have never known roots to obstruct pipes through which there was not a perennial stream, the flow of water in summer and in early autumn appears to furnish the attraction. Laying the tiles deep and with collars will afford the best security from all danger of this kind.

In some cases drains become obstructed by peroxide of iron. Iron exists in all animal and vegetable matter and in all soils to some extent, the iron in the soil is held in solution in water as a protoxide and is converted into pre-oxide by contact with the air either in the drains or at their outlets, and is then deposited at the bottom of the water. Common pipe drains should be full of air, which might perhaps in a feeble current be sufficient to cause this deposit. To guard against obstructions from per-oxide of iron tile should be laid deep, closely jointed or collared, with great care that the fall be continuous, and especially that there be a quick fall at the junctions of minor drains with mains and a clear outlet.

It is sometimes claimed that tiles are frequently prevented from receiving water by the filling up of the crevices between them. If water is poured on tiles in a stream it would be likely to carry into these

openings enough earthy matter to fill them, but the whole theory of thorough drainage rests upon the idea of slow precolation of the passage of water in the form of fine dew, as it were through the motionless particles which compose the soil, and if drains are properly laid there can be no motion of particles of earth either into or toward the tiles. The water should soak through the ground precisely as it does through a wet cloth. The ascertained instances of the obstruction of pipes by excluding the water from the joints are very few. No doubt that clay puddled in upon the tiles when laid will have this effect, but those who have experience in tile drainage will bear witness that there is far more difficulty in excluding sand and mud than there is in admitting water.

It is thought by some persons that sufficient water to drain land may be admitted through the pores of the tiles. I have no such faith. About 500 times as much water enters at the crevices between the tile as is absorbed through the tiles themselves.

Collars on tiles have a great tendency to prevent the closing up of the crevices between them, but injuries to tile laid to proper depths are very rare.

Water Supply.

Storage Stand-Pipe

Where a sufficient elevation is not to be had for the construction of an earthen reservoir it is a common practice to erect what is known as storage stand-pipes. This is practically a small reservoir built of plate iron, riveted the same as a steam boiler, erected upon the most favorable hill or elevation and carried to sufficient height to afford the necessary head for the town supply. The thickness of the metal varies with the height of the column, and rarely exceeds half-an-inch for the lower courses and diminishing to one fourth or three-sixteenths at the top. Near the base is a man-hole for access for cleaning and repairs, and the column is provided with a fixed ladder or spiral stairway leading to the top.

To insure a perfect uniform pressure on the pumps, an internal stand-pipe of the same diameter as the force main is sometimes placed in the centre of the column, the water from the pumps being discharged from the top. The same object may also be accomplished by omitting the internal pipe and substituting a weighted valve on the discharge pipe at the bottom.

By a simple arrangement of a check valve the water during the hours of pumping is distributed directly from the pumps, the surplus being discharged into the stand-pipe. When the pumping ceases the stored water is delivered into the mains through the check valve at the base of the bottom.

By the vertical circulation of the water in the stand-pipe, together with the alternating flow in the distributing pipes, fresh

water of a nearly uniform temperature is ensured at all seasons of the year. In winter, when the atmosphere is colder than the water, the natural circulation carries the colder water to the bottom, where it is received into the distributing main, while the warmer water is constantly rising to the surface, thus preventing freezing, and before the whole body can have been sufficiently reduced in temperature to form ice another supply is received from the pumps. By this process the cooler water contained in the column is delivered to the pipes in summer.

Useful Information—Water

Doubling the diameter of a pipe increases its capacity four times.

Friction of liquids in pipes increase as the square of the velocity.

The main pressure of the atmosphere is usually estimated at 14.7 lbs. per square inch, so that with a perfect vacuum it will sustain a column of mercury of 29.9 inches or a column of water 33.9 feet high.

To find the pressure in pounds per square inch of a column of water multiply the height of the column in feet by .434. Approximately we say that every foot elevation is equal to $\frac{1}{2}$ lb. pressure per square inch, this allows for ordinary friction.

To find the diameter of a pump cylinder to move a given quantity of water per minute, 100 feet of piston being the standard of speed, divide the number of gallons by four, then extract the square root and the product will be the diameter in inches of the pump cylinder.

To find the horse power necessary to elevate water to a given height, multiply the total weight of the water in pounds by the weight in feet and divide the product by 33,000, an allowance of 25 per cent. should be added for water friction and a further allowance of 25 per cent. for loss in steam cylinder.

The area of the steam piston, multiplied by the steam pressure gives the total amount of pressure that can be exerted. The area of the water piston multiplied by the pressure of water per square inch gives the resistance. A margin must be made between the power and the resistance to move the pistons at the required speed, say from 20 to 40 per cent. according to speed and other conditions.

To find the capacity of a cylinder in gallons. Multiplying the area in inches by the length of stroke in inches will give the total number of cubic inches, divide this amount by 277.23 and the product is the capacity in gallons.

Woman Suffrage Abroad.

In the domain of local self-government women are admitted to the franchise in England, including her colonies, in Sweden, Iceland, Finland and Russia. In Austria, Prussia, Saxony and Brunswick they vote in rural communes only. Further, women have the franchise in school elections in Norway.

LEGAL DEPARTMENT.

H. F. JELL, SOLICITOR,
EDITOR.

CUNNINGHAM V. GOWANLOCK.

Mr. Cunningham, late acting city engineer of Toronto, won a libel suit against Ald. Gowanlock, but, while the verdict was a substantial vindication of his professional character, the result must have been at some personal sacrifice, seeing that the litigents are each left to pay their own costs, no damages being awarded. In the course of the trial Mr. Justice Falconbridge gave a ruling to the effect that a member of a municipal council has not the same degree of privilege in making charges that a member of Parliament has. The decision sprang from a technical point raised by Mr. Osler. He wanted the defence to enter a plea of justification but Mr. East declined taking that line.

JAMES TRAN OF CEDAR GROVE V. TOWNSHIP OF PICKERING.

This case was heard at the last Whitby Assizes. The action was to recover damages for an accident sustained by an upset on the 6th con. of Pickering, whilst driving along the turnpike. The statement of claim alleged that the roadway was turnpiked eight feet high, and that there was a hole in a culvert which was emphasized by a plank and a bush stuck up, etc. His lordship suggested that the lawyers retire and endeavor to make a settlement, and after about an hour they returned to court allowing Tran \$800 for his bruises, which had laid him up a month, and \$400 to his niece, who had her arm dislocated. Each party to pay their own costs.

FLEMING VS. CITY OF TORONTO.

Judgment on appeal by the defendants the city of Toronto from the judgment pronounced by 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.) ch. 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 by-law and taken other steps to validate their acts, 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 by-law for raising the city's share of the moneys required with-

out requiring the assent of the electors to such by-law. Appeal dismissed with costs. E. D. Armour, Q. C., for the appellants. Moss, Q. C., and Coatsworth for the respondent.

HUSON VS. TOWNSHIP OF SOUTH NORWICH.

Judgment on appeal by the township from two orders made by Galt, C. J., the first quashing a local option by-law of the township, and the second refusing an application for the rehearing of the application on which that order was made. The grounds on which the learned chief justice held that the by-law should be quashed were that it enacted no penalty for breach of its provisions; that the municipality had no authority to pass the by-law to take effect at once; and that the by-law was in excess of the authority of the provincial legislature as amounting to an absolute prohibition of the sale of liquor within the township. The appeal was taken on the grounds that the by-law did not impose total prohibition, but a prohibition of the sale of liquor by retail only; that it was validated by 54 Vic., ch. 46, sec. 1; that the omission to provide a penalty was not sufficient to avoid the by-law; that a penalty is provided by another by-law of the township, and on other grounds. The court held that the by-law prohibited retail selling only, and also held in favor of the by-law upon the other grounds urged. Appeal allowed with costs and order setting it aside recinded with costs.

ATTORNEY-GENERAL (VAUGHAN TOWNSHIP) VS. VAUGHAN ROAD COMPANY.

Action for an injunction to restrain the defendants from collecting tolls on the Vaughan road until the engineer of the township of Vaughan shall have certified the road to be in a fit state of repair, he having notified the defendants, under the General Road Companies' Act and amendments, not to collect tolls. The defendants contended that they were not subject to the provisions of the general Act. The question at issue has been decided by the court of appeal in favor of the defendants, on a motion for an interlocutory injunction; but the motion was brought down to trial in order to enable the plaintiffs to appeal to the supreme court. Judgment for the defendants, following that of the court of appeal already pronounced, and dismissing the action with costs. Reference as to damages by reason of the injunction. Proceedings stayed till further order.

VILLAGE OF GEORGETOWN V. STIMSON.

Judgment in special case submitted. R. S. O., c. 184, sec. 340, provides that "Every municipal council may, under the formalities required by law pass by-laws for contracting debts by borrowing money or otherwise, and for levying rates for payment of such debts on the ratable property of the municipality for any purpose within the jurisdiction of the council, but no such by-law shall be valid which is not in accordance with the following restrictions and provisions, except in so far as is other-

wise provided in the next following two sections of this Act." The by-law in question was passed under the formalities required by law, but was not in accordance with the provisions and restrictions referred to, and its defects were apparent on its face, but it was duly registered under sec. 351 of the Act, and no application or action to quash or set aside the same was made within three months from the registry. The learned chief justice holds that the by-law was at first invalid under sec. 340, but that by sec. 351 the by-law and the debentures issued thereunder, is, are, and will be absolutely valid and binding upon the plaintiffs according to the terms of the by-law; that if there is any repugnancy between secs. 340 and 351, the former must give way to the latter, as the later expression of the will of the legislature; and that registration cures defects apparent on the face of the by-law. Judgment in favor of the plaintiffs upon the special case.

S. S. 18, VS. MARIPOSA TOWNSHIP

At Osgoode hall, on Monday, 11th April before V. C. Ferguson, a motion was made on behalf of the trustees of S. S. No. 18, Mariposa, for a mandamus to compel the municipal council of Mariposa to pass a by-law for the issuing of debentures to pay for a new school site and the erection of a new school house. For more than a year the question of change of site was agitated and finally an award was made establishing the old site. The statute makes such an award binding for at least five years. The agitation continued, however, and on the presumed authority of a special meeting held since the award, the trustees applied to the township council to pass the required by-law. This the council refused to do. Hence the motion for a mandamus to compel them. On behalf of the trustees it was urged that the council were obliged to pass the by-law on its being shown that a majority vote of a special meeting of ratepayers held sanctioned the application for the loan. Council for the township argued that notwithstanding the imperative language of section 115, it was the right as well as the duty of the council, in the interests of their township and of their particular ratepayers, to see that the applicants had established a clear legal right to demand what they did; that section 64 is to be read with section 115 of the act as a condition precedent, and that in the absence of proof that a majority vote had adopted the new site the council properly refused; also that the requisition asking the debentures to be made payable in ten years, was an improper interference with the discretion given to the council by the statute to extend payment over a term not exceeding thirty years, and that the court would not deprive the council of this discretion. His lordship ruled in favor of the township council on each of these points and refused the mandamus, with costs to be paid by the trustees, but without prejudice to any application which they may choose to make on other materials.

(Continued from Page 78.)

Although statute labor is at present inefficient, yet, as Mr. Roberts recommends, if properly controlled, if used in the right way and at the right time it would be a mighty engine for roadmaking.

The more important roads, those on which there is, and always will be a continual heavy traffic, should be directly managed by the central office. The best machinery, best materials, best methods of road-making, such as McAdam or Telford, should be employed. Thus we would get thoroughly good main roads, and our local roads would be vastly improved.

* * * * *

What led me to make these remarks was this—I saw that in many things our municipalities act not in unison but as separate units. I saw that partly on this account their action was often inefficient. For instance I saw that the isolated co-operative stores overcame the difficulties of separation by means of a central wholesale society, and wondered whether an analogous institution, a central municipal bureau, would not enable the municipalities to gain all those advantages and resources in buying and in working, which individuals acting in union have, but individuals acting in isolation have not.

Any such scheme as this is always confounded with direct governmental action, and owing to this misunderstanding a series of objections are raised: by noticing these we can see what is the nature of any such scheme, what are its limitations and possibilities.

First, it is said that an attempt on the part of a central power to regulate affairs so widely extended, so far reaching as roads and bridges must end not in system but in confusion, not in success, but in miserable failure.

Again, it is said that while such an attempt might be made in England, a country in whose great destiny "a burden well nigh not to be borne" burns a sense of responsibility into the minds of her legislators; but in ordinary democratic countries like Canada or the United States—actual experience—a court from which there is no appeal has shown that the government elected on party lines is unable to control the vast patronage involved in municipal affairs. It is also objected that whereas hitherto the municipal elections have been kept tolerably clear of party politics, any close connection with a government elected on party lines would introduce party politics in all its virulence into municipal affairs.

Last it is said that our municipal institutions are a splendid educative force for teaching the people self-government, they give that wide basis local self-government on which, alone can rest the principal of federation: toward which the history of the future seems tending that

such a scheme would ruin all this by substituting in its place bureaucracy which is utterly deadening to true self-government, to true national life.

To all these the answer is that it does not involve direct governmental action at all. It is simply a central office by means of which the municipalities could make the most of their own resources, all that the government would do, would be first to institute, to initiate the concern, and second to ensure responsibility on the part of salaried managers. Hence it would not be beyond the scope of an ordinary democratic government. It would not aid in introducing party politics into municipal elections. It would not increase the national debt because the system of municipal taxation would be retained and each municipality would pay for what it got. It would not lessen the value of our municipal system as an educative force, it would not be a tearing up, but simply an attempt to strengthen that system and to increase the powers and resources of the individual municipalities.

But there is an objection so grave that, I confess it could easily be fatal to this or any other scheme for organizing municipal action and furthering municipal powers. To the English artisans their stores were a direct personal gain. Hence they stuck to them and were willing to put up with delay and inconvenience. But to municipal councillors it would be no personal gain, only a public one; and if the thing involved any delay, any inconvenience, any complicated system of accounts, they would have nothing to do with it. In view of this, two things may be said. First, in arranging any such scheme the utmost simplicity must be observed, and the plainest and most accurate business methods employed. Secondly, it is perfectly useless for us to evolve some fine scheme out of our imaginations and expect to introduce it at one swoop. If any thing is done in this line, it must be done step by step, it must be a gradual growth which the experience of the past and the needs of the present will modify into proper shape as it goes on. Only in this way can we get a system which will be practicable throughout.

Hence I have given several hints rather than a definite scheme, in the hope that it may stimulate thought on this matter in the minds of the readers of THE MUNICIPAL WORLD, and that thus better ideas on this subject than those I have given, may be put forth.

One thing is certain, it behoves the people of Ontario to give deep and thoughtful attention to their municipal institutions, to look upon them, not as a thing apart, independent, but rather as an integral portion of the national system and having a relation to those institutions, which should be diligently studied.

WM. BLEWETT.

Yarmouth, June 17th, 1892.

Country Roads.

To the Editor of THE MUNICIPAL WORLD:

One of the important questions before the public to-day is the construction and maintenance of our country roads. Every person will admit that the advantages of a well-built roadway, which will carry a heavy load or a light rig with ease and security are very great, that we have very few of these roadways will be also admitted by those who have occasion to travel on them.

The system under which the majority of them were built and are being maintained, is the statute labor system, aided by municipal grants expended by the different councillors. That this system is a very imperfect one for the construction of permanent roads is easily shown by results, and that some other plan must be adopted is evident, if we wish to succeed in our undertakings. The abolition of statute labor and the imposition of a tax in lieu thereof, is being seriously considered by some townships, and, I believe, adopted by others, if those who have adopted some other plan would give it to your readers with the results accomplished, I believe it would assist in solving the question. The plan I propose is abolition of statute labor, and of grants made by the council to be expended by its own members and instead thereof the council to place in its estimates at the beginning of the year, a certain amount to be spent during the year in the construction and repair of the public roads, then to select the most competent man in the township, give him a fair salary to direct and supervise the expenditure of the amount raised over the whole township. By a competent man, I mean one who understands the principles of roadmaking and the nature of the different materials used in their construction, who will not be influenced by fear or favor and who would report from time to time to the council, and, if necessary, have aid of an engineer on any difficult piece of road.

Some of the advantages of this system would be that instead of our roads being built and repaired under the supervision of forty or fifty different men, each perhaps with a different system, or very often with no system at all, they would be under the direction of one, which would give us straight roads, regular grades, the same width, good drainage, and many other qualities of a good road, which would tend to make them of a more permanent and lasting character. Gravel, tile, plank, etc., would be bought in larger quantities, thus ensuring a cheaper rate. Larger contracts would be let at a less rate than is possible now, and more especially would we expect a dollar's worth of work for every dollar expended.

Some objections to this plan are: Another salaried officer and increased taxes. Would it not pay us to give a competent man a fair salary to expend our money as above, than to allow it to be expended by men who are not competent, and where sometimes the money is as good as thrown away? Yours,
WEST ZORRA.

Amendments to Municipal Assessment Act, 1892.

(Continued from last issue.)

Sub-section 38 of section 489 is amended, and councils in cities and towns may, by by-law, provide that the chief constable or inspector may release any person charged with being drunk, without being disorderly, when it is the first or second arrest for such offence.

Section 46 A is added to section 489, and provides for the regulating of firing of guns, other firearms and fireworks, to prevent charivaries and other like disturbances.

Section 495, sub-section 3 A is amended by inserting after the words "dry goods" in the fourth line, the words "watches, plated ware, silver ware." This provides the word hawkers shall include all persons who, being agents for persons not resident within county, sell or offer for sale tea, dry-goods, watches, plated ware, silver ware, or jewelry, or cause or expose samples of any of such goods to be afterwards delivered within the county to any person not being a wholesale or retail dealer in such goods.

Sub-section 5 of section 495 is amended by prefixing the words "for establishing high schools, and appointing high school trustees subject to the High Schools' Act and"

Section 6 of section 495 is amended so that the council of any union of counties may pass by-laws for the purpose of apportioning the amount to be levied, so that each county forming such union shall be liable only for the maintenance of the high schools situated in such county.

Section 42 of the Municipal Amendment Act 1891 is repealed. Also sub-sections 3 and 9 of section 496.

Section 521 is amended by the addition of sub-section 21, which provides that township councils may pass by-laws for giving and paying bounties not exceeding \$5 per head for the destruction of foxes or other wild animals which kill or destroy poultry.

Section 351 is amended by the addition of sub-section 7. (7) Where two or more municipalities are jointly liable for the keeping in repair of a public road, street, bridge, or highway, there shall be contribution between them as to damages sustained by any person by reason of their default in keeping the same in repair, and if an action shall be brought by any such person the same shall be brought against all of such municipalities, and any of the defendants in any such action may require that the proportions in which such damages and the costs of the action shall be borne between them shall be determined therein, and in settling such proportion, either in the action or otherwise, regard shall be had to the extent to which each municipality was responsible, either primarily, or otherwise, for the act or omission for which the damages shall become payable or to be recovered, and the damages and costs shall be apportioned between them accordingly.

Sub-section 6 of section 30 of the Municipal Amendment Act of 1890 is

amended by striking out the word "such" in the seventh line.

Section 30 of the Municipal Amendment Act 1890, is amended by the addition of sub-section 9, which states that the section shall apply to bridges of the prescribed length constructed, which have been or shall be constructed after the 7th day of April 1890, and the maintenance of the said bridges to include re-construction in whole or in part after the said date.

The drainage and local improvements clauses of the act are also amended, and two sections relating to the powers of trustees of police villages added.

Collectors' Rolls.

The preparation of collectors' rolls will, during the next two months, engage the attention of municipal clerks. Section 119 of the Assessment Act refers to these duties. It is very necessary that the work of the clerk in this respect should be accurate, as the financial business of the municipality depends on the payment of correct amounts by the parties liable under by-laws that may have been passed in accordance with the Municipal, Drainage and other Acts. The first duty of the clerk should be to enter as much of the Assessment Roll as is required in the collector's roll, and ascertain the total assessment of the municipality. This will be required by the council in striking the rate. In townships, clerks will find it to their advantage in checking these additions to ascertain the valuation of each school section, and the total valuation of all the sections should agree with the total of the Assessment Roll.

Carefully kept records of Debenture By-Laws and the payments required thereunder will materially assist in arriving at the proper special rates to be entered in the roll, and the amount of any special rate imposed under Debenture By-Laws should be the amount required for debentures and coupons payable during the year 1893, the amount fixed by the by-law to be raised each year.

Under section 101 of the Assessment Act provision is made for the return of statute labor lists before the 15th of August, and the clerk is required to enter the commutation for statute labor against the name of every resident, owner, tenant or occupant entered upon the assessment roll, who has made default in performing statute labor, or in payment of the commutation of the same.

Section 109 of the Public Schools Act of 1891, which has been amended by the Act of 1892, so that it does not refer to union school sections which include part of a township and a village or town, provides that the municipal council of every township shall levy and collect by assessment on the taxable property of the public school supporters of the whole township the sum of \$100.00, at least, for every public school therein, in which a public school has been kept open for a whole year. When a public school has been

kept open for six months or over, a proportionate amount of the said sum of \$100.00 shall be levied and collected on the taxable property of the whole township, and an additional sum of \$50.00 shall be levied and collected in a similar manner for every assistant teacher engaged for the whole year, and a proportionate amount for such assistant teacher if engaged for six months or over.

In the case of union schools they shall levy and collect a proportion of said sum as fixed by the equalization provided for under section 95 of the said Act.

Owing to the difference in the rates imposed, clerks should be very careful in checking over the valuations of the different school sections in their municipality to see that the assessor has made no errors, and that the property rightly belonging to the section is assessed therein. Trustees generally like to know the valuation of their sections, and in order to obtain a requisition from them in proper time it is advisable to send each secretary-treasurer a circular or letter giving the valuation of his school section as it appears on the assessment roll for the year, and enclose a blank form of requisition to be filled in, signed by the trustees and to be returned to the clerk on or before the first day of August. This would insure uniformity of requisitions. The circular should also direct the trustees to enter in requisition the full amount required by them, and the council in levying the school section rates can deduct the amount to be raised by the general public school rate imposed under section 109 before referred to.

If clerks have any difficulty in ascertaining in what schools are more than one teacher, or the length of time for which schools are kept open in any of the sections, this information could be obtained at the time the requisition is sent in. We would suggest, to procure uniformity and correctness in this matter, that the clerk in each municipality write to the inspector of public schools and obtain from him a certificate as to the number of teachers employed at and the time for which each school is kept open in the township.

In the case of union school sections, the clerks of the municipalities interested, before entering the trustees' rates upon the roll, should ascertain that the amounts to be entered by each clerk is correct and in accordance with equalization of assessors.

This is rendered more necessary owing to liability of trustees acquainted with the provisions of the Act to deduct the amount raised by general rate of the township from the total amount required in each section, in filling in requisition. If this matter is explained to the secretary-treasurer of the sections in the circular mentioned we think there would be no difficulty. This is the first year of this general public school rate in many municipalities and too much pains cannot be taken to give the trustees every information to secure uniformity and prevent confusion in levying.

QUESTION DRAWER.

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

SUBSCRIBER.—When the collector returns the roll to the treasurer he makes oath before him as to all uncollected taxes, etc. In this case is it necessary for the council to issue an order to the treasurer, to, as they say, "balance the roll?"

It is not necessary for the council to issue the order to the treasurer, mentioned by our correspondent, or to pass a resolution to that effect.

J. A. S.—Can a pathmaster in the event of a ratepayer refusing to perform his statute labor compel him to do said labor? Does the municipal statutes deal with him the same as those who are not ratepayers but are twenty-one years and not over sixty, or is the only recourse, as is very often done, collect the same with taxes?

2 Can village councillors remunerate themselves as councillors?

(1) No. He can only return him to the clerk, as a defaulter, in the manner provided by section 101 of the Assessment Act.

(2) Assuming that the village referred to is an incorporated village, the head of the council only may be paid such annual sum or other remuneration as the council of the municipality may determine. See section 232 of the Municipal Act.

CLERK.—Are the municipal councillors of an incorporated village entitled to remuneration as such?

No. Except the head of the council. Section 231 of the Municipal Act provides for the paying of the members of township and county councils, and section 232 for the payment of such annual sum or remuneration to the head of the council of an incorporated village as the council of the municipality may determine.

DEXTER.—A farmer owns a farm in a township which he rents to a tenant, and he lives on a rented farm in another part of the township. Is it right that his son should be assessed as a farmer's son, as he is living on a rented farm?

We are of opinion that the son could not be assessed as a farmer's son, under the circumstances mentioned. The Act should be amended to extend the franchise to the son of a farmer who lives with his father on a farm of at least twenty acres, provided he owns a farm of twenty acres or more in the same municipality.

PELHAM.—A road company, formed under the Road Companies' Act, abandoned the road owned by them as provided in section 81 of the said Act, and the road is now under the jurisdiction of the council of this township. At the time of the abandonment there was a quantity of prepared stone on the said road (not placed but ready to be used). Who has a right to the ownership of the stone—the township or the road company?

The municipality are the owners of the road, as successors of the company, and liable for the maintenance and repair, and we think that the stone in question was vested in them on the abandonment of the road by the company, and the company cannot now remove the same.

J. H.—What would be the proper means to force surveyed streets and lanes to be opened in an

incorporated village, and who should have same done?

Assuming that the plan on which the streets and lanes are laid down has been duly filed and is binding on the person filing the same and other persons interested, as provided in section 86 of the Registry Act, the council should pass a by-law for the removal of obstructions on the streets or lanes, pursuant to the power given them by section 550 of the Municipal Act, sub-section 1.

PARRY SOUND.—A dam has been constructed in an adjoining township by a lumber company. The water in the river, thus dammed, floods the roads in our township, rendering them impassable. What course should we take to get the matter righted?

In reply we refer our correspondent to section 522 of the Municipal Act, which provides that a notice in writing may be served on the head of the council of the adjoining township, into which the stream or creek flows, requesting such council to clear such stream through their municipality—which they are required to do within six months. If the council, receiving such notice, neglect the duty, and by reason of such neglect, any public road, street, bridge or highway shall be out of repair, the corporation in default shall be responsible for all damages.

I. CLERK, ALGOMA.—Where a portion of a union of townships formed into a municipality, is separated and incorporated as a town, and the remaining townships are formed into a municipality divided into wards, in what way do I, as returning officer, ascertain the lists of voters to be used at an election for such a new municipality?

2. Has a returning officer (for any reason) any authority for refusal to accept a nomination for the office of reeve and councillor in a town or township municipality?

3. Does a candidate for a councillor in a town require to have property qualification in the ward which he is a candidate for; providing he has it in some ward of such municipality? Or can a candidate for councillor qualify on property in two wards not having sufficient in one?

4. Do the revised statutes of Ontario make any provision for the calling of a school meeting for the election of trustees in a newly formed school section, in a township, before the regular annual school meeting?

(1) If the Voters' List cannot be furnished in accordance with section 130 of chapter 184, R. S. O., or the election held as provided for in chapter 185, R. S. O., sections 6 to 16, our correspondent should send fuller particulars, explaining position of municipalities interested before incorporation of the town, also the manner of incorporation of the town, the formation of the new township, and also his authority for acting as returning officer and when election is to take place.

(2) No. The returning officer cannot question the right of any person to a nomination for the offices named. See section 117, Municipal Act.

(3) No. Can qualify if he has sufficient property within the municipality. See declaration of property qualification.

(4) If section is formed of portions of pre-existing sections, the meeting is held at same time as other annual school meetings, as provided in section 29 of Public Schools Act, 1891.

In unorganized townships in any county or district the meeting for election of School Trustees may be held at any time after formation of section, as provided in section 43 and following sections of said Act.

FERRIS.—In making out list of lands liable to be sold for arrears of taxes, some of the lands were in arrears for 1888 and continuously on to present time. As treasurer I made out list of land to be sold to year 1890, inclusive. I wrote to a lawyer, stating that I wished to know if year 1891 could be included. He stated, I could only put in lands in default since 1888 as it required that time to be three years in arrears. Will you please state if all taxes have to be three years in default, as it will be of interest to many in this district. Please state question in what manner you think best.

The lands in arrear for 1888 might have been sold for taxes in 1891, but the arrears for 1891 could not have been included. Where lands have been in arrear continuously for three years and are unoccupied in the fourth year or subsequent year, in which proceedings are taken for the sale of land in arrear, the taxes for the year in which the sale takes place still remain in arrear—after the sale.

M. C.—1. Can a councillor who does not receive any salary from the village do any work and receive pay for it?

2. Can a pathmaster hire one of the councillors to do corporation teaming for him?

(1) No. Assuming that the work referred to is to be done for the village corporation.

(2) No. The pathmaster is an employe or agent of the corporation, and the teaming contract would be let by him on behalf of the corporation, and we presume would be paid for with corporation moneys.

The MUNICIPAL WORLD has just been placed in my hands, and I am so pleased with it that I enclose my subscription for the year.

J. B.

General Directions to Truant Officers.

The following general directions to truant officers have been issued by the education department of Ontario: Each officer shall endeavor to procure the attendance at school of all children in the district assigned to him, between 8 and 14 years, visiting them at their homes or places of employment, or looking after them in the streets for this purpose, and shall, by persuasion and argument, both with the children and their guardians, and by other means than legal compulsion, strive to secure their attendance. The officers shall not be employed to enquire into the occasional absence of pupils. When a truant officer shall be unable in a district assigned to him to procure the attendance at school of any child who is an habitual truant, or who is required by the provisions of the law to attend school, it shall be the duty of such officer, after notice as required by the Act, to procure a warrant and arrest such child, who shall be brought for trial before a magistrat having jurisdiction in the case.

CORRESPONDENCE.

This paper is not responsible for opinions expressed by correspondents.

All communications must be accompanied by the name of the writer, not necessarily for publication, but so that the publishers will know from whom they are received.

Clerks' Salaries.

To the Editor of THE MUNICIPAL WORLD:

I see in the May number a municipal clerk complains of the small remuneration clerks receive, and that an effort should be made to secure the passing of an act whereby clerks would receive a salary in proportion to the number of names on the Assessment Roll. The writer does not approve of paying clerks in the manner stated, but would say that not only clerks but all municipal officers should be paid by a set salary, and not by percentage of job work. To pass an Act fixing their remuneration is entirely out of the question. The taxpayer has a right to have all these things to deal with, and I think there are more Acts passed now than are beneficial to poor taxpayers in rural municipalities.

REEVE.

ED.—Write again.

Dangerous Well Water.

To the Editor of THE MUNICIPAL WORLD:

Sir.—Thru the medium of your valuable paper I wish to draw attention to the danger lurking in the drinking water of our wells.

In this township, Aldborough, Elgin Co., the water used for drinking purposes is largely supplied from wells, the water in which is surface water filtered through some five or six feet of sand and held in a reservoir of hard blue clay.

In the spring of the year these wells are invariably flooded with an overflow of surface water, pregnant with organic matter, the decomposition of which furnishes abundant disease germs, and I would suggest for the benefit of those using water from wells, especially wells supplied by surface water, that such wells be pumped out, and thoroughly cleaned, on or before the last of May in each year. By doing this (other obvious precautions being observed, such as locality of well, etc.) I am satisfied that typhoid fever and kindred diseases would be of much less frequency than now.

S. M. DORLAND,

Medical Health Officer,
Aldborough.

Clerks' Salaries.

To the Editor of THE MUNICIPAL WORLD:

I notice in your last number that a correspondent takes up the question of clerks' salaries. I am of his opinion as to the remuneration at present paid to township, town and village clerks, and through a mistaken idea of economy. Councils generally are not even just, let alone generous, in the amount paid to their clerks, and even go so far as to say that the allowance for recording births, marriages and deaths, and salary as secretary of the Board of Health, and all other fees, shall be

paid into the town treasury, and the legislature itself says that the fees for acting as clerk of the Police Court shall be paid into the town treasury, as your correspondent states, the legislature keeps adding work, session after session, to the duties of the clerk without considering any compensation therefor, and I know of clerks who are compelled to remain in their office from six to ten hours per day, and kept busy all the time, whose salaries do not exceed \$400 per year. It is time the clerks took this matter in hand and acted together, and bring the subject before the legislature and show the exact position they occupy, and I believe that the men now at the head of affairs in Ontario will give the matter just consideration, and so arrange that the salaries to be paid in different municipalities shall not be in the hands of the council. Salary or fees are fixed in almost every other profession by the legislature, and why should not this be fixed by them also? The rate proposed by your correspondent seems to me to be fair and the council should have no power to interfere with it.

TOWN CLERK.

Boards of Health.

So far as the well being of the citizens is concerned, perhaps the most important office is that of sanitary inspector, acting under the direction of Boards of Health, which have only become recognized as important in the last half-dozen years or so. To allow any considerations to prevail that will put in this place an inferior man is a grave mistake, and, possibly, under certain conditions, productive of serious results to a municipality.

Sanitary science includes in its scope many more things than fumigating an infected house or testing a sewer pipe: heat and light, ventilation, construction of dwellings, dealing with refuse and noxious matter, overcrowding and many other factors, bearing on, and affecting the public health. In such matters, too, prevention is more important than cure. It is in the power of an efficient inspector to do much that will benefit a municipality though the citizens may never perceive it. On the other hand, an inefficient officer may, without the responsibility being traced, overlook evils that may seriously injure the community.

As sanitary inspectors are now making house to house inspection would it not be well for them to consider whether it is right to allow poultry to be kept in yards hardly large enough for domestic purposes? In the hot summer months places of this sort are a nuisance. In the interests of health the inspector should prevent fowl from being kept in yards that are not suitable. If the premises will not permit the fowl being kept at least fifty or sixty feet from the back door, the inspector should prohibit the keeping of fowl in all such places, and after prohibiting, see that his order is enforced.

It is to be regretted that in this enlightened age the common laws governing hygiene are all but disregarded by the mass of the people. It has been suggested that a competent person be appointed by the Provincial Board of Health to deliver from time to time popular lectures on hygiene, that the same be printed in leaflet form and disseminated over the length and breadth of the province. This method has been pursued in Edinburgh, Scotland, for the past decade, and yielded practical fruit. Vaccination is not practiced as it should be, there are many who have never been vaccinated and will remain so until it is made compulsory, as it is in most countries in Europe.

Assessment Amendment Act, 1892.

Sub-section 23 of section 7 is amended by striking out all the words after the word "earnings" and substituting "to the amount of \$700." Section 24 is amended to read "the annual income of any person to the amount of \$400, derived from any source other than personal earnings. Proviso, that no person shall be exempted for a greater sum than \$700."

Sub-sections are added relating to the assessment of farm lands in cities, and exemptions in towns, cities and villages for certain improvements.

Section 14 is amended by requiring the assessor to set down in column 2, the name (surname first) and post office address of taxable party.

Section 75 is amended by requiring a copy of assessment roll to be transmitted to county clerk within ninety days, under a penalty.

Section 141 is amended by requiring clerk to furnish county treasurer as soon as received from assessor, occupy returns, certified under seal of corporation.

Section 151 is amended by providing that the county treasurer may charge twenty cents for a search and statement of each separate lot or parcel not exceeding four.

I welcomed the Miscellany last year, feeling it was a harbinger of something better, and from your sample of THE MUNICIPAL WORLD, I may safely say that something has come.

A. S., Clerk, Sutherland.

* * *

If as good as the Miscellany of last year I would not be without it for five times the amount. I hope the municipal officers will give you every assistance.

E. C.

* * *

Am well pleased with the January number. The other Miscellany was good, but yours is better. I trust you will meet with every success, as I know such a paper will be of the greatest use to town clerks and municipal officers,

C. H. R., Town Clerk, Walkerville.

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